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# COMMUNICATION AND THE ORIGINS OF PERSONHOOD

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# ABSTRACT

This thesis presents a communicative account of personhood that argues for the inseparability of the metaphysical and the practical concepts of a person. It connects these two concepts by coupling the question “what is a person” (concerning the necessary conditions of personhood) with the question "how does one become a person"(concerning its genetic conditions). It argues that participation in social interactions that are characterized by mutual recognition and giving-and-taking reasons implied by the practical concept of a person is in fact an ecological and developmental condition for an entity to possess the kind of characteristics and capacities such as reflexive self-consciousness addressed by the metaphysical concept. The chief theoretical contribution of the dissertation research lies, accordingly, in demonstrating that an adequate metaphysical concept of a person has to make reference to the kind of social processes that are necessary for the emergence and development of the distinguishing attributes of persons among other moving, perceiving, desiring and cognizing agents. Methodologically, it undertakes an original philosophical analysis that is enriched by an interdisciplinary investigation of several notions and insights from semiotics, comparative and developmental psychology, cognitive science and anthropology.

The main argument of the thesis is that one becomes a person through internally recreating a social, communicative process; namely, that of dialogical transformation of habits. We find the paradigmatic case of this social process in mutual persuasion. The internalization of this process in the form of an inner dialogue cultivates a social self that is in ongoing communication with the embodied, organismic self of uncritically habituated attitudes, convictions and desires. This inner dialogue can be conceived as a temporally extended process of self-persuasion, which is characterized by an ongoing strive for attaining higher degrees of self-control; that is, for achieving a more coherent alignment between our habits and the kind of person we would like to be. It starts with self-interpretation and self-evaluation, and culminates in the formation of higher-order desires that facilitate habit-change and novel habit formation in accordance with certain social, moral, aesthetical or intellectual categories and norms one comes to endorse. For this reason, self-induced, deliberate habit-change is also a process of appropriation or self-appropriation, through which we strive to cultivate habits of feeling, thinking, acting that we can deem more truly ours.

The thesis demonstrates that the capacity for engaging in this kind of self-persuasion consists chiefly in the capacities for metasemiosis, perspective-taking, and for cultivating habits of reflexivity. It explicates how all these capacities have a social origin and ultimately a social function by showing that they all presuppose certain higher-order communicative patterns that arose through an evolutionary

and cultural history, and develop through the internal reconstruction of these patterns as cognitive-semiotic processes.

The thesis concludes that becoming a kind of being who can engage in self-persuasion, thus a person, consists ultimately in internalizing the patterns of communicative social interactions in the form of an ongoing auto-communication.

# KURZBESCHREIBUNG

Die vorliegende Arbeit präsentiert eine kommunikative-semiotische Theorie der Persönlichkeit, die für die Untrennbarkeit der metaphysischen und praktischen Konzepte einer Person argumentiert. Sie verbindet diese beiden Konzepte, indem sie die Frage „Was ist eine Person?“ mit der Frage „Wie wird man eine Person?“ verknüpft. Es wird behauptet, dass das praktische Konzept einer Person, welches die Teilnahme an sozialen Interaktionen impliziert—die von der gegenseitigen Anerkennung und dem Geben und Nehmen von Gründen geprägt ist—, tatsächlich eine ökologische und entwicklungsbedingte Voraussetzung für das Erwerben und Besitzen der Art von Grundeigenschaften wie Reflexivität und Selbstbewusstsein darstellt, die vom metaphysischen Konzept einer Person angesprochen werden. Der hauptsächliche theoretische Beitrag der Studie besteht dementsprechend darin zu zeigen, dass ein hinreichendes metaphysisches Konzept einer Person auf die Art von sozialen Prozessen verweisen muss, die der Entstehung und Entwicklung der Unterscheidungsmerkmale von Personen unter anderen sich bewegenden, wahrnehmenden, begehrenden und erkennenden Entitäten zugrunde liegen. In Bezug auf ihre Methode führt die Arbeit eine originelle philosophische Analyse durch, die von einer interdisziplinären Untersuchung einschlägiger Themen aus Semiotik, der vergleichenden Psychologie und Entwicklungspsychologie, Kognitionswissenschaft und Anthropologie bereichert wird.

Das Hauptargument der These ist, dass Person-Werdung in der Verinnnerlichung eines sozialen, kommunikativen Prozesses besteht, nämlich der dialogischen Transformation von Gewohnheiten. Wir finden den paradigmatischen Fall dieses sozialen Prozesses in der gegenseitigen Überzeugung. Die Verinnerlichung dieses Prozesses in Form eines inneren Dialogs kultiviert ein soziales Selbst, das mit dem verkörperten, organismischen Selbst der unkritisch habituierten Haltungen, Überzeugungen und Wünschen permanent kommuniziert. Dieser innere Dialog lässt sich als zeitlich ausgedehnter Prozess der Selbstüberzeugung verstehen, der durch ein kontinuierliches Streben nach einem höheren Grad an Selbstkontrolle gekennzeichnet ist. Das heißt, um eine kohärentere Abstimmung zwischen unseren Gewohnheiten und der Vorstellung der Person zu erreichen, die wir gerne wären. Dieser Prozess der Selbstüberzeugung beginnt mit der Selbstinterpretation und Selbstbewertung und gipfelt in der Herausbildung von höherstufigen Wünschen, die Gewohnheitsänderung und Gewohnheitsbildung in Übereinstimmung mit bestimmten befürworteten sozialen, moralischen, ästhetischen oder intellektuellen Kategorien und Normen ermöglichen. Aus diesem Grund ist die selbstinduzierte, reflexive Gewohnheitsänderung auch ein Prozess der Selbstaneignung, durch den wir uns bemühen, die Gefühls- wie Denk- und

Handelnsgewohnheiten zu etablieren, die wir auf authentischere Weise als unsere betrachten können.

Die Arbeit demonstriert, dass die Fähigkeit, sich auf diese Art der Selbstüberzeugung einzulassen, hauptsächlich in den Fähigkeiten (i) zur Metasemiose, (ii) zur Einnahme von Perspektiven und (iii) zur Herausbildung von Gewohnheiten der Umgewöhnung besteht. Es wird erläutert, wie all diese Fähigkeiten einen sozialen Ursprung und letztendlich eine soziale Funktion besitzen, indem gezeigt wird, dass sie alle bestimmte Kommunikationsmuster höherer Ordnung voraussetzen, die durch eine Evolutions- und Kulturgeschichte entstanden sind und sich durch die interne Rekonstruktion dieser Muster als kognitiv-semiotische Prozesse entwickeln.

Die Arbeit kommt zu dem Schluss, dass die Entstehung einer Art von Wesen, das sich selbst überzeugen kann, also Person-Werdung, letztendlich darin besteht, die Muster kommunikativer sozialer Interaktionen in Form einer fortlaufenden Autokommunikation zu verinnerlichen.

# TIIVISTELMÄ

Väitöskirjassa käsitellään persoonuuden kommunikatiivista prosessia ja osoitetaan, että persoonan metafyysiset ja käytännölliset käsitteet ovat erottamattomat. Nämä kaksi käsitettä yhdistetään tarkastelemalla kysymyksiä ”mikä on persoona” ja ”miten tullaan persoonaksi”. Väitöskirjassa osoitetaan, että osallistuminen sosiaaliseen kanssakäymiseen, johon kuuluu persoonan käytännön käsitteeseen kuuluva vastavuoroinen tunnustaminen sekä kompromissi, on itse asiassa entiteetin ekologinen ja kehityksellinen olotila, jossa se saavuttaa piirteitä ja taitoja, kuten persoonan metafyysisen käsitteen mukainen refleksiivinen itsetietoisuus. Väitöskirjan keskeinen teoreettinen tavoite on osoittaa, että persoonan onnistuneessa metafyysisessä käsitteessä on otettava huomioon sosiaaliset prosessit, jotka ovat välttämättömiä persoonan erityisten attribuuttien kehittymiselle, kuten liikkuminen, havaitseminen, haluaminen sekä kognitiiviset agentit. Väitöskirjan metodologia koostuu filosofisesta analyysista, jota monitieteisesti rikastutetaan semiotiikan, vertailevan ja kehityspsykologian, kognitiivisten tieteiden ja antropologian lähestymistavoilla.

Väitöskirjan keskeinen teesi on, että agentista tulee persoona, kun se luo uudestaan sisäisesti sosiaalisen, kommunikatiivisen prosessin, toisin sanoen tapojen dialogisen transformaation kautta. Tämän sosiaalisen prosessin paradigmaattinen esimerkki on molemminpuolinen vakuuttaminen. Sen sisäistäminen sisäisen dialogin muotoon kehittää sosiaalista minuutta, joka on jatkuvassa kommunikaatiossa epäkriittisten asenteiden, vakaumusten ja halujen elimellisesti ruumiillistuneen minän kanssa. Tämä sisäinen dialogi voidaan mieltää itsensä suostuttelun prosessiksi. Itsensä suostuttelu on jatkuva pyrkimys saavuttaa itsehillinnän korkeampia tasoja, toisin sanoen saattaa yhteen tapamme ja se persoona, joka haluaisimme olla. Se alkaa itsearviolla ja huipentuu niiden ylevämpien halujen muodostumiseen, jotka edistävät persoonan tapojen muutosta niiden tiettyjen sosiaalisten, moraalisten, esteettisten ja intellektuaalisten normien mukaisesti, joita yksilö alkaa noudattamaan. Tästä syystä itse toteutettu tapojen muutos on myös itsensä hallitsemisen prosessi, jonka kautta me voimme kehittää tapoja, joita pidämme aidommin ominamme.

Väitöskirja osoittaa, että taito ryhtyä itsensä suostutteluun muodostuu pääsääntöisesti kyvystä metasemioosiin, perspektiivin ottamisesta sekä refleksiivisyyden kehittämisestä. Se esittää, että kaikilla näillä taidoilla on sosiaalinen alkuperä ja viime kädessä sosiaalinen merkitys, osoittamalla, että ne kaikki edellyttävät tiettyjä ylevämpiä kommunikatiivisia malleja, jotka nousevat kehitys- ja kulttuurihistoriasta ja kehittyvät näiden mallien sisäisen rekonstruktion kautta kognitiivis-semioottisina prosesseina.

Lopuksi väitöskirja osoittaa, että tuleminen sellaiseksi olevaksi, joka voi toteuttaa itsensä suostuttelun, toisin sanoen persoonaksi, muodostuu viime

kädessä sosiaalisen kanssakäymisen kommunikatiivisten mallien sisäistämisestä jatkuvan autokommunikaation muodossa.

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# THE FIRST PART: PERSONHOOD AND COMMUNICATION

## I IN PLACE OF AN INTRODUCTION

This thesis approaches the question of what kind of being a person is through an investigation of the question of how a being becomes a person. The "what" question typically addresses certain necessary and sufficient conditions of personhood such as rationality and self-consciousness, which are then linked to what personhood implies in the practical domain, such as a moral standing or certain rights and responsibilities. The "how" question addresses, on the other hand, its genetic conditions; that is, those that essentially characterize the origin and mode of formation of that kind of being we designate a person. In philosophy this latter question is rarely put, arguably because it is deemed largely irrelevant to the former, analytic question, with the notable exception of medieval theories of creation or communication of a soul to a body. In various other fields several aspects of the genesis of persons attract more attention, but these are not investigated through particularly philosophical questions: how the human species came to possess its present form, how the human infant develops cognitively and socially, how the moral and legal status of persons differ from culture to culture or across historical periods, or how normatively structured social systems emerged would be some representative examples. I argue that the genetic and the analytic questions are intimately related to one another, to the effect that we need an understanding of the origins of personhood in order to reach an adequate understanding what personhood consists in. By an adequate understanding I mean a holistic exposition of the metaphysical, intersubjective and practical dimensions of personhood in their integrity.

I translate the "how" question into a philosophical one in terms of constitutive relations: a person is a kind of being who not only exists in relations, but also originates and consists in them. What kind of relations, then, are these? I argue that persons originate and consist in relations of mediation; namely, in certain semiotic interactions. Semiosis, in a broad sense, is sign-activity or sign-process. A sign can be anything, from odors to arguments, that acquires meaning in being interpreted as referring to something beyond itself. Semiosis denotes processes of sign interpretation, be they intellectual, affective, perceptual, interpersonal or collective, which give rise to meaning and may further result in the establishment of enduring meaning structures in the form of individual habits of interpretation, social meanings or cultural artifacts. All living beings exist in semiotic interactions; that is to say, their activity takes place in a selectively meaningful environment, whose features are revealed and engaged with on the

basis of expectations, values and goals. Among these, a significant portion are inter-individual or communicative. Semiotic interactions that are constitutive of persons, on the other hand, are temporally extended and gradually sophisticated intersubjective processes of interpretation that are embedded in a particularly social and cultural environment, and yield certain habits of thought, emotion and action that ultimately make up the person. To these latter I refer as person-making dispositions. Representative examples would be critical self-evaluation, acting in accordance with reasons, or adopting a personal attitude towards others. Not all dispositions of a person originate through intersubjective semiotic interactions—for instance a capacity for multimodal perception or long-term memory. Person-making dispositions, on the other hand, can all be traced back to sustained formative semiotic interactions with other persons, which are mediated by and further give rise to meaning structures of an intersubjective, social and ultimately cultural nature. Becoming a person, I claim, is an intersubjectively extended and culturally scaffolded process of semiotic habit formation and habit-change, which culminates in the constitution of a being who can understand, evaluate and resolve to change its own habits of thought, emotion and action by recreating this originally intersubjective semiotic interaction as an intrasubjective one—as self-interpretation and self-control, or as *self-persuasion*, where both are united. In other words, persons are beings who engage in a *communicative self-relation* characterized by persuasion, which derives its form from intersubjective interactions and its medium (signs) from a cultural world. This self-relation implies intrapersonal interactions between different thoughts, like when we think about a belief, between different perspectives, like when we adopt a normative attitude towards a desire we have, or between past and future selves, like when we regret our past actions or evaluate our imagined future predicaments.

The theoretical aim of this thesis is twofold. Firstly, it aims to demonstrate that the metaphysical and practical dimensions of personhood are revealed to be not at all distinct but intimately related when we approach the question from a genetic perspective. As I discuss in the following section, it is commonplace in philosophy to treat these two as yielding two distinct senses of personhood, the one related to essential properties of persons and the other to relational statuses such as moral responsibility or dignity. I intend to show how the characteristic dispositions of a person not only *allow for* the attribution of intentional agency, accountability, bestowal of rights and responsibilities, or adoption of a personal attitude towards the being manifesting them, but they are equally *products of* intersubjective interactions characterized by personal attitudes, norms, social and cultural practices. Secondly, the thesis aims to present an interdisciplinary portrayal of personhood by using the framework of semiotics as a mediator to integrate the implications of established bodies of research and theorizing on several other, related questions: What are the commonalities and differences between various forms or modes of communication in human social interactions and across species? How are reflexive thought and cultural artifacts such as

symbolic sign-systems related? How does the human animal come to acquire the essential qualities of a person and are these continuous or discontinuous with other animals? What kind of a role the human cultural niche plays in the emergence and development of these qualities? How do we understand others and ourselves? Lastly, how do we acquire social meanings and come to participate in norm governed interactions?

The thesis will touch upon these questions as well in grounding its core premises; namely, (i) that a communicative self-relation is essentially characteristic of personhood in all its core dimensions, at the intersection of which we find the capacity for self-persuasion, (ii) that self-persuasion is an internalized semiotic interaction of a particular kind, whose paradigmatic instance is mutual persuasion, (iii) that it depends for its emergence and development on the capacities for reflexive semiosis, perspective-taking, and establishing higher-order habits of reflexivity, and (iv) that all of these latter originate firstly within intersubjective semiotic interactions and secondly in the psychological domain.

The kind of communicative social interaction that can introduce such a mediation into the operation of psychological processes has a particular focus and function that are not representative of all communicative phenomena among persons as well as non-persons. Communication in its basic and phylogenetically prior function consists in the coordination of actions. This coordinative function can be fulfilled even in the case when the involved sign processes are completely transparent, such as a bird's mating song cognized not as such but as an attractive quality in itself. Social relations that are more complex require a coupling of individual processes of interpretation to the degree that not only behavior but also attitudes can be coordinated and a shared view of reality can be formed. In this context, communication acquires further, self-reflexive functions; namely, the negotiation of attitudes of agents towards one another and the world, and the creation and modification of social meanings and habits of interpretation. Any communicative interaction characterized by such self-reflexivity is termed transformative communication. In distinction to coordinative communication, it does not rely on shared meaning and common goals but aims towards creation, modification and negotiation of meaning. The form of intrapersonal communication at work in reflexive self-control through self-persuasion originates precisely in this transformative kind. The thesis demonstrates how transformative communication in ontogeny semiotically, normatively and psychologically scaffolds the development of the capacities for reflexive semiosis, perspective-taking and formation of habits of reflexivity; that is, for the recognition and modification of sign relations, for the coordination of various social perspectives and the development of a self-concept, and for the deliberate habituation of practices of normative evaluation of past actions as well as control of cognitive and affective processes with reference to projections of a self into the future with whom one volitionally identifies with.

The first two premises are explicated and partly discussed in sections I.2 and I.3 against the background of an exposition of the philosophical concept of a person in section I.1. The third and fourth premises are briefly outlined in section I.3, while their exposition and defense make up the majority of the present thesis. Chapter II establishes the theoretical framework of the thesis and introduces the key terms and notions. There I introduce the concepts of transformative and coordinative communication, which are central to the main argument. An introductory presentation of these can be also found in section I.3. Chapter III situates the twofold differentiation of communication presented in the previous chapter in the broad field of communication theory, in particular connection to the analysis of multiple relational and metalinguistic levels of communication in the relational theory of Gregory Bateson and Paul Watzlawick. Chapter IV presents an exposition of Peircean semiotics and discusses several of its key philosophical implications in relation to varieties of signification and meaning. The chapter addresses in particular the later pragmaticist semiotics of Peirce, which links semiosis to the concepts of deliberate habit-formation and self-control. While in the context of Peirce's theory I focus rather on the abstract logical structure of signification and his logic of relations, Chapter V discusses semiosis and reflexive semiosis (referred to as metasemiosis) in the concrete context of animal (including human) communication, social learning and culture. The chapter further investigates the nature, origins and function of reflexive semiosis in reference to contemporary cognitive semiotics and biosemiotics. It lastly presents a communicational interpretation of the biosemiotic concept of semiotic scaffolding in reference to Lev Vygotsky's sociocultural theory of development and Bateson's concept of metacommunication, in order to explicate from the semiotic perspective how transformative communication operates on meaning structures. Chapter VI focuses on how transformative communication operates in ontogeny. It demonstrates firstly, drawing chiefly on the work of Lev Vygotsky (and partly of Colwyn Trevarthen), how external, intersubjective scaffolding of processes of interpretation is internalized as internal scaffolding of higher order cognition, with particular emphasis on the origins of discursive thought in inner speech. Chapter VII shifts the focus to the development of perspective-taking in reference to George Herbert Mead's pragmatist-semiotic notion of perspective and his account of the development of the self-concept through social interactions. Lastly, Chapter VIII investigates the notions of habit, habit-change and self-control and argues that the kind of reflexivity characteristic of personhood is embodied in a habit of habit-change; that is, in an ongoing inner dialogue with intrapersonal perspectives where we identify with certain normatively evaluated attitudes and disown others in an effort to align the former with our actions through embodying them in habits of feeling, thought and action.

The account of personhood that comes out this investigation constitutes a contrasting alternative to any view that regards the essential dispositions of a person as given or non-derivable properties (as transcendent or transcendental

properties of human souls or minds), or explains their development in terms of a maturation or mere blossoming of species-specific, inborn faculties. This is because the present work regards person-making dispositions ultimately as dispositions of the (empirically given) human being and maintains that their semiotic and psychological underpinnings are more continuous than discontinuous with other (non-human) animal dispositions. It further identifies the appropriate domain of the investigation of their development as the particular semiotic properties and social as well as cognitive functions of human communication. I explicitly do not pivot this investigation on verbal communication, which is often proposed among the necessary conditions of personhood. Verbal communication has a broader semiotic basis by focusing on which we can reach a much deeper understanding of the relation between external, material communicational signs and self-reflexive thought, and can place language acquisition in the context of varieties of communicative interactions and the socio-cultural development of higher cognitive functions. While I consider the paradigmatic form of transformative communication to be mutual persuasion, I thereby do not exclusively refer to something like the argumentative function of language. I regard social negotiation and meaning construction as the general function of the transformative mode of communication, which for this reason corresponds to a wider and more fundamental domain of (pre-linguistic as well as extra-linguistic) pragmatics of communication that spans to include as far as play and pretense. The coordinative mode similarly involves but does not correspond to something like a transmission or information function of language. Not only because transmissions take place also via non-linguistic means, but more importantly because the communicative coordination of action (interindividual or social/collective), so to speak, is the final cause of all information transfer.

The present investigation might ultimately imply that the person is not to a category we can neatly delineate with reference to some absolute and unique properties. On the other hand, if we regard the characteristic properties of a person as being absolute and unique, by the same token we risk that a satisfactory understanding of these (i.e., their nature, origin and function) ever eludes us. I think that the virtue of conceiving these properties as being relational and admitting of gradation and development lies precisely in that it allows us to understand why metaphysical persons must also be social animals, accountable agents as well as subjects of a personal attitude and addressees thereof. Such an understanding could help restore to the human being its animality, which arguably received heavy damage throughout the medieval as well as modern conceptions of personhood, and place the individual in its proper context where it is inseparably embedded phylogenetically, developmentally, culturally and socially; namely, among fellow persons.

## I.1 THE CONCEPT OF A PERSON

Arguably, the most long-lived characterization of "person" in philosophy is *rational being*. The term itself, however, was not a philosophical one until it acquired a particular significance beginning with scholasticism. Latin *persona*, traceable to the Greek *πρόσωπον,* was originally a theatrical term denoting a mask, later to be generalized to a role or character assumed in play or in life.[1] This latter sense hardly lives on in the modern philosophical term, however it is clearly associated with related notions such as personality (as character) or social roles and identities. The characterization rational being belonged in the context of ancient philosophy simply to the *human*, which still is the equivalent of person in ordinary usage. The human being who is characterized by rationality, moreover, was the whole entity: it is the human animal, defined by Aristotle as *ζῷον λόγον ἔχων,* who is capable of rational thought and speech,[2] and pursues a social and political life, who is thereby a communal or political animal, *ζῷον πολιτικόν*.[3] For the Aristotelian, reference to the reason or intellect is simply reference to this whole entity, but *qua* having the dispositions pertaining to it by virtue of being a "rational" animal. We find in Aristotle's characterization an approximation to the idea that the peculiarity of the human way of being-in-the-world and being-with-others, from self-reflection to social institutions, is to be sought for in the centrality of communication in the human form of life and in its complexity. Because this characterization rests on the broader ontological assumption that speech and thinking are essentially related—a relation that was manifest already in the polysemy of the word "*λόγος*," which comprised speaking, explaining, narrating as well as thinking, deliberating, reckoning; what is spoken as well as

[1]The Oxford English Dictionary lists this rather obsolete sense under (I). See "person, n.". OED Online. September 2019. Oxford University Press. https://www.oed.com/view/Entry/141476?rskey=fSeciS&result=1&isAdvanced=false (accessed November 05, 2019).

[2]See Aristotle, *Politics* 7, 1332b3-5: While most other animals live by nature (τῇ φύσει ζῇ) and some by nature as well as habit (μικρὰ δ᾽ ἔνια καὶ τοῖς ἤθεσιν), the human animal lives also by reason (ἄνθρωπος δὲ καὶ λόγῳ). See also *Politics* 1, 1253 a 9-10, where Aristotle refers to the same distinguishing capacity as that of speech: λόγον δὲ μόνον ἄνθρωπος ἔχει τῶν ζῴων.

[3]See *Politics* I, 1253a3. See also Aristotle, *Nicomachean Ethics* I, 1098a3-5, where he maintains that the peculiar function or work of the human being is the *practical life* (i.e. the life of purposeful conduct) *of the rational part* (in all of the following senses: obedient to or possessing rational principle as well as the active exercise of the rational faculty): πρακτική τις τοῦ λόγον ἔχοντος.

We do not find, on the other hand, in Aristotle's characterization a clear answer to the question whether the human being is a social, political animal because it is capable of rational thought, or manifests this capability by virtue of its particular sociality. The former option has often been rather uncritically assumed in rationalist theories of the origins of social-political organization, which commonly take off from a hypothetical natural state where rational but non-social individuals coexist without the regulation of moral or political law. One could say that the dissolution of the intimate relation between rationality and sociality into two possible causal directions implied in the question would be alien to Aristotle, because his (as well as Plato's) very conception of rationality is a power of reasoning that is interwoven with dialogical speech. Reasoning, hence, is embedded in the social practice of conversation.

what is thought.[4] Plato as well as Aristotle gave the name "*λογιστικόν*," among its other synonyms, to that faculty in the soul where these two species-specific activities are governed.[5] In line with this basic assumption, we can infer that deliberating with and through other people, *διάλογος*, belongs to the specific difference of the rational animal, whose form of life is civic.

The subsequent course of philosophy presents a gradual (albeit not linear) shift in philosophical perspective in contemplating central questions such as what the nature of the powers peculiar to the human being are and how these should be cultivated, where we move from an image of the human being as a dialogical animal, endowed by nature with intrinsically *social* intellectual powers, who is by nature driven towards *collective* reasoning and deliberation with the purpose of illuminating the nature of what there is and ultimately of cultivating the civic form of life, to an image of an individual soul—a solitary seeker of truth and wisdom, whose intellectual powers are driven towards and privately capable of reflecting on all kinds of possible topics from the order of the universe to what morally good behavior is.[6]

The philosophical concept of a *person* appears to have developed, moreover, in a way that differentiates an aspect or dimension of the human being in order to posit it against the others. Most generally, the term person marks the difference between a natural species and a metaphysical kind. We can find the origins of such a differentiation in one of the earliest definitions of person proposed by Boethius: "*naturae rationabilis individua substantia*" (an individual substance of a rational nature).[7] The theological problems surrounding the nature of the Trinity and Christ that constitute the background of this definition need not concern us here. It suffices to say that, on the one hand, the range of the notion is not restricted to

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[4]*A Greek-English Lexicon, Compiled by Henry George Liddell and Robert Scott*, 9th ed. (Oxford: Clarendon, 1940). Plato can be indicated as the first to define thinking (*διανοεῖσθαι*) in terms of an "inner debate": "*λόγος ὃν αὐτὴ πρὸς αὑτὴν ἡ ψυχὴ διεξέρχεται,*" *Theateus* 189e. The same formulation appears in *Sophist* 263e, using this time the term "*διάλογος*".

[5]See e.g. Plato, *Republic* 439d and Aristotle, *De Anima* 432a25.

[6]It is worthwhile to note that although Plato comes to the fore as the first philosopher who proposed the relation between speech and thought to be one of analogy, he is also the one who initiated a gradual prioritization of thinking (as private, internal conversation) to (public, external) conversation. This was made possible, on the one hand, by the asymmetry of expressivity Plato assumed already at the point he proposed the analogy; *Sophist* 263e4 and *Philebus* 38e1-3 present a reversal of the analogy where this time speech is described as audible "stream of thought." Then, the relation between speech and thought is not a complex intertwinement but a mere linear hierarchy of presupposition where speech is the expression of pure thought in a medium, which itself has no medium. Nonetheless, the fact remains that Plato could attempt at an explication of thinking only through an analogy with speech.

Later, the Augustinian triple analysis of *verbum* into spoken word, inner word and thought breaks more substantially with the Platonic analogy between speech and thinking, although it carries on with it in terms of terminology. On the one hand, the presupposition hierarchy continues to be endorsed, and on the other there is a clear distinction between *process* and *substance*, which places *reason* in the center of gravity of the original meaning cluster of "logos." Not the act of thinking but the object, or term of thought becomes the origin of verbum.

[7]Boethius, *The Theological Tractates*, Loeb Classical Library (Harvard University Press, [1918]1978), *Contra Eutychen et Nestorium*, III, 5, p.85.

the human person, but extends to angelic and divine persons as individuals of a rational nature. On the other hand, this definition arguably also allows one to differentiate the human person from the human animal by identifying it with the human soul. Against this implication and drawing significantly from Aristotle, Aquinas incorporates the "rational nature" part of this formulation into his own conception of persons, but further qualifies the "individual substance" as complete (not being part of a nature, as human soul is), subsistent by itself (being the ultimate owner of its nature and all the acts of this nature), and separated from others (capable of separate existence, as opposed to second substances).[8] Personhood is thus anchored in the independent and separate subsistence of a first substance: the person is the human being, as a first substance, and not the human soul.[9] This argument holds, nonetheless, only in an Aristotelian framework. Scholastic discussions of personhood extending into modern philosophy were characterized by differing degrees of dualism with respect to the soul and the body, and the personality of the soul, comprising its individuality and immortality, was clearly a central concern for adopting a more dualist position.

The modern philosophical notion of a person preserves the demarcation of persons in terms of rationality, but it differs from the scholastic conceptions in being further couched in explicitly psychological terms. Broadly stated, the person is primarily the subject of self-consciousness. One of its earliest and most influential formulations provided by Locke is centered around the problematic of subsistence, coupled with that of identity. His definition anchors it, however, not in a substance but in psychological continuity: a person, according to Locke, is a

> thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing in different times and places, which it does by that consciousness, which is inseparable from thinking.[10]

Although the second part of the definition, the consciousness of oneself as being numerically identical through time and space, largely serve the same function as does "individual substance" in Boethius' definition (namely grounding individuation and persistence) here it is realized by a continuous, reflective self-consciousness. Personal identity, or the sameness of a rational being, reaches "as far as this consciousness can be extended backwards to any past action or thought."[11] Moreover, it is this consciousness, alone, that appropriates actions past or present into the same person and thereby grounds personal concern an accountability for them.[12]

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[8]Thomas Aquinas, *Summa Theologica*, III, Q. 16, Art. 12, trans. Fathers of the English Dominican Province.

[9]Angels or other immaterial substances can also be persons, because they are neither partial nor secondary substances.

[10]John Locke, *An Essay Concerning Human Understanding*, II, 27.9, ed. Peter H. Nidditch, The Clarendon Edition of the Works of John Locke (Oxford: Oxford University Press, 1975).

[11]Ibid.

[12]Ibid., 27.16.

This understanding of the person is contrasted sharply with the notion of a living organism, which is a complex material object that has a soul and a body.[13] The identity of the person does not imply the identity of this complex object, nor does it imply the identity of a soul or a body. Thus personhood is grounded not in any (material or immaterial) substance, but in the psychological capacities the entity in question exercises. Another striking divergence from the older tradition is that these capacities are not conceived as the acts of a nature, but in virtue of the unique subjectivity they bring about. To be a person is thereby to be an "I," which is the subject of a unified experience, extending also to the past. Locke goes on to maintain that the consciousness of one's identity through time and space would guarantee one's personal identity independently of the numerical identity of the underlying substance (i.e., the soul or the body).

Leibniz also argues for a conception of personhood in terms of a special kind of consciousness; namely, reflection, which consists in our "attention to what is within us."[14] Through this reflective inward attention we become able "to think of that which is called 'I' and [...] to consider that this or that is *in us*."[15] While he does not deny consciousness or apperception to animals, he maintains that what is exclusive to "rational souls" and definitive of personhood is the reflective consciousness of an "I." This self-consciousness, in line with Locke, is also what renders us accountable, thus susceptible to praise and blame.[16] However, in difference to Locke, it consist in the (necessarily true) knowledge of oneself as an immaterial subsistent thing; i.e. a soul or mind. Because "reflection enables us to find the idea of substance within ourselves, who are substances"[17] and this self-knowledge cannot be provided to the soul by memory, which yields only a contingent association between experiences.[18]

Kant's discussion of the concept of a person involves the same themes of rationality and consciousness of one's identity through time, although his grounding of personhood follows a clearly more complex line of argumentation. In his formulation of the paralogism of the personality of the soul, he takes as the major premise a definition of the person in terms of the consciousness of the numerical identity of oneself at different times ["Was sich der numerischen Identität seiner selbst in verschiedenen Zeiten bewußt ist, ist so fern eine

[13]Ibid., 27.4.

[14]Gottfried Leibniz, *New Essays on Human Understanding*, ed. Peter Remnant and Jonathan Bennett (Cambridge: Cambridge University Press, 1996), p. 51.

[15]Leibniz, "The Monadology," in Philosophical Papers and Letters, ed. Leroy E. Loemker (Springer, 1989), 643–53, §26-29.

[16]On moral responsibility and consciousness, see Leibniz, *Theodicy: Essays on the Goodness of God, the Freedom of Man, and the Origin of Evil*, ed. E. M. Huggard (La Salle: Open Court Publishing, 1985), §89.

[17]Leibniz, New Essays, p. 105.

[18]Leibniz, Monadology, §26-29.

Person"].[19] This definition, which Kant simply endorses as that of personhood, appears *prima facie* to be equivalent to the formulations of Locke and Leibniz, but in a certain sense it actually corresponds to that of Leibniz and other rationalists, including obviously Descartes' *cogito*, since it involves the substantiality of the self or the subject of self-consciousness. He then explicates the ambiguity of the "self" in question as corresponding both to the "I" of apperception, or transcendental self-consciousness, and to a substantial, simple, identical self—the soul. Since the latter, as Kant's critique of rational psychology yields, is no object of knowledge, there can be no knowledge of one's personality.[20] Self-consciousness has no object. The transcendental unity of apperception, the necessary identity of the "I" of self-consciousness through changing experiences is a merely formal feature, thus it cannot be sufficient for personhood. We may indirectly infer that Locke's criterion of psychological continuity would also not satisfy Kant's concern, who thinks that substantiality, or the *fact* of being a self-identical entity, is included in the very concept of a person, which turns out to be empty.

Kant goes on to argue that the concept of a person as a substantial soul, however, is necessary and sufficient for *practical use*.[21] He grounds the necessity and sufficiency of this concept in the practical sphere later in the *Critique*, in his solution to the third antinomy of the pure reason, on the necessity and sufficiency of presupposing our metaphysical freedom, as persons, for moral accountability.[22] His argument, summarily, is that presupposing our legislative status a priori in regard to our existence discloses a spontaneity to determine our actuality independently of the conditions of empirical intuition, by virtue of which we can (at least) think that we are autonomous; that is, able to give rise to acts which are not caused. One can thus be a person in the moral sense,[23] as he explicates in the *Groundwork of the Metaphysics of Morals*, whose will is rational, thereby deserving of praise or blame. In other words, the psychological/metaphysical concept of the person is necessary and sufficient for practical use by virtue of representing a rational being, who is free and capable of self-determination, who therefore can determine its will under the moral law it prescribes itself.[24] Moreover, he goes on to infer, rational beings deserve a special kind of *respect* by virtue of being *ends-in-*

[19]Immanuel Kant, *Kritik der Reinen Vernunft*, in *Kants Gesammelte Schriften,* ed. Königlichen Preußischen (later Deutschen) Akademie der Wissenschaften (Berlin: Walter de Gruyter, 1900-), A361.

[20]What can be an object of knowledge is the identity of the *human being* as the object of outer sense. This identical entity, the living and thinking body, is of no bearing on the question of personhood and personal identity *as such*.

[21]*Kritik der Reinen Vernunft*, A365–6.

[22]Cf. *Kritik der Reinen Vernunft*, A533–4.

[23]Since Kant does not speak of two concepts but of two *uses*, theoretical and practical, of one and the same concept, it can be claimed that this is not at all a distinct *sense*.

[24]Béatrice Longuenesse offers an elaborate argument claiming that this psychological concept of personhood is not sufficient for practical use, unlike Kant claims, which requires also the (distinct) moral concept, which Kant indeed *adds* to the (rationalist) concept of person he explicates in the first *Critique*. See Béatrice Longuenesse, *I, Me, Mine: Back to Kant, and Back Again* (Oxford University Press, 2017), p. 152 ff.

*themselves*, in contrast to all other entities, which are demarcated as being *things* as opposed to *persons*:

> Die Wesen, deren Dasein zwar nicht auf unserm Willen, sondern der Natur beruht, haben dennoch, wenn sie vernunftlose Wesen sind, nur einen relativen Wert, als Mittel, und heißen daher *Sachen*, dagegen vernünftige Wesen Personen genannt werden, weil ihre Natur sie schon als Zwecke an sich selbst, d.i. als etwas, das nicht bloß als Mittel gebraucht werden darf, auszeichnet, mithin so fern alle Willkür einschränkt (und ein Gegenstand der Achtung ist).[25]

What is worth notice in the passage from the psychological/metaphysical concept to the moral one is, firstly, the introduction of a *relational status* (object of respect) through the notion of being an end-in-itself, and secondly, the generalization from the rational being who becomes *subjectively* aware in intuition of the persistent "I" of the self-consciousness to a *universal* notion of rational being, and through the latter, to a plurality of individual rational beings. While the whole discussion of personhood in the first *Critique* concerns itself with the individual subject, we have in the moral conception a relational category, which nonetheless is grounded without reference to an *intersubjective* dimension. Although Kant does not (and cannot) argue that autonomy is an *objective* quality of rational beings as *empirically* given entities, these seem to be the relevant objects of respect, whose *nature* can be ascertained and compared to that of irrational beings. Moreover, the question suggests itself as to whether the connection of the pure intellect of rational psychology to the notion of the will is not a synthetic one, which, if true, would undermine the claim for the sufficiency of this concept of pure intellect for practical use. In any case, in Kant's discussion of personhood, we find that the metaphysical and the moral notions are essentially related. This is the case with most of the modern philosophizing on personhood, including Locke's widely cited characterization of the person as a "forensic" term.

Upon defining personhood in terms of psychological continuity, Locke further identifies the context to which the term primarily belongs as a practical one: person then appears as

> a forensic term, appropriating actions and their merit; and so belongs only to intelligent agents capable of a law, and happiness, and misery. This personality extends itself beyond present existence to what is past, only by consciousness—whereby it becomes concerned and accountable.[26]

What we can at the first glance say is that we are actually presented, by Locke as well as by Kant, with not one but two apparently distinct senses of *person*: the metaphysical notion of a *thinking, intelligent, conscious being* on the one hand and the moral notion of an *agent* who is *accountable* and (thereby) capable of a law on the other. According to Locke, by virtue of the capacities for self-consciousness and rationality persons both persist through time and space as well as become

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[25]Kant, *Grundlegung zur Metaphysik der Sitten*, in *Kants Gesammelte Schriften*, Vol. IV, p. 429.
[26]Locke, *Essay*, II, 27.26.

responsible for acts committed at different times and places, since personal identity is where "all the right and justice of reward and punishment" is founded.[27] Locke does not discuss the nature of the relation between the psychological and moral senses of person, in these terms, any further but he seems to admit at least the necessity of the condition presented in former (psychological continuity) for the qualification of accountability central to the latter. Locke's psychology of the person is free from the paralogism Kant analyzes, but still it is not easily determinable whether we find in psychological continuity a sufficient condition for accountability.

On the one hand, the correspondence between the person and the substance (of whatever kind) that sustains the continuity of consciousness is clearly a problem, and one that cannot be ultimately solved along these premises. Whether the analysis of personhood essentially requires such a solution is another, equally valid question. A neo-Lockean argument that one finds in the contemporary literature (although in considerable variety) is that the person is not identical to but materially constituted by the human animal and differs from it by virtue of some non-shared essential properties. Baker, for instance, advocates such a position in terms of a "first-person perspective," which enables one to think of oneself as a subject distinct from the world.[28] A closely related line of thought is the wide range of functionalist theories of mind that deny mental properties to animals, human or not, on the grounds that they are attributable only to things that have psychological persistence conditions.[29] A striking conclusion that follows from such a reasoning is that expressions like "thinking animal" or "walking person" are senseless, for metaphysical reasons. However, the object of normative evaluation is the person *qua* agent, and agents cannot have (merely) psychological persistence conditions. What *can* be held accountable is not a continuous consciousness but a substantially persistent entity. Consequently, whether it is formulated along a substance or property dualism, or any other variety, a discussion of personhood that is restricted to the confines of the mind-body problem appears to be largely irrelevant to the normative aspect of personhood.[30]

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[27]Ibid., 27.18. In 27.20 Locke draws the further conclusion that one can be praised or blamed only for actions one remembers committing. Thus in the case one does not have the memory of committing certain actions, the author of the actions can be regarded as the same human being but not as the same person.

[28]Lynne Rudder Baker, *Persons and Bodies: A Constitution View* (Cambridge University Press, 2000).

[29]For a representative formulation, see Sydney Shoemaker, "Functionalism and Personal Identity: A Reply," *Noûs* 38, no. 3 (2004): 525–33.

[30]We need to note also Strawson's contrasting, quite influential account of personhood which maintains that there is a single logical subject of mental and bodily predicates. He says, in the third chapter of *Individuals* that "the concept of a person is the concept of a type of entity such that both predicates ascribing states of consciousness and predicates ascribing corporeal characteristics, a physical situation &co. are equally applicable to a single individual of that type." Such a view is arguably more in line with our ordinary intuitions. However, it also does not suggest anything regarding personal agency or accountability. See Peter Frederick Strawson, *Individuals: An Essay in Descriptive Metaphysics* (Routledge, 1959), p. 101-2.

Further, the capacities to think and to entertain a self-concept, or a conceptual first-person perspective, are actually manifest not in a binary manner but on a continuum—which is actually in line with our ethical, social and legal practices of granting a limited or symbolic person-status to children or mentally limited individuals. If personhood is a metaphysical kind, a sortal concept which defines the existence (and persistence) conditions of its instantiations, then it will at least be considerably vague, which can in turn render the question of personhood intractable if these conditions are determined in purely psychological terms.[31]

On the other hand, the kernel of the link between the metaphysical and the practical aspects of personhood is volition and its character, as Kant rightly identifies through the question of freedom (independently of whether one agrees or not with his solution). We cannot address the issue of accountability without analyzing the nature of the will. This, however, is largely lacking in the contemporary theorizing; more precisely, the treatment of the nature of the will as an essential aspect of the question of metaphysical personhood. Harry Frankfurt's discussion of the nature of volition as the essential core of personhood, rather than merely a topic of ethics or philosophy of action, is a significant example to the contrary. He argues that the defining criterion of personhood should be looked for in the ability to form "second-order desires:"

> Besides wanting and choosing and being moved *to do* this or that, men may also want to have (or not to have) certain desires and motives. They are capable of wanting to be different, in their preferences and purposes, from what they are. Many animals appear to have the capacity for what I shall call "first-order desires" or "desires of the first order," which are simply desires to do or not do one thing or another. No animal other than man, however, appears to have the capacity for reflective self-evaluation that is manifested in the formation of second-order desires.[32]

We commonly have a multitude of desires. But only some end up determining us to do or not to do something. One might desire, for instance, to live in a warmer place without this desire determining him or her to actually move to another country or city. Frankfurt characterizes a desire that is *effective* (or will or would be effective) in moving an agent to do something as the agent's "will." A second-order desire can accordingly be a desire that a particular desire becomes or ceases to be effective, thus one's will. A common example would be wanting not to

[31]For alternatives, see e.g. Paul F. Snowdon, *Persons, Animals, Ourselves* (Oxford: Oxford University Press, 2014); Eric T. Olson, *The Human Animal: Personal Identity without Psychology* (Oxford University Press, 1999). Snowdon argues that "person" is *not* a sortal concept (see chapter 3) and proposes an *animalist* view, whose most influential early advocate is obviously Aristotle. Olson argues, on the other hand, that "person" is a *functional kind*, demarcated by what a person *does* rather than *is*. He also offers a functional reading or Locke, in terms of capacities (see page 32).

[32]Harry G. Frankfurt, "Freedom of the Will and the Concept of a Person," *The Journal of Philosophy* 68, no. 1 (1971), p. 7.

procrastinate or to work enthusiastically. In regard to their relation to volition, Frankfurt also calls such desires second-order volitions.[33]

In Frankfurt's analysis rationality is necessary but not sufficient as a condition of personhood, on the grounds that an individual who can determine suitable courses of action to realize its desires, critically judge alternatives with respect to their effectiveness, and even deliberatively suspend or postpone the realization of certain desires can still be a "wanton" who is not concerned with the *desirability* of these desires, who is thus not critically aware of its will.[34] It is not only the case that the actions of the wanton are determined merely by whatever first-order desire wins out among others, which may be compatible with being a person, but more importantly the wanton does not take sides as to which *should* be the effective one. This "should," we must note, need not be formulated in terms of moral principles: the ground of preference may be aesthetic, social, legal or even a fancy. Thus what the wanton lacks is not only moral personhood but personhood as such. Further, this critical reflection which is lacking in the case of the wanton is clearly a *special* kind of self-consciousness, one that involves more than the formal "I" of apperception, having a unified self-concept, or psychological continuity through memory: it additionally involves that one *identifies* with some of one's desires, thus appropriates them as being more one's own while disowning others. This critically reflective self-consciousness then, arguably, is self-definition as much as it is self-awareness.

The idea of second-order desires is intimately related to another aspect of being an agent, much more so than rationality or self-consciousness (broadly understood) are; namely, to freedom of the will.[35] There is no discussion of accountability that does not somehow refer to the question of freedom. This question has traditionally been discussed, most generally, along two lines: absolute freedom, in the sense of (one's will) being an uncaused cause, and freedom of action, in the sense of being able to act as one wills. The first is the notion Kant refers to in relation to the rationalist concept of a person, which he deems necessary for practical use. While the rational being as an empirical object

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[33]Ibid., p. 10. Frankfurt's terminology is in fact more nuanced. A second-order desire, for him, might be either simply a desire to have or not to have a particular desire, or a desire that a particular desire becomes effective, thus one's will. The latter is not merely a second-order desire, but a second-order volition and this kind, he argues, marks the essential domain of personhood. An example he gives for a second-order desire that does not involve a volitional commitment is a physician engaged in psychotherapy with drug addicts, who might desire to have a desire for a drug just in order to experience how drug addiction feels like without wanting to become an addict. This distinction is meaningful chiefly in regard to the structure of Frankfurt's argument, thus it does not concern us here. Moreover, it could be argued that the notion of a second-order volition suggests, at least at first glance, two orders of will, which is but absurd.

[34]Ibid., p. 11. It can be objected, however, that what is described in Frankfurt's analysis is only instrumental rationality. Kant famously requires for ethical rationality not only to be instrumentally rational but also to obey the categorical imperative of the moral law. Aristotle characterizes practical reason, further, as the ability to adopt the right means for attaining the right end.

[35]To put this differently, it is perfectly conceivable that a rational and self-conscious agent cannot, for other reasons, enjoy freedom of the will.

is a thoroughly determined entity, its transcendental freedom can ground the autonomy of its will for practical purposes.[36] The latter is the notion one finds mostly in discussions of liberties and responsibilities (also in Kant's discussions of law). Locke, for instance, endorses only the latter notion as the relevant one regarding the freedom (or liberty) of the person.[37] More particularly, Locke finds the phrase "free will" to be devoid of sense. He argues that the will is a power of the mind to order bodily motion or rest and the consideration or non-consideration of an idea. Freedom is a power as well, namely a power to do or not to do as one wills. Since powers belong only to substances and the will is not a substance but a power of a substance, to speak of the power of a power is absurd, and free will is an "altogether improper" notion.[38] Freedom (or liberty), belongs thus not to the will but to the agent and it consists in the power to do or to forebear a particular action in accordance with the agent's volition.[39] Thus any voluntary (and un-hindered) action will in principle be performed freely. In this regard freedom need not pertain to what constitutes the essence of personhood. His link to accountability is not freedom but the psychological appropriation of actions, past and present.

However, the issue might actually be more complicated, since the will (i.e., the mind's power to command a movement or the consideration of an idea) is not an unlimited power and most actions cannot be neatly categorized as being either voluntary or involuntary. The classical notions of ἐγκράτεια and ἀκρασία, self-control and weakness of will, might actually enable us to characterize these two cases as two ends of a continuum. In other words, actions might manifest differing *degrees* of self-control or weakness of the will depending on the extent to which actions can be performed in accordance with or against one's better judgment. In this sense, it might be meaningful to speak, at least, of *degrees of freedom* with respect to the will. From a contemporary perspective, on the other hand, we can recognize a personal identity problem implicit in such a picture of volition that is characterized by conflict and struggle. This particular problem concerns not the appropriation of actions but that of desires. While all desires belong to the same agent, thus not giving rise to a substantial or logical identity problem, their conflicting multiplicity precludes the agent from appropriating all as part of his or her personal identity. The latter, thus, requires that one appropriates some particular desires while disowning or distancing from others, whereby grounding the "self," as if it is a voice (weather weak or strong) among others in a psychic discord. Frankfurt links second-order volitions to the question of freedom from a considerably similar perspective.

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[36]Assuming the freedom of the rational being is practically necessary, for Kant, since the moral law, as moral, cannot determine the will in the way laws of motion determine the movement of bodies; it can do so only by being the law the will freely sets itself.

[37]See Locke, *Essay*, II, 21.

[38]Ibid., 21.14.

[39]Ibid., see 21.10 and 21.15.

Unlike Locke, Frankfurt endorses the traditional demarcation of freedom of the will from freedom of action. Freedom of the will, unlike freedom of action, does not concern the relation between volition and action. It rather concerns the relation between desires themselves. As freedom of action is the freedom "to do what one wants to do," a person enjoying freedom of the will is "free to want what he wants to want, or to have the will he wants."[40] As we have seen, Frankfurt identifies any desire that actually moves the person to act as the person's will.[41] Freedom of the will would thus consist in the conformity of one's second-order desires with one's will.[42] It is, however, not a *condition* of personhood. What essentially characterizes persons, instead, is that the freedom of their will *can become a problem*. Thus, independently of whether freedom of the will is attainable, the mere fact that one can pose the problem suffices for personhood.

What does this characterization of the freedom of the will tell us regarding accountability? Frankfurt's position draws from a still subtler distinction between freedom of the will and freedom of action. One can act of his own free will, he argues, without his will being free. He illustrates this distinction through the example of a willing addict, who not only has a physical addiction to a certain drug and thereby has an effective desire independently of whether he wants to have this desire or not, but at the same time he prefers to constantly have this strong desire, so that if it would fade he would try to reinstate it. His will is not free, i.e. he is unable to will otherwise (due to factors beyond his control), but he takes the drug of his own free will, because his second-order desire (that his desire for the drug should be the effective one) makes this will nonetheless his own.[43] Thus, he concludes, he is still accountable by virtue of his second-order desire, unlike an unwilling addict who does not act of his own free will. Accountability is thus grounded in acting of one's own free will and not necessarily in having a will that is free.[44] Thereby, we can infer, the essential characteristic of persons that they can have second-order desires is necessary and sufficient for accountability, while

[40]Frankfurt, "Freedom of the Will and the Concept of a Person," p. 15.

[41]Locke had a similar view of volition in the first edition of the *Essay*, but he later switched to a notion in terms of power. See e.g. E1 II, 21.28.

[42]This does not mean that there cannot be any conflict among second-order desires. Such conflicts can occur, for instance, as a result of incompatible personal convictions or social demands. To be a person implies, however, that some sufficient level of commitment is reached, since if one cannot sufficiently identify with *any* of his desires, he can end up being altogether alienated from his will or unable to harbor any effective desire.

[43]Frankfurt, "Freedom of the Will and the Concept of a Person," p. 19-20. Frankfurt analyzes the situation as one of *over-determination* of the first-order desire (both by the addiction and by the second-order volition).

[44]Frankfurt further maintains that his account is neutral on the question of causal determinism (i.e., of absolute freedom), thus in principle compatible with a deterministic ontological framework. It is conceivable on his account that it might be causally determined that someone enjoys or lacks free will.

the freedom of the will (the freedom to have the will one wants), although intimately linked with personhood, cannot but be only a sufficient condition.[45]

An interesting connection that divorces the question of accountability from a requirement of absolute or ontological (including transcendental) freedom would be Hume's (quite Aristotelian) discussion of accountability on the basis of *character*: If and only if an action issues from someone's character, that individual is accountable for that action.[46] Put in this manner, the discussion of accountability ceases to be contingent upon ontological freedom. We can further elaborate on this idea in reference to second-order desires. One's character can be regarded as a source of second-order desires. Moreover, second-order desires that have their source in character are those that are rather persistent (not ephemeral) and coherent with one another. Thus, an action issuing from someone's character would certainly be one for which he or she can be held accountable, because such an action would be in compliance with a long-term second-order desire and also more or less in consonance with numerous other second-order desires. On the other hand, if an action is in conflict or even dissonance with a person's character, then the action is most probably due to some exogenous and/or accidental factor that undermines accountability.

What about entrenched first-order desires that are not evaluated on a higher order? Is it not reasonable to say that the wanton can have a character if its desires are so entrenched and more or less in consonance with one another? This applies clearly to most "hard-wired" desires. It is reasonable to regard such desires as "part" of one's character. But character in the moral (or broadly practical) sense is something that can be cultivated and susceptible to evaluation, hence more truly "ours." As such, it must at least comprise acquired, novel traits as well. A persistent desire acquired in a way that does not involve much higher-order evaluation, such as classical conditioning, does not count as novel because in such cases what is novel is not the nature of the desire itself but only its object.[47] Thus, the wanton arguably does not have a character, at least in this practically relevant sense. Individuals who can have ephemeral second-order desires but do not have enduring ones, on the other hand, would not be able to "have the will they want." The issue of self-control vis-à-vis weakness of will I have mentioned above is very relevant here. Persons can have characters of differing strength in determining their actions, as it would be attested by our colloquial way of describing persons as having a strong or weak character or personality. Cultivation of character

[45]In other words, we could say that having a high degree of self-control, or being strong-willed, is not necessary for being a person. What is necessary is that having (or lacking) self-control can become a problem for the individual.

[46]David Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Oxford University Press, 1978), p. 411.

[47]Classical conditioning consists in the introduction of a novel stimulus to act as a substitute of an unconditioned, natural stimulus (e.g. food) that arouses a fixed response (e.g. salivation).

arguably serves the acquisition of enduring second-order desires and thereby the attainment of higher degrees of self-control.

Do we find then an adequate account of what it means to be a person in second-order desires? Clearly Frankfurt's is stronger than other, most often proposed criteria of personhood, such as rationality, psychological continuity, agency, or subjectivity, and appears to be more explicitly relevant to our normative concerns regarding personhood. However, it still leaves in the dark many questions regarding the nature and relation of desires of different orders, arguably because Frankfurt is focused more on identifying a sufficient condition to *demarcate* persons while *understanding* personhood requires us to concentrate on the *nature* of those features that belong to persons essentially. Moreover, we do not have an account of how persons, defined in this manner, should also deserve respect, be capable of law, or how their attitudes and conduct towards others in a community of persons should be. This broader normative dimension is crucial if accountability is to be not only possible but also more positively meaningful in relation to personhood. Lastly, no analysis of the conditions of personhood, including Frankfurt's, seems to link the practical context of personhood with its metaphysical basis beyond identifying presuppositional connections. In order to explicate a deeper connection, however, we need to concentrate our focus on relations that might evade logical analysis, but are not thereby less dear to the phenomenon of personhood.

Let us at this point first take a broader perspective on various ways in which we can approach personhood and how they might be interrelated.

## I.2 DIMENSIONS OF PERSONHOOD

Among the whole range of concepts that comprise the subject matter of metaphysics, "person" is probably the one that belongs most clearly to that privileged domain of common opinion where philosophical analysis arguably has neither the first nor the last say. Not only that we are persons is indubitable, but also we are the only arbiter of how far this *we* can extend. Thus, unlike a dispute over whether the reality should be parsed into monads, relations or bundles of properties, the metaphysical concept of a person should both "save" our common intuitions to a decent extent and somehow resonate with our normative concerns regarding how to regulate our attitude and behavior towards other entities. In other words, it must be of relevance in those domains of inquiry and practice where the term is most clearly at home. We can consider these as the pragmatic constraints on defining personhood. They rule out metaphysical stipulations which, in fact ubiquitous in philosophical discussions of personhood, have no easily identifiable connection to the ordinary notion of a person and are of no clearly ascertainable practical import. These pragmatic constraints can be applied to any postulated definition of personhood, and will

serve to frame the content of the present proposal. Within these constraints, the central function of the metaphysical concept of a person is to identify those properties that are most essential to personhood, in the broad sense. Thereby it must on the one hand contribute to our understanding of what personhood essentially consists in, and on the other expediently demarcate a portion of reality that falls under that description.

These two functions, though interrelated, are quite distinct, because they have different satisfaction conditions, and both are of deep practical significance. They are distinct because our understanding of what being a person essentially implies does not depend on the answer to the question of which entities are denoted by the term and which are not. It might theoretically be the case that "person" is a vague predicate, like "tall," and not very useful as a sortal when it matters the most, or that the conditions specified by the concept, when strictly interpreted, are satisfied by only few actual entities or possibly by none. Although this discrepancy would present no impediment to the function of enriching our understanding of what a person is, it would prevent reliable identification criteria that can govern our attitudes and conduct. On the other hand, we may decide to classify a particular set of beings as persons for other practical concerns, such as fetuses, primates or even dead bodies, while thereby precluding an understanding of the very concept. These two functions are also closely interrelated, because a metaphysical understanding usually implies certain necessary and/or sufficient conditions for other senses of the term person in the practical domain; i.e. moral, social or legal personhood.

We can distinguish between these latter "evaluative" senses of the term from its "descriptive" sense in metaphysics. Generally, practical personhood is concerned with assigning a status that implies respect, responsibilities, duties and rights. It refers to a basic normative standing. Metaphysical personhood, on the other hand, is often stated in terms of certain attributes or capacities such as rationality, consciousness or self-consciousness, subjectivity, agency (in the more particular sense of ability to act on reasons or to act purposefully/intentionally) or verbal communication.[48] Although we generally unite these two senses in one single notion, such as "rational, self-conscious being who has a normative status" (as exemplified in Locke's explication of person as a forensic term), these are quite distinct, at least on the grounds that what an entity *is* cannot suggest straightforwardly how it *ought to* be perceived and treated.

[48]It is common in the literature that one, several or all of these conditions (or their similar varieties) are endorsed, depending on how they are interrelated. For similar classifications, see e.g. Daniel Dennett, "Conditions of Personhood," in *What Is a Person?*, ed. Michael F. Goodman (Humana Press, 1988), 145–67; Michael Tooley, "Abortion and Infanticide," *Philosophy & Public Affairs*, 1972, 37–65; Tom L. Beauchamp, "The Failure of Theories of Personhood," in *Personhood and Health Care* (Springer, 1999), 59–69.

This rather simplistic picture is complicated however by the fact that personhood can never be purely descriptive or purely evaluative, because it is intrinsically and inevitably normative and any normative judgment requires certain evaluative standards, which in turn require descriptions. The selection criteria (metaphysical conditions) are always normatively loaded, but one should also in some sense *deserve* a normative status if the latter is not to be arbitrary. On the other hand, only rational and self-conscious beings seem to be capable of *acknowledging* and *respecting* such a status in themselves and others. Further, it is often largely ignored that being an integrated member of a normatively structured community might in turn effect how the relevant qualities emerge and develop in the first place. Some (arguably all) essential features of personhood comprise capacities than can only be acquired and sophisticated through embodied interactions with other persons.[49] This would imply that the question of *becoming* a person can reveal how various senses of the person are intimately related, more than the question as to *being* a person does. Rather than speaking of distinct senses of personhood, it might therefore be more preferable to concern ourselves with "dimensions" of being a person—dimensions that can be partially conceptually differentiated but are inseparably related with one another.[50]

Part of the reason for this complexity is that declaring some entity a person is not a mere utterance but also a *speech act*, since this ascription is partly what constitutes being a person. However sure I subjectively am of my own personhood, if it is not acknowledged by others, I can hardly live the proper life of a person. Personhood is thus on some fundamental level a social institution, and arguably the broadest one. The ascription of person status reflects in the whole range of *possible* (not only *permissible*) conduct towards the entity so designated. Some actions can be realized only in relation to persons: one cannot ask for the permission of, apologize to, or criticize some entity without adopting a personal attitude towards it. Some actions, further, may have not an immediate interpersonal meaning but a derived one. Thomas Nagel gives surgical operation as an example of an action that is not addressed *to* a person *per se*, but one that acquires its interpersonal meaning from the broader social context; i.e., it takes place within the context of an agreement to medical treatment. A contrasting case would be torture, which is incompatible with a personal attitude towards the victim.[51] Thus the norms of personal interactions

[49]This, as stated previously, is the central thesis of this work. It is worth adding at this point that this would exclude the possibility of separate souls, brains-in-a-vat or human beings who grow up in conditions of social deprivation (such as fictive feral children) cannot be persons.

[50]A partially similar view can be found in Heikki Ikäheimo's recently proposed conceptual model. Ikäheimo distinguishes between three layers (person-making psychological capacities, interpersonal significances and institutional powers) and two dimensions (deontic and axiological) running through these. See the editors' introduction in Heikki Ikäheimo and Arto Laitinen, "Dimensions of Personhood," *Journal of Consciousness Studies* 14, no. 5–6 (2007): 6–16.

[51]See Thomas Nagel, "War and Massacre," *Philosophy & Public Affairs*, 1972, 123–44, p. 136.

are not only regulative but also constitutive, in John Searle's terminology, because they (at least partly) constitute those very actions they regulate.[52] Let us call this the *relational* dimension of personhood.[53]

In this particular (rather semantic and pragmatic) regard we see that the concept of a person is clearly distinct from several other concepts which are often associated or conflated with personhood, such as that of the human being and that of subjectivity. A human is the member of an animal species and can be compared or contrasted only with other animals, plants or, as a living being, with inanimate entities. Moreover, this comparison would have nothing to do with the proper mode of conduct towards the entity in question. The attribute of being a human is not something one can grant or take off through one's conduct. To be a person, however, also requires (at least at some level) being treated as one. Thus, on a relational analysis personhood appears to have hardly anything to do with animality. This does not mean that personhood can be a mere honorific: An account of personhood restricted to a special *stance* would arguably allow for the inference that the category of person can be thoroughly socially constructed (to the effect that someone ceases to be a person if he or she is not regarded as one) or arbitrarily extended (to the effect that personhood can be bestowed on any entity). We ascribe personhood primarily to those entities who are capable of and, preferably, willing to *reciprocate* a personal attitude. Thus, a person is the kind of being who can participate in mutual ascription of personhood. In other, more familiar terms, a person is the kind of being who can enter into encounters of *mutual recognition*. This aspect not only resonates with moral and legal dimensions of personhood, but also arguably suggests intersubjectivity as a condition of personhood.

This can be understood, in a Hegelian fashion, as the kind of intersubjectivity that holds between two persons whose consciousness of

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[52]See John Rogers Searle, *Speech Acts: An Essay in the Philosophy of Language*, vol. 626 (Cambridge University Press, 1969).

[53]A similarly relational conception of personhood is chiefly emphasized in dialogical accounts of self or subjectivity, most famously in Martin Buber's *Ich und Du*. He says:

> Die Welt ist dem Menschen zwiefältig nach seiner zwiefältigen Haltung. Die Haltung des Menschen ist zwiefältig nach der Zwiefalt der Grundworte, die er sprechen kann. Die Grundworte sind nicht Einzelworte, sondern Wortpaare. Das eine Grundwort ist das Wortpaar Ich-Du. Das andre Grundwort ist das Wortpaar Ich-Es; [...] Somit ist auch das Ich des Menschen zwiefältig. Denn das Ich des Grundworts Ich-Du ist ein andres als das des Grundworts Ich-Es […] Es gibt kein Ich an sich, sondern nur das Ich des Grundworts Ich-Du und das Ich des Grundworts Ich-Es. Wenn der Mensch Ich spricht, meint er eins von beiden.

Here he proposes the "Ich-Du" as the fundamental kind of relationship within which the person acquires its essential status as such, in contrast to a *thing*, which can be any entity that becomes the second relatum of the relation "Ich-Es." This intersubjective relationship is formed neither from a first-person nor from a third-person perspective: it is the second-person perspective, which is not inferred or derived but fundamental. See Martin Buber, *Ich und Du* (Stuttgart: Reclam, [1923]2008), p. 3-4.

themselves as persons involves their consciousness of being recognized by the other party as a person. We might then find plausible the idea that treating somebody as a person is to treat him or her as a subject as opposed to, or over and above, an object. But we might not have to articulate this condition in such strong internalist terms. The kinds of interactions that could take place between entities in a situation of mutual recognition would be qualitatively different from other kinds of interactions on many levels, including a behavioral one, in terms of being at least partly constituted by having a normative structure. Forms of conduct on their own can manifest recognition of the other, without necessitating a reference to particular mental states or moral qualities. Hypothetically, we would have to describe such an interaction as an interpersonal one even if (one or both of) the interactants were of a different biological species or altogether inanimate in a strict biological sense. That is to say, we do not need to commit to the existence, in the strictest sense, of any particular kind of intentional state in describing the relational dimension of personhood. It suffices to say that we can explain such interactions most suitably by ascribing certain interpersonal *capacities* to participating individuals (which might eventually not rule out that this amounts to adopting an *as-if* stance). In any case, in the context of an interpersonal encounter what we fundamentally have access to is not the internal psychological states of the other but an embodied attitude, couched in terms of public meanings. Further, what matters (and suffices) is that an individual *can* become the addressee of a personal attitude as well as *reciprocate* it. At this point the relational dimension intersects with another, namely the *dispositional* dimension personhood.

The dispositional dimension of personhood is the primary focus of all descriptive accounts. Dispositions, unlike forms or contents of subjectivity, are embodied relational attributes. A disposition is an entrenched capacity which becomes manifest only in entering a suitable kind of interaction, such as conductivity or fragility (which are epistemically, at least on some level, *ascriptions*). Most of the essential qualities of persons, on the relational basis I have outlined, would also have to be understood as or in terms of dispositions instead of purely intrinsic and fully actual properties: A person is a kind of entity that can assume and reciprocate a personal attitude, participate in verbal communication, enter into norm governed interactions, provide reasons for own actions and interpret actions of others in terms of reasons. The list can be infinitely extended. These and similar person-making dispositions already imply certain individual qualities, which can be regarded as dispositions that consist in self-relations: assuming a personal attitude towards oneself, self-ascription of intentional states, discursive thought, judging past actions and imagining hypothetical ones. On the other hand, what makes an improper, let alone depersonizing, treatment of an entity having the dispositions of a person so unsettling is that these dispositions imply by the same token a corresponding capability to suffer in ways (and to an extent) that an entity lacking those cannot.

Further, paradigmatic person-making dispositions, such as those just listed, are typically geared towards interpersonal interactions and social practices as well as being "acquired" ones, unlike, for instance, the disposition of sighted organisms to see when exposed to visual stimuli. Still more important, they are acquired *relationally*. One can become able to enter into norm governed interactions only through participating in them for a sufficiently long time. This may sound quite self-evident. However, this is the case with *all* qualities sufficiently characteristic of personhood. An individual comes to form an enduring self-concept, for instance, only within a social context, because although memory itself is not an acquired disposition, its contents are always selected, filtered, organized and interpreted through an interpersonal and broader social lens. The act of appropriation (Locke's criterion of accountability) that weaves together a continuous self is at the same time an act of narration in terms of social meanings.[54] Moreover, without the constant social demand for accounting for one's actions, evaluating someone else's reports of the past, or participating in joint remembrance, the need and motivation for maintaining such a temporally extended semantic memory of a self would clearly be diminished. Consequently, interpersonal attitudes are grounded in person-making dispositions, which in turn are grounded in certain animal dispositions that are acquired or sophisticated within a particular social context. The dispositional dimension of personhood, unlike the purely relational one, is intimately related to animality,[55] which nonetheless has to be understood in its embeddedness in social interactions.[56]

This brings us to the third dimension of personhood; namely, that of social agency. This is the thoroughly normative aspect of personhood, which moral or legal theories are mostly interested in. The question of what a person *is* (e.g., which dispositions a person has) is meaningful only within the broader question of what a person *does*. A person is a kind of agent who (co-)creates interpersonal (and broader social) situations, who has a significance-bearing impact on other persons' lives, conduct and attitudes, who participates in (and propagates) social practices and institutions, such as that of giving-and-taking reasons. This normatively structured social context is not only the irreducible and necessary condition of any adequate description or prescription we can make in regard to persons, but also attention to it reveals how contingent a phenomenon personhood might actually be. Not only entities who are not agents, such as

[54]Narrative accounts of personhood place the emphasis chiefly on this aspect of psychological identity. See e.g. Charles Taylor, *Sources of the Self. The Making of the Modern Identity*. (Cambridge, MA: Harvard University Press, 1989).

[55]In this connection one can also refer back to Aquinas' argument that *human* personhood involves embodiment essentially.

[56]Thus, an animalist conception of persons would clearly be insufficient, by itself, for identifying the kind of being who can be held accountable, enter into meaningful relations with others and participate in norm governed interactions.

fetuses, but also agents who do not participate in familiar forms of sociality, such as hypothetical intelligent extraterrestrials, cannot be persons in an adequate sense.

I mean by "adequate" definitely *not* that an entity who qualifies for personhood on only one or two of these dimensions cannot be considered as a person. The multi-dimensional nature of personhood indicates precisely the irreducible plurality of our uses of the concept of person. An individual who does not sufficiently manifest the characteristic dispositions of a person can nonetheless be granted the status of a person, enjoy some (perhaps all) of the rights appertaining to a person and become the recipient of a personal attitude. This is typically the case with human children. Further, corporate persons in the legal domain are persons only with regard to the social agency dimension I have just outlined. It is highly probable that a necessary and sufficient definition of personhood can never be found, because conditions deemed necessary on one dimension might not be transferable to others, or a sufficient condition on one dimension may not even be necessary on another.[57] An adequate understanding of personhood, nonetheless, cannot be reached if we neglect any of these. The locus of our concern should lie, moreover, on how all these various uses and senses of the concept person are *related* with one another.

Now let us revisit the definitional elements we have discussed in the first section in light of the preceding considerations.

## I.3 COMMUNICATIVE INTERACTIONS AND HABITS OF REFLEXIVITY

When we look more closely at the nature and structure of higher-order desires, we can conceptually distinguish a cognitive and a motivational aspect.

Firstly, we arguably do not need to postulate an ontological difference between first-order and higher-order desires. Higher-order desires can be subject to the same ontological conditions as first-order desires. They must indeed be, moreover, if we do not assume (as Kant does with the idea of spontaneity in reason) that some mental states can be ungrounded. We can argue, however, that they can be of different psychological kinds. Although all desires are intentional states, a first-order desire may be, for instance, an affective state that has a general directionality but lacks a particular object, but a second-order desire cannot be such a state, since it would refer to the former desire (as its object), thus would rather be a thought. We must arguably ascribe desires to a wide range or animate

[57]For instance, being a living organism is necessary for having the characteristic dispositions of a person, while not so for social agency (as we see in the case of corporate personalities). Alternatively, having certain rights and responsibilities is sufficient for the latter, while being not even necessary for manifesting person-making dispositions.

beings in explaining their behavior. We can ascribe higher-order desires, however, only to those who are capable of representational thought.

Higher-order desires involve, on the one hand, (higher-order) representations of desires. The term desire belongs obviously to the terminology of the theory of action, and thereby is too broad a construct. It comprises purposes, thoughts, beliefs as well as feelings and emotions. They might involve, thus, the representation of any such kind of mental state. Mental states that would be typically represented in higher-order desires, however, are not fleeting or otherwise insignificant ones, but those that are embedded in relatively long-lasting attitudes, convictions or modes of behavior. In other terms, they are instances of habits of action.[58] Accordingly, we can reformulate Frankfurt's definition of a person as the kind of being who can have second-order desires thus: A person is the kind of being who can desire to change its habits. On the other hand, higher-order desires involve the confirmation or rejection of these habits, a motivation to maintain or to change them, and, most importantly, a projection of the self into the future and volitional identification with this projected self. When we desire to change the way we behave, feel, think in relation to something, we actually desire to *become a person* who behaves, feels, thinks consistently in a manner we deem valuable in some respect. Therefore, we basically desire to establish certain habits. This desire, in turn, is not an ephemeral and temporary one, but one that is itself the instance of an attitude, conviction or persuasion; namely, a second-order habit. Thus, personhood has to do with the ability to establish higher-order habits—habits which maintain, modify or uproot lower-order habits.[59]

Further, we find in the possibility of self-induced change also the essential significance of accountability. If our wills were somehow fixed by nature, so that we are only left with the choice of appropriating or rejecting our effective desires, of being like either the willing or the unwilling addict, there would be little meaning left in holding each other accountable. As Hume maintains, the legal dimension of accountability also rests on the assumption that persons can be persuaded to behave differently.[60]

The establishment of second-order habits is at the heart of personhood when we consider it in its process aspect. This process is characterized by being aimed at attaining higher-degrees of self-control, in the sense I have explicated in the first section. Self-control is neither an absolute phenomenon, nor does it imply a special mode of determination. Because it concerns not how any action is actually brought about at the moment of its performance. Its power of determining the will concerns instead only future actions, and since future acts are not yet

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[58]This is to say, the kind of habits that can be ascribed to persons as such (unlike, for instance, habituated motor behavior).

[59]This idea is considerably similar to the classical Aristotelian discussion of cultivation of character, which I translate into establishment of higher-order habits, although it is arguably broader in scope and thus not restricted to the domain of ethics.

[60]Hume, *Treatise*, p. 410.

determined, it presents us the proper way in which we can conceive autonomy. Peirce writes:

> The power of self-control is certainly not a power over what one is doing at the very instant the operation of self-control is commenced. It consists (to mention only the leading constituents) first, in comparing one's past deeds with standards, second, in rational deliberation concerning how one will act in the future, in itself a highly complicated operation, third, in the formation of a resolve, fourth, in the creation, on the basis of the resolve, of a strong determination, or modification of habit.[61]

In connection with the previous discussion, self-control involves identification with a (future) self that is deemed in some respect *better*. This "respect" in turn, or Peirce's "standards," cannot but be embedded in social meanings. Self-control is thus inescapably normative and social. Further, from the perspective of self-control personhood appears to involve not only a spatiotemporal extension of self-consciousness, but also a differentiation into multiple selves which, though are all mine, I identify with differentially. This is because I do not simply appropriate past actions into my "self" through memory. While doing so I also evaluate these actions and accordingly adopt a certain *attitude* towards a past self. If I cannot *identify* with those actions I appropriated, I project a self into the future with whose (not yet realized) actions I can identify with. Identification with a past or future self, moreover, involves an irreducible emotive dimension. Appropriating actions but failing to identify with them is typically bound with feelings of regret, shame or guilt, which in turn strongly contribute to the motivational dimension of self-control. Formation of a resolve and, on its basis, modification of the habit that produces those actions that I do not identify with constitute the actual arena where the characteristic struggle for self-control takes place.[62]

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[61]Peirce, CP 8.320. Bibliographical note: Peirce's writings are cited in the form that has become convention among Peirce scholars. References to *The Collected Papers of Charles Sanders Peirce* Volumes 1 – 8 have the form CP n.m, where n refers to volume and m to paragraph number; those to *The Writings of Charles S. Peirce: A Chronological Edition* Volumes 1–8 have the form W n.m, where n refers to volume and m to page number; those to *The Essential Peirce* have the form EP n.m, where n refers to volume and m to page number. Lastly, citations of the form MS n are to Peirce's manuscripts and follow the numbering in Richard S. Robin (ed.), *Annotated catalogue of the papers of Charles S. Peirce* (Massachusetts: The University of Massachusetts Press, 1967).

[62]Cf. Frankfurt, "Freedom of the Will and the Concept of a Person," p. 17. The present account most clearly diverges from Frankfurt's analysis on a point that I deem to be central and Frankfurt finds peripheral or secondary. His discussion of personhood in terms of second-order desires arguably underestimates the significance and centrality of self-control. He argues that second-order desires are not of necessity formed deliberately and it is not the case that a person "characteristically struggles to ensure that they are satisfied." The conformity of one's will to one's second-order desires, he argues, might be much more spontaneous and thoughtless. Freedom of the will comes to some naturally, without much thought and effort, so that they are naturally moved by a desire when they want to be moved by that desire. Others need to struggle for self-control. However, why would we need to resort to an analysis in terms of different orders of desire in the former case? To follow his example of a person who is moved by kindness when he wants to be kind, why not simply say that this person is moved by kindness? Not only we would not need to talk about the additional level of *wanting* to be kind, because it will be of no practical import, but also the freedom of the will becomes a question only

Attainment of self-control, further, can only be a long lasting, or ever continuing process of habit formation and modification. Peirce, an Aristotelian in his conception of habit, speaks of self-control in terms of nested habits and habits of deliberate habit-change. Thus, what we are interested in is a particular self-consciousness that can contribute to the formation of higher order habits. Such a consciousness requires something different than experiential access: it is characteristically a deliberative process, one involving critical self-evaluation. This critical self-evaluation implies in turn that one can ask for and give reasons to oneself in the form of an inner dialogue. I argue that it is precisely here that the human animal appears in its irreducibly social nature: this self-consciousness is an *internalized* communication of a special kind, which primarily takes place in between people as they create, maintain, contest or confirm, mutually adjust social meanings and interpersonal relations; a kind of communication characterized by persuasion. Because acting on second-order desires, in difference to acting on first-order ones, is not essentially different from acting upon another person *as a person*.[63] The quintessential case of acting on other persons as persons is engaging in social negotiation and meaning-construction, or participating in the game of giving-and-taking reasons; to put it simply, engaging in *mutual persuasion*. This inner dialogue thus is rooted in the capacity for participating in mutual persuasion, which is secondarily internalized in the form of assuming the same interpersonal attitude towards oneself. The differentiation into multiple selves I touched upon above implies a differentiation of roles in the operation of this particular kind of self-consciousness: one assumes simultaneously the role of asking for reasons and that of providing them. In essence, then, the process of attaining self-control is a process of *self-persuasion*. Self-persuasion does not stop, moreover, at the point where we form higher-order desires, it further requires that we *act* on our reflectively formed aspirations, convictions, attitudes to maintain or modify the habits that determine our will.

We can arguably find in the capacity for self-persuasion the key to an adequate understanding of personhood. Firstly, it has an irreducible reference to the relational dimension of personhood in that it involves assuming and reciprocating a personal attitude (in a dialogue with oneself in the same way as with another). Secondly, it is a person-making disposition grounded in various animal dispositions, such as those for reflective thought, verbal communication, complex emotions, memory and imagination. Thirdly, it is essentially related

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if it can become a problem. If this latter is central to personhood, somebody whose will is (somehow) naturally free would not be a person, since the freedom of his will cannot become a question. Moreover, realistically such an entity could not be encountered among human beings. I argue, instead, that struggle for self-control is essential to personhood.

[63]For a similar interpretation of Frankfurt's second-order volition, see Dennett, "Conditions of Personhood," p. 193.

to certain practices (such as giving-and-taking reasons) that characterize the very context of social agency.

An adequate understanding can be truly attained, however, only when we achieve an understanding of how and why these aspects are inseparably interrelated in the capacity for self-persuasion. We can be in a position to explicate these relations only if we approach personhood from a genetic perspective; namely, if we inquire into the *origins* of personhood. I will locate this inquiry in the emergence and development of person-making dispositions.

There is a peculiar fact about human beings that is fundamentally related to becoming the kind of entity who can engage in self-persuasion, but is nonetheless strangely overlooked in the majority of philosophizing on persons—something that becomes especially striking when overlooked in an argument about unique properties of humans that demarcate them as persons from other animals: Humans are born into a community of fellow beings where they are regarded and treated as persons way before they begin to manifest the essential dispositions of a person. For a significant period of time this regard is hardly different than an *as-if* stance, since human infants do not differ from those of our closest living primate relatives in any way that would sufficiently justify the fundamentally different attitude that is assumed towards them. This attitude involves much more than can be explained on the basis of compassion and love, or can be reduced to an arbitrary choice to extend the person status to infancy. We constantly ascribe complex mental states to infants who clearly cannot manifest them, we over-interpret their slightest gesture or movement as signifying something which they are "trying" to but "cannot" yet express, we constantly talk with them before they become capable of verbal communication, attribute them sophisticated character traits, confer them gradually widening responsibilities and liberties for hardly any practical reason other than pedagogical ones, we happily grant their slightest claim for dignity and respect. Any act of reciprocation we receive for our personal attitudes towards a human infant, we answer with exponentially intensifying this attitude. But all these are central to becoming a person, because person-making dispositions can only come about within the context of intersubjective relations with beings who manifest these. The human infant in turn, while not yet manifesting person-making dispositions, is characteristically open to and deeply motivated for forming intersubjective relations. Soon the personal attitude directed at the infant ceases to be an as-if stance and becomes a central feature of a psychological system, where the infant's psychological processes are scaffolded by those of another. The characteristic dispositions of a person come about primarily as qualities attributable to this extended psychological system, rather than the individual organism that is the human infant. The development of the person is the history of how these qualities become internalized as those of an individual. Moreover, this whole developmental story is embedded in social practices and institutions and relies on cultural artifacts, such as sign

systems; thus, becoming a person is not only an individual but equally an intersubjective, social and cultural process.

From a genetic perspective, acquisition of the capacity for self-persuasion consists, firstly, in acquiring a capacity for metasemiosis. Metasemiosis is reflexive semiosis; that is, a sign-activity directed primarily at the processes of interpretation themselves and secondarily at their objects, as it is the case with, for instance, retrospective evaluation of an inference for consistency or talking about how we talk. Metasemiosis implies that one can recognize meaning-making processes as processes of sign interpretation, engage in social meaning negotiation and construction, and finally use signs reflexively, to effect change on own thoughts, attitudes and actions—to scaffold own meaning-making processes. Self-interpretation is a quintessentially metasemiotic process, thus a capacity for metasemiosis is the necessary formal condition of the reflexive character of an inner dialogue. Further, an individual capacity for metasemiosis presupposes the availability of a higher order in communicative interactions, which allows for social negotiation and meaning construction.

Secondly, it consists in an ability to assume and coordinate social perspectives and thereby to participate in norm governed social interactions. Perspective-taking is central to any reciprocal communicative social interaction which is targeted towards meaning construction and social negotiation. Engaging in perspective-taking is essential to internalizing interpersonal and (more general) social attitudes as potential normative attitudes through which one interprets own emotions, thoughts, beliefs and actions. Further, perspectives are differentiated, enacted and coordinated primarily in social interactions (e.g. through role reversal, creation of pretense situations or engaging in rule-based games) and on this basis they subsequently are represented in processes of thought.

It culminates in the formation of higher-order habits of reflexivity. These habits originate in interpersonal relations in the ontogenetic context of extended psychological systems. Learning how to interpret and modulate one's emotions, to critically evaluate situations, or to rise above one's personal perspective to gain an understanding of own attitudes, convictions or patterns of conduct all consist in the establishment of such higher-order habits. These habits determine psychological processes originally and for the most part in the context of social interactions (e.g., of settled practices of dialogical inquiry), but can eventually do so also in the form of individual habits of reflexivity. Conceived thus, becoming a kind of being who can engage in self-persuasion consists ultimately in internalizing the patterns and structures of communicative social interactions in the form of an ongoing auto-communication.

This proposal rests on several key theses that I will progressively develop in the subsequent chapters. In claiming that self-persuasion is a particular kind of internalized communication, I argue, firstly, that there are broadly two modes of communication, *coordinative* and *transformative*, and self-persuasion is

a transformative mode of communication, and secondly, that the capacity for self-persuasion comes about through the internalization of the intersubjective process of transformative communication in the form of a psychological one. The transformative mode of communication is characterized by its efficacy over meaning structures; that is, over habits of interpretation, be they individual or supra-individual. Mutual persuasion is the paradigmatic form of transformative communication, because it consists not in an exchange of informational content or an issuing of a request or order that has to be interpreted in the same way by all parties to be successful, but in the reciprocal addressing of the communicators' habits of interpretation themselves (such as social meanings). I refer to the former mode of communication as coordinative. With respect to the origins of person-making dispositions, communication becomes transformative in an additional sense: It contributes in a constitutive way to the establishment in the individual of (higher-order) habits of interpretation that operate by governing, constraining and guiding psychological processes. In this latter sense, transformative communication is not an inter*personal* process in the strict sense, because one of the parties does not yet manifest any person-making dispositions, but an intersubjective process through which these emerge. It does not require, again in this sense, conventional sign systems such as symbolic language either, because intersubjective processes of meaning construction and negotiation precede, rather than presuppose, the formation and use of such sign-systems. Thus, we can trace these foundational intersubjective processes back as far as non-verbal infant communication. Transformative communication establishes and modifies meaning structures in the intersubjective domain and scaffolds their establishment in the psychological domain. Internalization consists in this intersubjectively scaffolded process of transformation of forms of communication into forms of reflection. These concepts are explicated in Chapter II and linked to communication theory in Chapter III.

Transformative communication plays a constitutive role in all of the three major phases I have outlined as pertaining to the acquisition of the capacity for self-persuasion; namely, the emergence and sophistication of metasemiosis, development of perspective-taking and perspective-coordination, and the establishment of higher-order habits of reflexivity. I approach the development of reflexivity through processes of scaffolding and internalization in reference to Vygotsky's sociocultural theory of cognitive development in Chapters V and VI. In Chapter VII, I focus firstly on contemporary theories of social cognition and the Piagetian perspective-taking tradition and subsequently on a semiotic-pragmatic notion of perspective and an account of social development of perspective-taking in reference to Herbert Mead.

In arguing that self-reflective processes are internalized forms of communication, I take as a central premise that thought processes, just as processes of communication, are always in signs. Signs have objects, thus refer beyond themselves; their meaning consists in being interpreted and these

meanings are always public or can be made public. If all thinking is in signs, there cannot be any thought that is self-contained in being its own object, meaningful in itself, or fundamentally incommunicable. I thereby argue that reflexivity is always mediated, and communicational in nature. It is in essence a metasemiotic process, which involves interpretation of interpretation, or sign-processes that refer themselves to other sign-processes. Further, reflexivity of communicative processes, characteristic of transformative communication, is prior to the reflexivity of thinking, which requires the former. The former idea that all thinking is in signs is explored in reference to Peirce's semiotics, which is the topic of Chapter IV. The latter idea that the reflexivity of communication is prior is explored in reference to Bateson's relational theory of communication and his notion of metacommunication in section III.2 as well as Chapter V.

Lastly, signs are interpreted not only in thought but also in transient feelings, complex emotions, actions and in habits. In this respect semiosis permeates all psychological processes that involve some kind of interpretation (e.g. appraisal, evaluation, or expectation formation). Self-control, on the other hand, addresses habits of action, which involve habits of thought as well as habits of feeling, through establishing higher-order habits. Peirce's reformulation of semiotics in light of his pragmatist proposal will provide the context for discussing the central notions of habit and self-control. I go into these in sections IV.4 to IV.6 as well as in the last, eight chapter.

# II A GENETIC PROPOSAL

## II.1 COMMUNICATION, SOCIALITY AND INTERSUBJECTIVITY

To inquire into communication in the contemporary context implies that one ventures into unwinding the one thread that travels through numerous nodes of a web of inter-referential topics. The nature of meaning, reference, experience, identity, mind, knowledge, truth, objectivity as well as of culture and social order are but some of the most immediate puzzles that one faces. From the present perspective, at the core of this network of topics lies the relation between communication and a kind of self-reflexivity I have claimed to be essential to personhood. The way in which the nature of this relation is conceived has significant bearing on how the whole network is conceptualized.

The present argument approaches communication through a differential consideration of sociality and intersubjectivity. The former denotes, for our purposes, the generic features of a broad scope of interactions pertaining to the coordination of actions with a view to collective goals. The latter denotes those of a more limited scope of interactions that confirm, challenge, or transform the individual in its relation to the world and the world in its relation to the individual. Such a conception of intersubjectivity might appear peculiar. More commonplace conceptions of intersubjectivity range from the most externalist views that suggest a particular kind of social interaction that involves or is primarily characterized by an understanding of the other as having mental states (i.e., as an addressee of ascriptions of intentionality) to the most internalist views that refer to an understanding of the other as a subject of experience, as another self or "I." Our characterization above hits the middle ground, but more importantly emphasizes the relationality as well as perspectivalness of meaning. To explicate, intersubjectivity involves an understanding of the other as having a different but equally real perspective and as a being who can confirm the reality of our own perspective. A perspective, in turn, is understood as a relation between the individual and the world. It is both a holistic (sensory, perceptual, emotional, intellectual) and a constitutive relation: A perspective is the individual in its relation to the world and the world in its relation to the individual. In being holistic, a perspective comprises embodied experience, relational attitudes as well as self-definition. Understood in these terms, we can maintain that while intersubjectivity presupposes and can be subsumed under sociality, the reverse is not true: There can be various forms of social interaction that lack intersubjectivity completely, but intersubjectivity depends on and subserves sociality.

Communication through the lens of sociality is a process of coordination of various activities and attitudes, which are (individually) directed and constrained by common meaning structures, broadly construed. Through that of

intersubjectivity, it is a process of meaning creation, negotiation and maintenance. If the meaning structures in question are impervious to the influence of communicative processes but only direct and constrain them mono-directionally, then communication would serve social ends but be bereft of intersubjectivity. On this condition, individual perspectives would not have much implication in the social process. When communicative processes are efficacious on the meaning structures themselves, on the other hand, they can also confirm, challenge or transform perspectives.

It might be objected, however, that the primary or fundamental function of (at least human) communication consists in the conveyal or transmission of information, not in the coordination of actions. But conveyal of information is never for its own sake in communicative interactions; it is always for the sake of some broadly social end, such as persuasion, creating interest, organization of relational attitudes (e.g., through gossip), updating the other's knowledge base on shared facts, facilitating collaboration, maintaining common reference and so on. In short, it is ultimately in service of coordination of actions just as much as explicitly pragmatic utterances without much content (such as imperatives and questions) are. If, thus, conveyal of information is never independent from what the communicator wants to achieve with it, we can safely state that coordination is not the only but the most basic function of communication. With the increasing sophistication of the medium of communication (e.g., linguistic signs vs. gestures) and the simultaneous sophistication of possible content, the coordination function becomes obviously an ultimate rather than proximate function, which can be suspended, postponed, or become transparent. This creates in turn a space for negotiation, for the coordination not only of overt behavior but of roles and relational attitudes, and for the construction of a shared view of a reality. This is to say, coordination of actions might recede to the background of communicative interaction while negotiation and construction of meaning come to the foreground. In any case, communication is fundamentally social-pragmatic, whether this sociality also comprises an intersubjective dimension or not.

Such an approach to communication must evidently define it in a way that is not exhausted by conversations, but extends over all forms of interaction that coordinate and transform our relations to the world, to one another, and to ourselves. To begin with, linguistic communication is not the *only* process whereby meaning comes about, unless one approaches meaning solely in reference to a self-referential, enclosed system of symbolic communication. It is already widely acknowledged that neither communication is exhausted by language nor language is exhausted by usage of conventional symbolic forms in accordance with syntactic rules. On the contrary, linguistic communication depends for its possibility on a community of meaning that goes beyond lexical, one that is grounded in common forms of life shaped within the broader and all-encompassing human lifeworld. What supports these common forms of life at any point is not only social entities constituted by symbolic communication, like

rituals or institutions, but more primordially coordinated activity and intersubjective understanding. These consist in the first place in that we can perceive and treat one another as sentient beings, as agents, as seats of experience, as having different but commensurable perspectives.

The human lifeworld, the *Umwelt* of the human animal on the other hand, is a natural or ecological condition of possibility of coordinating our actions and, ultimately, of achieving intersubjectivity. The fact that this human lifeworld is "common" is not due to its being continuously constituted through symbolic communication, but ultimately to the integration of processes of meaning-making which show structural continuity as well as discontinuity across organismic life.

What does such an approach to communication imply in regard to the kind of self-reflexivity that characterizes a range of psychological processes from self-evaluation to self-persuasion? The self-reflexive mind is not a given that the present argument starts with, but a phenomenon to be investigated through its genesis. This genesis is to be investigated as a history of meaning, through the history of sign-processes. The history of the sign is embedded in the natural, organismic processes of meaning-making which extend themselves, though through certain qualitative changes, into cultural meaning-making, where mental processes can assume a reflexive form. I argue that mind is neither coextensive with life, nor is it a first-order, strongly emergent phenomenon that introduces a rupture into a naturalistically conceived chain of being. Instead, its necessary conditions are to be found in the broader process of natural meaning-making and those of self-reflexive mental functions in social meaning-making, which is grounded in but not absolutely reducible to the former. I take the processes whereby organismic activity within an environment is shaped and guided by the history of organism-environment relations as primary, and thereby assume that an account of self-reflexivity that neither mystifies nor deflates its subject matter should start neither with mind, nor experience, nor language, nor culture, but with *meaning*, whose history and transformations enable one to ground the former in actual relations that in different ways make the past present in action.

The ground level argument the present work draws on, which is elaborated in more detail in the following sections and presented in a rather axiomatic form here, is that self-reflexivity is essentially related to communication, which is based in turn on the primary activity of bringing forth meaning that is characteristic of life—*semiosis*. This primary activity, which is intended to cover the generic features of various ways of meaning-making, is a process of interaction that is self-referentially oriented, albeit not necessarily through consciousness, and one that actively defines its interactants and brings about change in them through making history, in the broadest possible sense, efficacious. In this latter capacity, we conceive it as an activity of habit-taking.

What a statement such as "the erosion marks on this section of bedrock are one billion years old" implies is essentially different than what is implied by a statement such as "the structure of this particular metabolic pathway is one million

years old," or as "this particular member of species *x* is ten years old." While for the bedrock the past is irrelevant, insignificant, and external to it, for the organism it is profoundly and substantially relevant and significant, because its whole history is in a certain sense contemporaneous with it and efficacious in it. The various ways in which the living being renders history efficacious, ranging from the most primitive integration of sensation and action to maintaining a personal identity, is what is denoted by the primary process of meaning-making. It is what renders the organism and its surroundings what they are in their interaction, namely an *agent* and an *environment*, what enables their coupling to be a seat of activity that goes beyond efficient causation, which operates only *hic et nunc*, and what confers being with *value*.

This primary process of meaning-making does not presuppose the category of the social. In its most rudimentary form, it consists in the integration of sensory and associative processes with motor action in the environment. Yet the social process, broadly construed, is what achieves the coupling with one another of such discrete interactions with the environment, and thereby what introduces a mediation into the meaning-making process from the outside. At its most basic and prevalent level, social mediation concerns only the *behavioral,* or motor action part of the otherwise integral process of meaning-making. The coupling of meaning-making processes with one another is limited to behavioral integration or coordination, such as is the case with the collaborative activities of social insects geared towards finding food or building nests. How differences are detected in the environment or how patterns are established between detected differences remain individual processes impervious to the social process. At a further level of coupling of individual processes of meaning-making, which is nearly absent outside of mammalian forms of sociality, social mediation penetrates the organismic processes of meaning-making not only on the level of behavior but also on that of *dispositions to act*. Here the integration of sensory and associative processes with motor action is not direct, but occurs through the mediating level of *affect*, thereby allowing meaning to be relatively unfettered from the linearity of the sensation-action cycle. Such social interactions are efficacious in coordinating attitudes already before they culminate in action. At a further level of coupling, the mediation of individual meaning-making through the social reaches beyond attitudes and penetrates down into the *perceptive* processes. What registers as pleasant, repugnant, relevant, striking, off, important, valid option for choice, in other words the very parsing of reality in terms of value is co-determined by the history of social interaction.

On the other side of the coin, to the extent that the social process sublates the independence of the individual processes, there emerges a novel kind of individuality and independence. Whereas the temporal order that is efficacious through the meaning structures that organize the activities of most organisms is only that pertaining to the *species*, depending on the level of coupling the temporal order of the *lifetime* can acquire an efficacy of its own through communicative

sociality. While most species act in a present that obeys the evolutionary time, we (and, to some extent, also our primate relatives and possibly some other complex mammals) can act within a temporality that is more truly ours. The effect of social mediation has thus a paradoxical outlook: To the extent that a living being is social, it becomes individual and to the extent that experience is transformed through the social process, it acquires a truly inward dimension.

## II.2 MEANING AND SIGNIFICATION

Charles Sanders Peirce conceived all the perceptive, affective and intellectual processes whereby aspects of a situation are rendered meaningful in terms of signification, hence not only textual and spoken meaning**,** in other words linguistic meaning, but also experiential meaning has become a phenomenon to be investigated in "communicational" terms. This extension of the scope of communication to include all meaningful experience is based on more than an analogy or modelling relation established between thinking, in the widest sense, and communication, which would have been neither illegitimate nor unprecedented. It is based rather on an explicit epistemological claim that we always and only think in signs and a further implicit one that meaning, in all possible contexts it appears, is signification.

We can see two potential conceptual expansions that follow from this identification: that of signification over meaning and that of meaning over experience, possibly over life *per se*. Firstly, signification in the linguistic context becomes the subject matter of but one sub-domain of a wide research field investigating signification.[64] Secondly, different modalities of experience going beyond what can figure in conversation as its *content* become amenable to be conceived in terms of meaning.

Following Peirce, one might equate the significative potential of any aspect of experience with the interpretive capacity of the experiencer and infer that, in the social realm broadly conceived, the communicative potential of any act is proportional to the interpretive depth of the addressee or simply of the observer, more than it is to the expressive capacities of the producer of the message. Then, as long as there is an interpreter and a social situation, any behavior would be communication. The minimal instance of "communication" can then be outlined as any interaction where the action, attitude, or subjective state of one party is mediated by the actual or anticipated response, attitude, state or qualities of the other. A person who wears sunglasses in an enclosed space by that very act can alter the behavior, attitude, or simply the subjective state of others; they may avoid contact, reproach, become more reserved, or

[64]This opening up of linguistics into semiotics has yielded burgeoning research programs, a most prominent of which was born out of a semiotic reading of Jakob von Uexküll's *Umweltlehre* by Thomas Sabeok—biosemiotics.

simply feel surprised, irritated, or possibly entertained without acting on that state. This is but a broader semiotic interpretation of Paul Watzlawick's axiom that "one cannot not communicate."[65]

Very few would confine communication to the boundaries of the peculiarly human, yet still fewer would argue against the qualitative discontinuities among the communicational phenomena across species. In a broad sense, communication seems to be coextensive with life. In a wide range of contexts from foraging, migration, hunting to mating, intraspecific and cross-specific social interactions, livings systems depend on communication. Hence, the minimal requirements outlined above are fulfilled by a range of encounters much broader than human interactions. A cat startling at the snarling of a dog and rushing away has a clear enough idea of the hostile attitude of the dog, so does the dog of the cat's fear, which is already anticipated in the initial behavior. And so does another cat on top of a wall watching the interaction of the two and moving silently away. Yet, the insect changing its path due to the presence of the large body of the dog in the vicinity is not part of the communicative situation, since the dog's behavior does not have any significative potential for the insect.

On the other hand, human communication typically manifests not only the interpretation and conveyal of meaning based on pre-determined or species-specific meaning structures, such as the interpretation of snarling as hostile, but also creation and communication of novel meaning structures that constrain, modify or frame the former on a higher order. "Learning," in the operational sense of establishment of novel associative connections between stimuli, occurs even in species with a most rudimentary nervous system. But only a small part of social interactions seems to involve the communication of learned relations in the form of novel content and means of expression, and, further, the formation of the latter within the communicative process itself. Moreover, human communication is characterized by a particular form of reflexivity that distinguishes it from most other instances of communicative sociality. To return to the example, the connection between the initial snarling behavior and the affective response of startling which culminates in a fleeing behavior is evidently not a coincidental one. The effect of the initial behavior on the other party already prefigures in it in some way. The fleeing behavior, further, has some reference to the potential response by the first party; for instance, to let the fleeing individual go upon perceiving a lack of challenge. Had the hostile attitude been attributed to a less formidable creature, the response would also be different. Thus, the whole interaction manifests a certain reflexivity in that some of its components, or phases, refer to others. This reflexivity of the complex relation between the attitudes and behaviors of the involved parties,

[65]Paul Watzlawick, Janet H. Beavin and Don D. Jackson, *Pragmatics of Human Communication - A Study of Interactional Patterns, Pathologies and Paradoxes* (New York: W. W. Norton, 1967).

however, is not due to the self-reflexivity of the processes that bring about these attitudes and behaviors—as in fine-tuning the emotional tone of a message in anticipation of how it would be received—but is achieved within a temporal order that far exceeds that of experience, and through processes rather different in nature than reflexive thought. As such, in the example and in other similar cases the complementary reciprocity of behaviors that gives a reflexive quality to the interaction obeys structural constraints that often have the force of necessity. It is necessary that the snarling of the dog signifies a hostile attitude, in the absence of which the gesture would also be absent. Also necessary is the agitated reaction to perceived hostility. A human participant in the encounter could, on the other hand, not only restrain the agitated disposition but even perform the same gesture without harboring any hostility herself, for instance in order to intimidate the dog, thereby act in reflexive reference to its meaning *as such*; that is, as something signifying something else for an interpreter. In this case, in reference to the fact that the snarling gesture signifies hostility for the dog.

Human communication typically involves the recognition of interpretation *as* interpretation. Moreover, it involves the recognition of *difference* in interpretation (i.e., sense) with respect to the elements of reality that are fixed by mutual reference as being the *same*. In other words, while meaning in any form and complexity is necessarily perspectival, human communication owes the possibility of its modern form to higher-order meaning structures that circumscribe natural meaning[66] *as* perspectival. It further implies dynamicity of meaning, the ongoing redefinition of previous means of interpretation. All this expansion and transformation of communicative capacity goes hand in hand with the expansion and transformation of sociality into one that is thoroughly infused with intersubjectivity, that is, with the perception and treatment of one another as agents who simultaneously act on, interpret and create meaning.

This is not to say that we can or should clearly demarcate between self-reflexive and natural meaning-making, or between dynamic, ambiguous and pre-determined, shared meaning structures. These distinctions are highly simplistic and are meant only to mark the extreme ends of a spectrum, one of which is most clearly known to us and the other most clearly identifiable through its contrastive features. A genetic perspective would instead be interested in elucidating what kind of quantitative or qualitative changes occur in the much broader grey area.

It is not a rare practice in the field of semiotics, the broad discipline investigating meaning in terms of signification, to restrict *semiosis*, sign-process,

[66]The distinction between higher-order meaning and natural meaning here assumed comes practically close to that between non-natural and natural meaning made by Grice, although I envision not a binary but gradual picture. See Herbert Paul Grice, "Meaning," *Philosophical Review* 66, no. 3 (1957): 377–88.

to the human use of signs, or to *anthroposemiosis,* as it is sometimes referred to.[67] Besides the anthropological and cultural routes taken in investigating how signs are used in specific contexts, the sign-processes addressed in the context of an anthroposemiotic study are the self-reflexive meaning-making process that require the recognition of signs *as signs*, that is, as denoting something other than themselves for an interpreter. Where this reflexivity is absent, we can supposedly no longer talk of signs, but maybe of signals. This sign concept,[68] however, can be more accurately described in reference to the process of *metasemiosis,* or self-reflexive semiosis*,* instead of semiosis per se. Moreover, if one adopts the methodological perspective that the process of meaning creation is better investigated through its genesis, it becomes clear that such a restriction would preclude or at least terminologically over-complicate a genetic account. The modal and genetic conditions of metasemiosis, its possibility and development, should then be looked for in semiosis. This is broadly the general perspective uniting more naturalist approaches to meaning, a prominent example of which is the research program *biosemiotics*.[69]

## II.3 GENESIS OF THE REFLEXIVE MIND FROM AN ONTOGENETIC PERSPECTIVE

Sociality is a broader phenomenon that predates and prefigures intersubjectivity, whereas intersubjectivity is much harder to identify in nature, except amongst some highly complex mammals such as our closest primate relatives. An intuitively appealing and most travelled path of reasoning to explain the nature of the relation between intersubjectivity and the human capacity for meaning creation goes from the evolution and development of cognitive capacities to that of social understanding in an almost linear fashion: The more complex the cognitive apparatus becomes, more sophisticated the intersubjective process, like any other mental operation, is structured. Intersubjectivity, hence, is but one outcome of the rise in cognitive complexity. The processes of understanding are ultimately indifferent towards whether one tries to understand a person or a non-person. We come to understand each other better because we simply understand better.

It is increasingly acknowledged, however, that the relation between sociality and cognition is rather interactive and not at all linear; that social

[67]For the origin of the term, see John Deely, *The Human Use of Signs, or, Elements of Anthroposemiosis* (Rowman & Littlefield Publishers, 1993).

[68]See e.g. Göran Sonesson, "The Foundation of Cognitive Semiotics in the Phenomenology of Signs and Meanings," *Intellectica* 58, no. 2 (2012): 207–39.

[69]A more detailed exposition of some key theoretical and terminological issues related to the scope of semiotics, or how far and wide the study of meaning can reach in nature, is presented in Chapter V.

processes has been crucial in the evolution of our cognitive capabilities[70] as well as that social interaction is a necessary factor in the unfolding of those stages of cognitive development that are characteristic of the human mind.[71] This relatively less travelled path of reasoning tilts the balance of significance in the interaction of social processes and human cognition in favor of the former and allows one to emphasize the social origin and inherently social nature of higher cognitive processes. The focal point of this perspective is often symbolic activity, which is thought to represent a qualitative leap in the evolution and development of intersubjectivity and, mediately, of the human mind. Communicative practices can be regarded from such a perspective as both the origin and the paradigm of the processes of symbolic meaning-making, the highest form of which is discursive thought.

Attributing the origins of symbolic thought to communication might seem to be circular, since intuition tells us that that there cannot be any communication without communicating subjects and that one cannot communicate something one has not already thought. However, the circularity can be resolved if we take the origins of symbolic activity to lie in actual social processes that are but potentially symbolic, thus ground symbolic communication in a broader sphere of pre-symbolic and extra-symbolic communication.

This reversal of explanatory priority has precedent, among others, in Herbert Mead's strategy of going from social interaction to the self-conscious mind. Mead maintained that instead of presupposing the existence of minds or selves "as antecedent to the social process in order to explain communication within that process", such phenomena "must be accounted for in terms of the social process, and in terms of communication," because:

> if […] you presuppose the existence of mind at the start, as explaining or making possible the social process of experience, then the origin of minds and the interaction among minds become mysteries. But if, on the other hand, you regard the social process of experience as prior (in rudimentary form) to the existence of mind and explain the origin of minds in terms of the interaction among individuals within that process, then not only the origin of minds, but also the interaction among minds (which is thus seen to be internal to their very nature and presupposed by their existence or development at all) cease to seem mysterious or miraculous. Mind arises through communication by a conversation of gestures in a social process or context of experience—not communication through mind.[72]

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[70]Tomasello's work has been central in addressing the role of coordinated activity and its communicative demands in the evolution of cognitive abilities. See e.g Michael Tomasello, *The Cultural Origins of Human Cognition* (Harvard University Press, 1999). A more detailed exposition of this connection can be found in Chapter V.

[71]To a certain extent Jean Piaget's perspective on cognitive development recognizes the driving role of social interaction. The strongest defense of the developmental priority of social interaction, on the other hand, can be found in Vygotsky's work. The question of priority is addressed mainly in Chapter VI.

[72]George Herbert Mead, *Mind, Self and Society* (Chicago: the University of Chicago Press, 1934), p.43.

The genesis of the human mind has often been investigated on historical, evolutionary (phylogeny), and developmental (ontogeny) time scales, often with analogical inferences from one scale to another. Comparisons between the human infant and the primitive man, or between non-human animals and pre-social humans are abound in the philosophical, psychological or anthropological literature. Gregory Bateson's ecological mind, for instance, furnishes a prominent example of a genetic account of sign-processes on the phylogenetic time scale. Mead's perspective, quoted above, falls within the thread of analogies between stages in the evolution and the ontogenetic development of symbolic communication. He is joined in that also by the sociocultural developmental psychology tradition that we can generally term Vygotskian. One finds here as well the primary assumption that the human infant is only potentially human, and the necessary condition of its actualization is interaction with the human social environment through symbolic communication.[73]

An emphasis on interpretation over against expression and the prioritization of the interpreter's role in communication is of crucial significance in a social interactionist investigation of the development of subjectivity, since the social situation peculiar to human development, unlike that pertaining to hypothetical scenarios of our historical or evolutionary past, involves a fundamental asymmetry between the communicators. As the necessary condition of the development of its own capacities for meaning formation, the human infant is from birth on immersed in a social environment that far exceeds its interpretive capacities in complexity, and bestows its behavior with far greater significance that what could possibly be intended.

On the other hand, historical approaches to the genesis of a reflexive subjectivity are more common in philosophical inquiry. Taking culture and society as the domain of reference, a historical perspective approaches this genesis through the diachronic trajectory of the social process. Not the only, but probably the most famous example of such an account is Hegel's philosophy of self-consciousness. A more recent example with particular emphasis on symbolic activity would be Ernst Cassirer's philosophy of symbolic forms. With respect to analogical connections between historical and developmental scales, Freud (and Jung) may be mentioned as having proposed genetic accounts of reflexive subjectivity through linking the diachronic trajectory of the social process to that of the ontogenetic development.

A consideration of the phylogenetic dimension is an integral part of any naturalist and genetic approach to the human mind. Yet the evolutionary endowment of the human being is only one part of the picture, which cannot be complete without the sociocultural context. The sociocultural context in

[73]For an early and representative adaptation of Vygotskian sociocultural psychology tradition to communication framework, see Frank E. X. Dance and Carl E. Larson, *Speech Communication: Concepts and Behavior* (New York: Holt, Rinehart and Winston, 1972).

turn is not a stable background but itself historical, and as such it is a constitutive factor not only in the ontogenetic process, but also recursively in the theoretical inquiry directed at explaining it. The evolutionary, historical, and ontogenetic time scales cannot be considered in exclusion of one another, or reduced or opposed to one another, but collectively constitutive an integral whole, where each nonetheless enjoy some degree of independence from the others. Hence, a developmental psychological account can in principle *bracket* sociocultural phenomena, and a historical account can do the same for evolutionary phenomena. The ontogenetic one is the lowest and narrowest of these time scales, but has a particular significance for a genetic approach to human subjectivity by virtue of being the mediating dimension where phylogeny, culture, and society meet and communicate in the process of psychic individuation.

The present account of personhood, for this reason, places the ontogenetic dimension at its focus. However, in terms of its main assumptions, it endorses a qualified naturalist perspective in identifying the given structural constraints of meaning-making, and boundaries, thresholds and continuities in the interaction of the natural and the cultural domains. On the other hand, it endorses a qualified social constructivist perspective in giving explanatory priority to the social, communicative process over mind, self and their individual development. A semiotic framework is most fitted to unify these two perspectives in an account of the communicative origins of higher orders of cognition that are central to the reflexive mind and thereby to personhood.

From a semiotic perspective, communication and cognition have an affinity which appears almost self-evident: They both involve meaning-making on the basis of sign processes. In line with a long-lived philosophical tradition inaugurated by Plato who envisioned thought as internal dialogue, Peirce conceives the movement of thought to be dialogical—hence, communicational—in nature. The sign reflects, in turn, the communicational structure of semiosis its unified two-sidedness:

> [S]igns require at least two quasi-minds; a *Quasi-utterer* and a *Quasi-interpreter*; and although these two are at one (i.e., are one mind) in the sign itself, they must nevertheless be distinct. In the sign they are, so to say, *welded*. Accordingly, it is not merely a fact of human Psychology, but a necessity of Logic, that every logical evolution of thought should be dialogic.[74]

For Peirce, the operation of mind is communicational in form and origin. In its process aspect the mind is dialogical semiosis, which is always embedded in signs and semiotic habits. Its development can thus be mapped onto, as Atã and

[74]CP 4.551.

Queiroz put it, "the development of available semiotic material artifacts."[75] In a similar vein, Mead anchors the development of the self-conscious mind in communicational and quasi-communicational processes mediated by what he calls "significant symbols;" that is, by signs which manifest the two-sides of the social act in their very constitution.[76]

When approached from a semiotic perspective, the developmental question turns into the question of how the sign processes realizing both communication and cognition come about. Although semiotic studies of human cognitive development currently make up a rather small niche in developmental literature,[77] two of the most influential pioneers of developmental psychology, Piaget and Vygotsky, had given a central place to sign use in their theories of cognitive development. They both maintained that communication, in particular its linguistic variant,[78] and cognition do not follow separate developmental paths, because both interpersonal and intrapersonal psychological processes are modulated and transformed by the understanding and use of signs. Piaget[79] has famously dubbed the capacity for engaging in sign processes the "semiotic function," which he thought to underlie both communication and cognition. However, for Piaget the capacity for the communicative use of signs was largely an aspect of individual cognitive development, which followed a path from egocentrism to sociality. Vygotsky maintained, on the other hand, that sign use was developmentally a social achievement, not an individual one. For this reason, sign-mediated social interaction was the precursor and origin of sign-mediated cognition. From a broader perspective, the sociocultural school of Vygotsky and his colleagues maintained that semiotic mediation implies sociocultural mediation and thus individual psychogenesis should be understood in terms of the sociogenesis of mind. They are joined in endorsing this guiding heuristic by the social interactionist school rooted in American pragmatism, which goes back to Mead, and partially to Dewey.[80]

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[75]Pedro Atã and João Queiroz, "Icon and Abduction: Situatedness in Peircean Cognitive Semiotics," in *Model-Based Reasoning in Science and Technology*, ed. Lorenzo Magnani (Berlin, Heidelberg: Springer Berlin Heidelberg, 2014), 301–13, p. 301.

[76]Mead, *Mind, Self and Society*.

[77]Notwithstanding, we should note that the developmental history of cognitive-semiotic capacities is among the most central research questions to be addressed by the bourgeoning field of cognitive semiotics. See e.g. Jordan Zlatev, "The Mimesis Hierarchy of Semiotic Development: Five Stages of Intersubjectivity in Children," *The Public Journal of Semiotics* 4, no. 2 (2013): 47–70.

[78]The relation between socio-cognitive development and pre-linguistic semiosis is a research question that has been explored to a still more limited degree. A notable exception is the work of Colwyn Trevarthen on infant semiosis, to which I extensively refer in Chapter VI, section 4.

[79]Jean Piaget, *La Formation Du Symbole Chez l'enfant: Imitation, Jeu et Rêve, Image et Représentation* (Neufchâtel: Delachaux et Niestle, 1945).

[80]This perspective is still central to contemporary sociocultural activity theory, social interactionism and similar sociocultural approaches to development. See e.g. Jerome S. Bruner, *Acts of Meaning* (Harvard University Press, 1990); Michael Cole, "The Zone of Proximal Development: Where Culture and Cognition Create Each Other," *Culture, Communication and Cognition: Vygotskian Perspectives*, 1985, 146–61; Katherine Nelson, *Language in Cognitive Development: The Emergence of the Mediated*

This thesis approaches the question of social origins or the sociogenesis of mind in terms of a developmental (as well as evolutionary) connection I envision between higher-order communication and higher-order, reflexive mental processes such as metacognition, perspective-taking, self-interpretation and self-control,[81] which I identified in the previous chapter as being central to personhood. By higher-order mental processes I denote those which are in some way about other mental processes; that is, processes that regulate, monitor, interpret, evaluate, guide or control other processes taking place within the same psychic system. I denote by higher-order communication those social interactions where there is a multiplicity of interrelated levels of meaning and consequently a multiplicity of communicative channels, which make it possible to communicate about communication; that is, to modulate, confirm, challenge or transform the structures, the means and the (relational) patterns of communicative interactions. I maintain that at the basis of this connection lies reflexive semiosis, or metasemiosis, that characterizes both of these interpersonal and intrapersonal processes.

The higher-order in communication is famously termed by Gregory Bateson "metacommunicative." He[82] defines metacommunication in terms of a hierarchy of signs, where metacommunicative signs refer to or frame the interpretation of first-order signs. On the intrapersonal end, metacognition involves higher-order monitoring, evaluation and control of cognitive processes. Perspective-taking implies contrasting and coordinating possible alternative interpretations. Self-interpretation implies critical evaluation of own actions and attitudes. Self-control involves top-down regulation or modification of agentive processes or psychological components thereof (e.g. affective responses). These higher-order mental and communicative processes share the feature of involving metasemiosis; that is, second-order processes of semiotic mediation. Metasemiosis, in its cognitive sense, refers to higher-order, reflexive processes for recognition, monitoring and evaluation of sign interpretation. The operation of this semiotic reflexivity is reflected in the capacities for attending to signs, their objects and interpretants differentially, examining and evaluating sign processes, and judging the success or failure of interpretations. In its communicational sense, metasemiosis refers to the self-reflexive character of communicative interactions where meta-linguistic as well as relational rules and patterns are assumed, confirmed, explicitly thematized or negotiated.

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*Mind* (Cambridge University Press, 1998); Barbara Rogoff, *The Cultural Nature of Human Development* (Oxford University Press, 2003); James V. Wertsch, *Mind as Action* (Oxford University Press, 1998).

[81]For a more limited exploration of this connection in regard to earliest communicative interactions, see Duygu Uygun Tunç, "Transformative Communication as Semiotic Scaffolding of Cognitive Development," *The American Journal of Semiotics* 35, no. 1–2 (2019): 117–54.

[82]Gregory Bateson, *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology* (University of Chicago Press, [1955]2000**]**).

In line with Peirce's, Vygotsky's and Mead's strategies of approaching the question of mind through the study of sign processes, I look at the relatively less studied *semiotic* properties of interpersonal and intrapersonal reflexive processes with a view to capture some of their general, common features that can shed light on the developmental relation between interpersonal and intrapersonal meaning-making.

## II.4 COORDINATIVE AND TRANSFORMATIVE COMMUNICATION

In light of the preliminary considerations above, the basic premises and the outline of the proposed account can be laid down. Identification of primarily two *types* and secondarily *modes* of communication, coordinative and transformative, will constitute the backbone of the following discussions. The distinction in terms of type is introduced in reference to the evolutionary trajectory of communicative sociality. While the distinction in terms of type implies the mutual exclusivity of coordinative and transformative communication, the distinction in terms of mode implies their dialectic co-existence. The coordinative type of communication is proposed as the basic and phylogenetically prior one, where communication supervenes on shared meaning. The transformative type of communication is proposed as a phylogenetically emergent form of social process that assumes a constitutive role in the generation, negotiation and modification of meaning. The coordinative type of communication gradually leaves its place, on the phylogenetic time scale, to two dialectically alternating modes of communication. The distinction in terms of mode is intended to identify the differential communicational dynamics of meaning-maintenance versus meaning-generation and negotiation in the sociocultural sphere, where the coordinative mode denotes those communicational processes that supervene on shared meaning and the transformative mode denotes those that are efficacious over the structures, means and patterns of meaning-making.

These points require for their further elaboration the historical and theoretical background presented in the following three chapters on communication theory and semiotics. Here, the exposition is limited to the presentation of the basic premises.

(i) The relational history of the organism-environment interaction is preserved in the form of *meaning structures*, or *semiotic scaffolds*, that constrain, guide, and stabilize the activity, orientation and responses and of the organism. Semiotic scaffolds are hierarchically organized, temporary or enduring semiotic supports that are efficacious on an organism's relationship with the environment in accordance with its evolutionary, developmental, or sociocultural history. The relation between semiotic scaffolds and semiosis can be described in

ontological terms as the relation between *structure* and *process*. Synchronically considered, processes animate structures and structures shape and direct processes. Diachronically considered, structures are stabilized processes and can be maintained or undergo change and transformation.

(ii) Semiosis in nature broadly manifests a continuity from mostly fixed, transparent structures to highly dynamic, flexible, and socioculturally regulated ones. There is an increase in interpretive freedom and significative potential as we proceed towards the latter end, which can be interpreted with respect to the temporal order within which semiotic scaffolds undergo change. The temporal order in which scaffolds can change narrows down from phylogenic history to the temporal order of the lived time to the extent that phylogenesis is carried over to and partly accomplished by culture, which enters between the environment and the individual as a mediator. History is no longer only a phylogenetic but also a cultural history.

(iii) In ontological terms, the increase in the plasticity of semiotic scaffolds and consequently in degrees of semiotic freedom is not simply an increase in complexity through *building upon* simpler structures, but the manifestation of a relative *destabilization* of the structures that scaffold semiosis so that semiosis can avoid or postpone fixity. That is to say, the semiotic complexity of socioculturally mediated processes of meaning-making is attained not by bottom-up construction of further levels upon simpler and less permeable organismic semiosis; it is attained rather by destabilizing the structures of organismic semiosis and maintaining them in a more plastic state through ongoing intrasubjective, intersubjective and social processes of semiotic mediation. These latter are top-down influences that aim to avoid determination and to defer a decisive reduction in the degrees of semiotic freedom. While in some species the way in which the individual organism interprets and responds to an environmental stimulus, such as a "threat," follows a stabilized, much repeated sensory-motor pattern, in some the solution to a similar problem might not issue directly from such a crystallized habit but require further interpretation or experimentation, in still others the identification of the problem itself might be open to the influence of social norms or even to critical self-reflection and a solution can be postponed indefinitely. Consequently, those structures that can change in the temporal order of the lived time through sociocultural factors are for the most part not absolutely novel kinds, but relatively destabilized instances of existing kinds, to the effect that the processes that are shaped and constrained by such structures are amenable to novel kinds of mediation.[83]

[83]To illustrate this idea through an analogy, we can consider how we change patterns of learned motor behavior. When one desires to change or improve the habituated way one walks, swims, rides a bike or pronounces certain letters, one can do so by regularly intervening in the habitual execution of the behavior through attentional processes and volutionally realizing other patterns. This process can also involve communicative interactions, for instance in the form of expert assistance. The pre-existing

(iv) The medium through which social and cultural forms shape and support semiotic development is that of communication. Communication on the basic and general level serves to coordinate action. It depends on the commonality of meaning structures within and across species. This phylogenetically prior, basic type of communication is grounded in the stability of semiotic scaffolds. It is not efficacious over them and modifies semiotic activity only externally. The transformative type of communication is, on the other hand, the social process through which semiotic scaffolds are formed and can undergo change. Through transformative communication, semiotic scaffolds of action and interaction are socially formed by effectuating a top-down modification on the organismic level of semiotic scaffolding. The extent to which transformative communication occurs among members of a species is also the extent to which *sociality* takes an *intersubjective* turn.

(v) Human semiosis does not diverge from the broader range of semiotic phenomena in nature in fundamental terms (such as featuring as opposed to lacking signs) but in gradual terms; namely, by virtue of its degree of metasemiotic mediation and, in correlation, of its degree of semiotic freedom. This characteristically high degree of mediation is made possible by extending semiosis to include other persons and cultural artifacts, and internalizing patterns and structures of interpersonal semiosis in the form of higher-order mental processes.

(vi) The cognitive capacity for metasemiosis develops within the context of communicative interactions before it comes to serve self-evaluative and self-regulatory purposes (e.g. in perspective-taking and self-persuasion). Reflexive semiosis involved in higher order mental processes has ontogenetically a social, intersubjective origin in the communicative use of signs. Complex communication and cognition involve organizing meaning into inter-referential levels and a differentiation of the various aspects of the sign process. The chief developmentally constitutive role I attribute to (transformative) communicative interaction is the establishment of levels of meaning and the differentiation of constituent elements of semiosis. The availability of various levels of meaning in communication and the intersubjective differentiation of the constituent aspects of the sign process are genetic conditions of self-reflexive mental processes, because these enable hierarchical organization of signs (including not only external signs such as words but also percepts, concepts and judgments). Organizing sign processes in inter-referential ways allows for further semiotic mediation of the utterance and interpretation of lower-order signs. Through achieving such a reflexivity in communication, social interaction externally scaffolds the development of metasemiosis in

sensory-motor patterns are relatively destabilized in the process and thereby rendered amenable to processes of conscious cognitive and communicative mediation, which are normally not involved in the execution of motor behaviors.

cognition. The development of metasemiotic capacities is thus a psychologically extended process, which relies on particular semiotic features of the material culture: The child's meaning-making processes are extended over social and material supports; namely, to include cognitive-semiotic resources of more mature peers and cultural artifacts such as linguistic signs, pictures and diagrams. Communication in this particular function serves thereby as an ecological foundation for cognitive-semiotic development in that it provides the proper context for and gradually transforms the burgeoning metasemiotic capacities of the child.[84]

(vii) The social development of the capacity for metasemiotic activity in ontogeny also shows certain similarities to those dynamics of interpersonal communication that are at play whenever sign-relations are formed and transformed; that is to say, whenever the meaning structures constraining human interaction become themselves the subject-matter of communication. Needless to say, the dynamics of development are qualitatively different from those of mature intellectual and practical activity, and communication in its pre-linguistic form shows significant structural differences in comparison to adult communication. However, processual isomorphisms can be found between the development of sign processes in ontogeny and the *becoming* phases of interpersonal communication. Both in the ontogeny of sign processes and in the becoming phases of interpersonal communication, the predominant mode of communication is transformative as opposed to coordinative.

The transformative and coordinative *modes* of communication relate to processes of meaning creation and maintenance. They are correlative and complementary modalities of communication, which diachronically manifest a dialectical relation with one another. It is worthwhile to elaborate on these modalities through a consideration of the temporal modalities of two broad kinds of meaning-making.

*Retrospective* and *prospective* processes: We can identify two complementary processes of meaning-making in terms of *two ways of making history efficacious*. Retrospective processes have their footing in the present but their focus of interest is the past. Situations can have precedence over and even efficacy on the constraints and conditions determining them. The past is retrospectively reconstructed with respect to the conditions and demands of the present. The future, on the other hand, is (or perceived as being) indefinite or underdetermined. Prospective processes have their footing in the past but their focus of interest lies in the future. Situations are determined by their enabling

[84]The term ecology refers broadly to the evolutionary, social and cultural contexts wherein cognition is embedded. The ecological approach to cognition is generally traced back to Bateson's ecology of mind, the cultural-historical activity theory founded by Vygotsky or to Gibson's ecological phenomenology. Many of these ideas have found contemporary expression in theories of extended, situated as well as distributed cognition. See e.g. Edwin Hutchins, "Cognitive Ecology," *Topics in Cognitive Science* 2, no. 4 (2010): 705–15.

conditions and global constraints rooted in the past. The future is progressively constructed in a present that rises above the edifice of the past. Yet the past can be transparent or reified into an a-temporal mode of existence. That is, the various constraints or enabling conditions of a certain occurrence can remain completely un-thematized, or treated as if they are un-historical or unchangeable. The prospective process relies on already existing meaning structures, such as descriptive categories, conceptual models, convictions or pre-judgements, and parses reality in accordance with them. The retrospective process gives priority to the situation and its demands, and re-evaluates the existing global network of meaning structures *ex post facto* to fit the situation.

From the perspective of learning, it is possible to recognize a broad similarity between these two kinds of processes and Jean Piaget's two complementary cognitive processes that realize intellectual adaptation to the world; namely, assimilation and accommodation. Assimilation is adaptation though fitting novel experience within the pre-existing interpretive schemes (such as that of the child who might regard the first cow she sees as a giant dog). Accommodation, on the other hand, re-structures the existing network of concepts and beliefs in the face of a novel situation (such as delimiting the previously vast concept of dog to introduce the novel concept of cow). With regards to self-identity and personal narratives, it can be said that prospective processes are coherence-oriented while retrospective processes are plasticity-oriented.

It is merely for the purposes of abstraction that these two kinds of processes have been presented as if they are separable. In fact, the temporal structure of actual mental or interpersonal processes are much more complex and cannot be pigeonholed into one of these two classes. Nonetheless, there can be personal and cultural differences in preferential reliance on one or to the other.

*Two modes of communication*: Communication manifests two global modes when conceived as a *diachronic process*: There are phases in the history of communicative interactions, be it interpersonal, intergroup, within a scientific discipline or conceived as the internal conversation of a society, that are characterized by tension, conflict, proliferation of incommensurable perspectives, deconstruction of extant meaning structures such as social meanings and identities, by destabilization of social relations that support them, and plurality of attempts at redefinition. The constitutive ground of communication, the relational community of meaning and its interpretive schemes, loses its transparency and comes to the fore as a theme of communication. The representative function of communication, the function of *presenting* a part or aspect of the world *as* being *so-and-so* is hindered; what is communicated is less something about the world and more something about the very ways of presenting something about the world in their otherwise concealed perspectivalness and contingency. For instance, the "symbolness" of symbols,

their inherent ambiguity, connotativity and unsaturatedness, becomes salient. To use a geographical metaphor, we can describe these phases as those of terraforming on the topology of meaning.

Conversely, there are phases in which meaning structures are stably maintained and scaffold the social process. Actions follow from and rely on common meanings, which are embedded in social relations that are stable, all of which form the transparent background before which figures can appear as such. Interactions are dominated by a mode of communication in which stably scaffolded meaning-making activities of individuals are coordinated. This mode enables reliable sharing of experience on the basis of common sign relations, facilitates collective action, and cultivates cognitive and affective resonance among social agents. Following the metaphor, we can call such phases as those of cartography on the topology of meaning. The mode of communication characterizing the former phase is *transformative* and the mode characterizing the latter is *coordinative*.

With respect to the two ways of making history efficacious outlined above, we can say that there is a processual correspondence, a relational analogy between the transformative mode of communication and the retrospective process and between the coordinative mode and the prospective process. Transformative communication is a retrospective meaning-making process and coordinative communication a prospective one operative on the interpersonal as well as the collective level.

Self-persuasion, an internalized form of interpersonal semiosis which I have proposed to be central to personhood, is intrapersonal communication in the transformative mode. We also engage in auto-communicative processes that can be likened to coordinative communication; for instance, when someone makes a shopping list, or underlines certain passages in a book to return to them later. But such activities are hardly characteristic of persons as such. The kind of internal dialogue that is essentially characteristic of persons is concerned, as we have argued, with self-induced habit-change. More precisely, it consists in an internal reconstruction of a kind of communicative interaction that aims at effecting a change in the other's agential and interpretive habits through his or her own conscious agency. We engage in self-reflexive processes of this kind, such as self-interpretation, critical self-evaluation and deliberate habit-formation, usually when there is a situational change or relational demand that calls for a re-evaluation of and possibly a change in our habits of action, thought or feeling. This is typically a retrospective process, since its subject matters—the features of our personalities, our interpretive tendencies, expectations, attitudes and beliefs—are all part of the past that is effective in us.

The common ground, which is the condition of the coordinative mode communication, understood as shared experiences, symbols, norms etc. is a temporarily stabilized field of meaning. It does not depend on the similarity of individual experiences understood in an atomized manner, nor to fixed

correspondence between words and things. It depends, among others, on dynamic maintenance and occasional negotiation of shared meanings and relational attitudes.

The differential operation of these basic modes of communication can be witnessed in all domains of symbolic communication. Imagine a statue of a religious figure being erected in a site of worship, and a similar social object placed among a collection of contemporary artwork curated a-chronologically. Although at the semantic, representational level the two communicative acts employ the same symbol-relations, in the latter these are bracketed in order to communicate a completely different message than the former at the metacommunicative level. While the former is confirmatory, the latter is not. We also see two different attitudes towards the temporality of social object. While the former a-temporalizes and renders transparent the social processes constitutive of the object with a commitment towards the future (that these processes shall or should remain operative), the latter attempts to retrospectively reconstruct them.

When conceived in terms of *structure*, the two modes of communication employ various levels of abstraction and media of meaning, such as content and context or verbal and non-verbal signs, differentially. In the coordinative mode, verbal as well as non-verbal metacommunicative signs are *confirmatory* of the underlying relational attitudes, which can (for the sake of argument) be symbolically expressed in utterances such as "You are my friend," "People are generally good," "Lying is detrimental to relationships," or in meta-discursive ones like "Communication is a process of mutual understanding." Symbolic articulation of relational attitudes belongs by itself to the transformative mode of communication: They are not mere expressions of inner feelings, thoughts and beliefs that reside in a mind, but co-constitute them by introducing a reflexive distance into the pre-reflexive embodied integrity of experience. When articulated, they are no longer only relational attitudes that collectively make up a relational perspective, but become potentially contestable normative propositions.

Moreover, the order of priority between coordinative and transformative communication is altered when we refer these as modes and not types of communication. An asymmetrical relation gives its place to one of co-dependence or mutual presupposition. The transformative mode depends on the coordinative mode in that transformation can take place against a background of sameness or commonality that is confirmed in communication, and the coordinative mode presupposes the ever-present possibility of a transition to the transformative mode. Thus the coordinative mode, where meaning is assumed, understood, conveyed and shared, is not separable from but equally depends on the transformative mode, where meaning is created, challenged, or negotiated. For instance, the communicative act of confirming (whether implicitly or explicitly) someone's self-definition depends for its

significance on the possibility of contesting it, which is often mutually acknowledged as a background assumption. Transformative communication in this sense becomes only occasionally the dominant mode, but such occasional transitions are also necessary in the history of communicative interactions, since they produce emergent forms of social organization, novel meaning structures and relational patterns as well as novel communication content that extends beyond the immediate context of interaction. The type of relation between these two modes is dialectical, and it manifests a punctuated equilibrium between phases of transformation and preservation of sign-relations that scaffold individual and collective activity. However, as I have briefly stated above, in the peculiar context of the ontogenesis of semiotic capacities where common meaning structures are under formation, the transformative mode has a pronounced dominance.

# III COMMUNICATION-THEORETICAL CONSIDERATIONS

Communication is among those topics upon which a vast number of different disciplines have a claim, as well as all of us as persons have rich first-hand knowledge about. From linguistics to psychology, sociology, economy, mathematics, biology, anthropology, or media-studies, we find quite distinct and sometimes incommensurable[85] theories of communication, which have all contributed to differing degrees to the multidisciplinary origins of the relatively newcomer communication discipline, resulting in the striking diversity of disciplinary perspectives and vocabularies within the discipline.

Quite a number of theories of communication either take their start from or occupy themselves primarily with shedding light on some commonplace aspects of communication as it takes place within our social lifeworld. Others start from abstract representations of aspects of communication which then find application in the study of the actual human communication. Given the rich complexity of the phenomenon of communication in terms of its levels (be it interpersonal, intra-group or inter-group, international, or cultural), the methods with which it is studied, and the epistemological or ontological background assumptions of various research traditions within which it is studied, the odds of arriving at a unified theory of communication and, moreover, at a common vocabulary seems unrealistic.

The last decades, on the other hand, have witnessed an augmented debate on the concept of communication itself, against the background of a discussion on the chances of the discipline to establish itself as a coherent field. Among these proposals the most relevant and significant one for our purposes is that of a *constitutive view of communication* or a *constitutive model*. The terms constitutive view or model can be seen at bottom as a shorthand for a basic theoretical perspective on communication, independently of employing a concrete *model* to describe the communication process or not, which conceives communication as a process of meaning creation within social interaction. This meaning and interaction oriented stance on communication has already proved useful in providing a source of conceptual unity that allows to bring together various past and present theories of divergent focus, methodology and theoretical orientation as belonging to a common framework or sharing a common theoretical perspective. For its proponents, moreover, it entails several interrelated claims: that meaning is (socially) constructed; that communication is the constitutive process that produces and reproduces all shared meaning, hence also theories of communication; that social entities are communicatively

[85]Robert T Craig, "Communication Theory as a Field", *Communication Theory* 9, no. 2 (1999): 119–61.

constituted; that communication is reflexive in the sense that it can only be understood from within communication; that communication theories are reflexive in the sense that they are socially and politically consequential.[86] These positions are endorsed by theories founded within the constitutive view differentially and to differing degrees, depending on their theoretical orientations and research focus, but are recurring themes that collectively lay out a common conceptual topology.

At the most basic and most comprehensive level, the source of coherence is looked for in a particular, *communicational* perspective onto our engagement with one other on interpersonal, social, political, and cultural dimensions, which conceives all possible kinds of such engagements as processes of communication. Moreover, communication from a communicational perspective is the very process by which all shared meaning, that is, identities, norms, concepts, theories, systems as well as social entities such as customs and institutions are constituted.[87] Hence, from such a perspective any theory of communication is itself constituted communicationally, and manifests reflexivity in terms of becoming in turn a determinant of the processes it takes as its subject matter.[88]

In a narrower vein, theories of communication emerge out of the commonplace, or our intuitive understanding of communication. This understanding manifests itself either explicitly in the form of symbolic metacommunication, i.e. in symbolic communication about communication, or implicitly in the form of common beliefs and assumptions regarding and underlying communication. Given that communication in the social lifeworld is already permeated with metacommunicative elements or "practical meta-discourse", it is reasonable to view various theories of communication as theoretical, or intellectual meta-discourse.[89]

The constitutive view of communication has its roots to a significant extent in social constructivist ideas which made their entry into public discourse beginning with the early 20th century in the works of thinkers like Dewey, Mead, Mannheim and Wittgenstein, although it is reasonable to trace some

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[86]The list does not claim to be exhaustive, but is intended to provide a reference point to guide the following exposition of the constitutive view. For an alternative exposition of some common themes found in the literature dealing with the constitutive view, see Robert T. Craig, "Communication Theory as a Field".

[87]A rather commonplace and quite significant tenet of the constitutive view, manifest especially in the formulation by Deetz, is that not only shared meaning, but also social entities are communicatively constituted. See e.g. Anne Maydan Nicotera, "Constitutive View of Communication," in *Encyclopedia of Communication Theory*, ed. Karen A. Foss and Stephen W. Littlejohn (Thousand Oaks, CA: SAGE Publications, 2009).

[88]See e.g. Klaus Krippendorff, "A Recursive Theory of Communication," in *Communication Theory Today*, ed. David Crowley and David Mitchell (Cambridge, UK: Polity Press, 1994), Retrieved from http://repository.upenn.edu/asc_papers/209; James Carey, *Communication as Culture: Essays on Media and Society* (Boston, MA: Unwin Hyman, 1985).

[89]Robert T Craig, "Communication Theory as a Field".

basic tenets of social constructionism back to the work of Vico.[90] The latter half of the century witnessed a revival of the communication perspective through the advent of second-order cybernetics and the reception of systems theory in social sciences, renewed interest in American pragmatism, and through the works of European thinkers such as Luhmann, Bakhtin, Foucault, Habermas, Derrida, and Lyotard.

Within the framework of modern communication theory, the proposal of founding the communication discipline through a communicational perspective—i.e., through establishing " a way of thinking/acting/talking that leads to a particular type of attending to the world"[91] which is communicational—originates in significant part from within a critique of the traditional, or what came to called the "transmission" or "information" view of communication. The transmission/information view is conventionally conceived in terms of messages being sent and received, or information being transmitted in some form from a sender to a receiver. The more simplistic its description, the more it gives the manifold of arguments for a constitutive view a greater, albeit rather negative cohesion. The categorization of a variety of theories of communication as sharing a common transmission or information perspective, thus, implies for many statements of the constitutive view a bipartite categorization of communication theory. Before looking more closely at the constitutive view, it is worthwhile to give a brief outline of the internal history of communication models in order to illuminate the path leading towards the constitutive view and especially towards the conception of the constitutive view as a *model*.

## III.1 A BRIEF HISTORY OF MODELS OF COMMUNICATION

Although the spectrum of theories and models grouped together, from the opposite front, under the transmission/information view is actually quite diverse[92] and not without historical and intellectual gaps, there is in general an identifiable tension within the broad field of communication theory between theories of communication having in focus the production and exchange of

[90]See also Andy Lock and Tom Strong, *Social Constructionism: Sources and Stirrings in Theory and Practice* (Cambridge University Press, 2010), p. 12-29.

[91]Stanley A Deetz, "Future of the Discipline: The Challenges, the Research, and the Social Contribution," *Annals of the International Communication Association* 17, no. 1 (January 1, 1994): 565–600.

[92]When extended rather metaphorically, and it is done so, to any account of communication dealing with how messages are generated, conveyed and understood, the label "transmission" view sweeps whole research traditions and their histories from ancient and modern rhetoric, psychology, quite many orientations in linguistics and epistemology, and relatively new fields such as cognitive science.

information between generic poles, and those interested in the relational, qualitative aspect of communication that brings about emergent patterns, organization, structures as well as novel content. This tension is manifest already in the historical shift the concept of information (which is nowadays closely associated with the transmission view) went through. Thus, the concept of information is a good starting point to lay out a brief history of communication models.

The English word information is traced back, via 14th century Anglo-Norman and Middle-French *informacion, enformacion* (the *act* of informing) "the formation or molding of the mind or character, training, instruction, teaching"[93], to the classical Latin nominative *informātiōn-, informātiō* "formation, conception, infusion with form," which in turn derives from the verb *informare*: "to give form to," "to shape," "to mould by instruction" (a person or the mind).[94]

The philosophical concept of information deriving from this original sense appears throughout the Middle Ages in various contexts ranging from ontology, epistemology to pedagogy and ethics, in senses of giving form to matter, mind or character, educating, or forming virtues.[95] The concrete or literal usage of the term denoted giving shape or form to matter, as in crafts. The abstract usage of the term in contexts such as education and ethics bore reference to philosophical or psychological notions like virtue, mind and personality. Particularly the usage of *informatio* in Cicero, Augustine and Aquinas shows a clear connection with the Greek terms *εἶδος*, *μορφή*, *ἰδέα*, and their connotations in Plato and Aristotle.[96]

The sense of "knowledge communicated"[97] in divergence from the sense of formation, shaping, molding, on the other hand, makes its appearance first around late 14th to mid-15th century, and gradually replaces the original sense towards Modernity.[98] On the one hand, the sense shifts from the *act* to the (direct) *object* of the act. On the other, there is an interrelated diminishment of

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[93]See 1.a, *Oxford English Dictionary*, s.v. "information, n.", accessed March 6, 2018, http://www.oed.com.ubproxy.ub.uni-heidelberg.de/view/Entry/95568?redirectedFrom=information.

[94]Ibid., s.v. "inform, v.", accessed March 6, 2018, http://www.oed.com.ubproxy.ub.uni-heidelberg.de/view/Entry/95559.

[95]For a presentation of the Latin and Greek origins in connection to the conceptual history and scope throughout the Middle Ages, and a critical account of the conceptual turn in Modernity, see Rafael Capurro and Birger Hjørland, "The Concept of Information," *Annual Review of Information Science and Technology* 37, no. 1 (January 1, 2003): 343–411. For a more detailed exposition, see Capurro, *Information: Ein Beitrag Zur Etymologischen Und Ideengeschichtlichen Begründung Des Informationsbegriffs* (München, New York, London, Paris: Saur Verlag, 1978).

[96]Of particular interest in the present context would be Augustine's usage as exemplified in terms *informatio virtutum* and *informatio morum*.

[97]See 2.a, *Oxford English Dictionary*, s.v. "information, n.".

[98]Capurro and Hjørland, "The concept of information." For a critical account of the conceptual turn in terms of the influence of empiricism, see John Durham Peters, "Information: Notes toward a Critical History," *Journal of Communication Inquiry* 12, no. 2 (1988): 9–23.

efficaciousness both of the act and of its object. It will not be wrong to say that to the extent that the original sense of the term denotes a *transmission*, a transmission of form, it does so a transmission that is *constitutive*—of a *form* that *informs*.[99] The modern sense is bereft of this connotation of *change* on the part of the addressee of the act.

The term information belongs now exclusively to the vocabulary associated with the transmission view broadly construed, hence the identification "information" model. This sense of information, as that which is transmitted, presents also the broad, commonsensical epistemological basis on which its terminological sense has been developed in the context of modern communication theory. The origins of modern communication theory lie in the work of early cybernetics theorists, and most famously in the *mathematical theory of communication* of Claude Shannon and Warren Weaver,[100] known also as the original proposition of *information theory*. It presented a general, technical formulation of information on the basis of thermodynamics, control theory and probability theory, which had a long lasting effect on a wide range of fields already existing or yet to emerge from journalism, rhetoric, computer science, linguistics, epistemology to cognitive science. It also made a new entry under "information" in *OED* as "a mathematically defined quantity divorced from any concept of news or meaning."[101] The motivation behind the information theory was solely that of improving the efficiency of telecommunication systems by enhancing the capacity of signals for transmission through a channel. It was not meant to account for how information is *created* or for its *significance*. In information theoretical terms, a distribution of black dots on a plane that is meaningless for a human observer can amount to *more* information than a black and white caricature of a person on the basis of the lower probability of the configuration in reference to a thermodynamic ground-state of absolute randomness.

From then on, the concept of communication came to be closely associated with information processing and transfer. Although it is possible to observe that the original sense of information could have been rehabilitated within the constitutive view, the actual path taken by its proponents has been to redefine communication in contradistinction to information.

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[99]For a reconstruction of this sense, see Gilbert Simondon, "L'individuation à La Lumière Des Notions de Forme et d'information" (Grenoble: Millon, 2005).

[100]Claude Shannon and Warren Weaver, *The Mathematical Theory of Communication* (Urbana, Illinois: University of Illinois Press, 1949).

[101]See 2.c, Oxford English Dictionary, s.v. "information, n.". It must be noted that information is a purely technical term in the context of the mathematical theory of communication, which denotes not (yet) semantic content but rather *data*, which is operationalized as *information minus meaning*, as "messages comprising uninterpreted symbols", and thus is fit to study information "at the *syntactic* level." See Luciano Floridi, "Semantic Conceptions of Information," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Spring 2017 Edition, https://plato.stanford.edu/archives/spr2017/entries/information-semantic.

Early 20th century communication theories were presented generally in terms of models, where the information theory proposed the most influential *linear model* of communication visualized often as a line travelling from one box to another. Among the earliest of linear models,[102] the model of the information theory described the communication process through the vocabulary of *information sender*s and *receiver*s, *transmitter*s, *encoding* and *decoding*, *channel*s and *noise*. The Shannon-Weaver linear model was originally not meant to be applied to human communication, but rather to develop more efficient means of data transfer. Nonetheless, it provided a common framework for a wide-ranging spectrum from philosophical theories of semantic information to analysis of face-to-face communication. This model was soon applied to human face-to-face communication employing the same vocabulary of senders and receivers, and adopting the same message-oriented approach, which resulted in a proliferation of linear models of human communication. A prominent example of such a linear model of human communication was David Berlo's SMCR model featuring *sender*, *message*, *channel* and *receiver* as its components.[103]

In response to the limitations of linear models but still within the theoretical paradigm of the information theory,[104] Wilbur Schramm[105] proposed one of the earliest versions of what came to be known as the *interactive* or *circular model* of face-to-face communication, which replaced the senders and receivers of the linear models with *interpreters* who are simultaneously *encoders* and *decoders.*"[106] The model included the concept of *feedback*, incorporated an ongoing alternation of the speaker and listener roles, and deviated from the sender-oriented structure of the linear model that placed no focus on interpretation, and did not acknowledge the individual, qualitative

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[102]Although the theoretical endeavor of coming up with *models* of communication is characteristic of the 20th century and onwards, the history of such models starts generally not with the 20th century but is traced back to Aristotle's *Rhetoric*. The model of communication attributed to Aristotle has a limited application, in the domain of public speech, and has traditionally been grouped together with *linear* models on the grounds that it depicts a one-way flow of a message from the speaker to the audience and there is no concept of feedback, and has been criticized in relation to other linear models that there is no account of barriers to and failure of communication due to, e.g. *noise*. Since the treatment of the transmission view in the present work has to be limited to its significance in relation to the constitutive view, a more detailed account of Aristotle's analysis of communication is out of its scope.

[103]David Berlo, *The Process of Communication: An Introduction to Theory and Practice* (New York: Holt, Reinhart and Winston, 1960).

[104]It is common to define three phases or stages in the evolution of communication models, where the linear models such as Shannon and Weaver's belong to the first and Schramm's belongs to the second. The second phase is argued to be an advancement over the first one in that communication is depicted not as a linear, de-contextualized process but a two-way and contextualized one; yet, it is argued, the models of the second phase operate on the same epistemological paradigm—a view endorsed by the proponents of the constitutive view as well. See Wimal Dissanayake, "Poststructuralism," in *Encyclopedia of Communication Theory*, ed. Karen A. Foss and Stephen W. Littlejohn, Karen A. F (Thousand Oaks, CA: SAGE Publications, 2009).

[105]Wilbur Schramm, "How Communication Works," in *The Process and Effects of Mass Communication*, ed. Wilbur Schramm (Urbana, Illinois: University of Illinois Press, 1954).

[106]Nicotera,"Constitutive View of Communication," p.176.

characteristics on the part of the participants, which form the background of the communication process and distinguish interpretation from reception. To this end, Schramm included in the model two additional elements, namely two *fields of experience* associated with the participants. The contextualization of communication, nonetheless, remained within the scope of the physical and psychological, and the problematization of the wider relational, social, cultural and historical context of communicative situations as well as conditions of miscommunication was yet to come. Moreover, the circular representation of the communication process in terms of simultaneous encoding and decoding activities and ongoing role alternation acknowledges those aspects of communication that can be grasped *synchronically*, but only presupposes those that can be grasped *diachronically*, such as the relational history between the communicators, the dynamic structure of the fields of experience and the role communication plays in their formation and transformation. As such, the interactive model shares the epistemological framework of the transmission view.

A fundamental break with this framework occurred following a broader shift of scientific and mathematical interest from linear to non-linear dynamic systems and chaos theory, the advent of second-order cybernetics in the second half on the 20th century and the favorable reception of these ideas into the field of social theorizing, where postmodern and poststructuralist ideas were simultaneously making their entry. Sociology of knowledge and political communication becoming heated areas of debate, the focus in modelling communication shifted in turn from *message* and its transmission to *meaning* and its construction. The models of communication realizing this shift came to be known as *non-linear* or *transactional* models and acknowledged as representing the origins of the constitutive model.

Dean Barnlund's transactional model of communication[107] is the most famous of such early non-linear models. It incorporates a dynamic and multi-layered system of feedback, which features interactants (persons) who are encoding and decoding simultaneously. Besides these components, the model incorporates different sets of interrelated and dynamic *cues*, namely *public* (or environmental), *private* (or personal), and verbal and non-verbal *behavioral*, by means of which four kinds of *contexts*, namely *physical and psychological*, *relational*, *social* and *cultural*, co-determine the process of communication. It describes communication as a process through which meaning is created within these relational, social and cultural contexts and allows for social realities such as identities and relationships, and various forms of articulated or implicit norms to be acknowledged as elements intrinsic to any communicative interaction. Due to the symmetrical form of the model, however, it implies equal conditions

[107]Dean C. Barnlund, "Transactional Model of Communication," in *Foundations of Communication Theory*, ed. Kenneth K. Sereno and C. David Mortensen (New York: Harper and Row, 1970).

for the interactants and falls short of addressing the *situational* or *systemic* factors that distort communication, which increasingly moved towards the center of theories of interpersonal, intra- and inter-group communication.

Theories of communication have gradually moved away from describing the communication process in the form of graphic models. As the focus shifted from message to meaning, it was increasingly acknowledged that the medium of graphic models is inadequate for representing the complex and reflexive process of meaning creation.

A major part of the set of propositions articulated in the beginning that lay out what a communicational, or constitutive perspective consists in, e.g. that communication is reflexive, consequential, replete with meta-discourse and so on, owe their origin to a significant extent to the theoretical contributions of what came to be called the *relational perspective*. While the relational perspective is retrospectively included in the constitutive view as one of its prime examples, it does not originate from the quite common exclusive dichotomization of constitutive and information views of communication, but rather represents a dialectical development internal to the cybernetic paradigm that brought about the information theory. Since it is of particular relevance for the present account, a separate exposition of the relational perspective is in order.

## III.2 THE RELATIONAL PERSPECTIVE AND THE PRAGMATICS OF COMMUNICATION

Known also as the *relational communication theory* or as *pragmatics*, the relational perspective is born out of cybernetics and the closely related systems theory. In a radical departure from the epistemological perspective of the information theory and from earlier theories on relationships, the relational perspective shifted the analytical focus from the individual and psychological processes to relations and systemic processes. Relations were conceived as emergent structures that are constituted by systemic patterns in the communication process, which they in turn shape and define. Moreover, the relational purport of communication, conceived as the *pragmatic* aspect, replaced in significance the *content* of messages.

The theoretical foundation of the relational perspective has been laid down by the cyberneticist, psychiatrist and anthropologist Gregory Bateson, whose work was not limited to communication theory but spanned a vast field including theory of evolution, philosophy of mind, ontology and epistemology. Among Bateson's theoretical contributions to communication theory, the most significant in the context of the present account are his concept of *information* and his concept of *metacommunication*, which build upon conceptions such as the report and command aspects of communication, the joint operation of verbal and non-verbal communication—the depth dimension of communication—the

reciprocal constitution relation between meaning and context, and upon his ecological proposal for a constructivist epistemology.

Bateson was among the early critics of the information theoretical concept of information central to cybernetics, and one of the precursors of second-order cybernetics. A characteristic feature of the second-order movement within cybernetics was the shift from the notion of feedback conceived as *mechanistic circularity* to that conceived in terms of adaptive *systemicity*, particularly in those of systemic dynamics involving an integral observer/agent. In the words of Heinz von Foerster, the shift was a recursive development from "cybernetics of observed systems" to that of "observing systems."[108] Among semantic theories of information that have a systemic, second-order cybernetic and semiotic orientation, information is defined as a pragmatic concept;[109] that is, "with regard to the change on the receiver's model of reality."[110] Bateson's definition of information as "a difference which makes a difference"[111] is central to the pragmatic conception both in terms of its historical significance in the development of such orientations and in that of providing a concise and universal formula.

The doubly occurring term *difference* is a *semiotic* concept, it denotes not a subject-independent property in the world (as the tendency in the first-order cybernetics still is, where information is conceived in terms of difference in "objectivized" probability between events[112]) but a potential element of knowledge. It is based on a differentiation between non-semiotic and semiotic concepts of determination that respectively portray a world of substance and a world of (formal) pattern.[113] Bateson explicates the concept by borrowing the map-territory metaphor of Korzybski. Map stands for the territory of which it is a map, but itself is not a territory. In order not to confuse the map with the

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[108]Heinz von Foerster, "Cybernetics of Cybernetics," in *Communication and Control in Society*, ed. Klaus Krippendorff (New York: Gordon and Breach, 1979), 5–8.

[109]Lars Qvortrup, "The Controversy over the Concept of Information," *Cybernetics & Human Knowing* 1, no. 4 (1993): 3–24.

[110]Capurro and Hjørland, "The concept of information."

[111]Gregory Bateson, "Form, Substance, and Difference," in *Steps To an Ecology of Mind* (Northvale, New Jersey, London: Jason Aronson Inc., 1972), 455–71, p. 460.

[112]See Capurro and Hjørland, "The concept of information." Capurro and Hjørland attribute a realism (observer-independence) of difference to the conceptualization of information in engineering and natural sciences, the domains out of which the Shannon-Weaver theory of information originated. They cite Qvortrup, "The controversy over the concept of information," in commenting that Shannon and Weaver were unclear as to whether they conceive information as substance or as sign.

[113]The terms substance and form here no not bear their traditional ontological senses, but are used by Bateson as an alternative terminology to the map-territory metaphor. Representation of the world in terms of substance does not necessarily imply endorsing a substantialist ontology, but broadly an epistemological realism. Representation in terms of pattern or form is also an epistemological standpoint. In resonance with Peirce's epistemological idealism, Bateson endorses that the process of inquiry does not start or end at a point where reference is not to a *sign*. But he does not favor the kind of ontological idealism he attributes, for instance, to Whitehead (see "Comment on Part V" in *Steps to an Ecology of Mind*). The epistemological delineation, on the other hand, does neither imply nor rule out an ontological position giving analytic priority to substance, process, or relation.

territory, he addresses the need to start with the question of what exactly is it that gets onto the map from the territory. What gets onto the map is only differences, but not anything intrinsic to the territory. Difference, moreover, is not found in either of the things that are different, it belongs only to the map; that is, to the world of patterns, organization, information, communication and so on—to the world of signs, or as Bateson calls it to that of *mind*:

> when you enter the world of communication, organization, etc., you leave behind that whole world in which effects are brought about by forces and impacts and energy exchange. You enter a world in which "effects"— and I am not sure one should still use the same word—are brought about by [transformed/codified] differences. That is, they are brought about by the sort of "thing" that gets onto the map from the territory. This is difference.[114]

Difference is synonymous with *idea* in its most elementary sense,[115] and *information* is the process by which differences bring about further differences *ad infinitum*. At each point where a difference is transformed, represented, or communicated (from sensation to transformations along nervous pathways, conceptualization, expression, interpretation and so on), we find the functional relation between the map and the territory: Each difference is the territory for the difference it brings about, which in turn is a map of the original difference. Territory, as a *Ding an sich*, never enters the map: The *mental* world, in Bateson's broad designation, or the *semiotic* world is but an infinite series of maps.[116] These two worlds stand, though, neither in opposition to each other nor are accountable solely in terms of one. The mental is not a property traceable to atomized entities; it pertains only to complex relationships and processes of transformation (codification/representation) analyzable at the system level.[117] These complex relationships are not transcendent but inherent to phenomena, and their investigation reveal logical types and hierarchies. He says:

> [T]here are differences between differences. Every effective difference denotes a demarcation, a line of classification, and all classification is hierarchic. In other words, differences are themselves to be differentiated and classified.[118]

The *logic* of differences is then integral to the science of mind.

Proceeding from information to communication, we can start by briefly mentioning a well-known example of a pragmatic concept of information developed within a cybernetics/systems theory perspective. Niklas Luhman's

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[114]Bateson, "Form, Substance, and Difference," p. 459.

[115]Ibid. Here Bateson invokes Kant, in which he says that in the *Critique of Judgment* Kant identifies the most elementary aesthetic act as the selection of a fact among an infinite number of potential facts, and modifies Kant's statement in terms of information, as selection of a very limited number of differences of an infinitude and their transformation into further differences.

[116]Bateson's conception of information is significantly similar to Peirce's conception of *semiosis*, which I will go into in the next chapter.

[117]See "Comment on Part V" in *Steps to an Ecology of Mind.*

[118]Bateson, "Form, Substance, and Difference," p. 464.

concept of information based on self-referential systems draws explicitly on Bateson's definition of information. According to Luhman, the social and psychic variant of self-referential systems are constituted by *Sinn*, which comes about through selecting and processing differences. *Information* is the selection of differences out of the "meaning offer" (*Mitteilung*) through connections between them. Understanding (*Verstehen*) is the difference between *Mitteilung* and *Information*. He describes communication, in turn, as the unity of *Mitteilung*, *Information*, and *Verstehen,* where each differentiates the other two.[119]

The term *metacommunication* was introduced initially in the book *Communication, the Social Matrix of Psychiatry* by Jurgen Ruesch and Gregory Bateson. Metacommunication is communication *about* communication. It denotes, however, not simply conversations on the topic of communication. It is described as a "new order" of communication that arose in the course of mammalian evolution and rendered possible some of the most peculiarly complex, reflexive and paradoxical features of social interaction.[120] Hence, it denotes also a novel *function* of communication.

Bateson begins to explicate metacommunication by distinguishing two *aspects* of communication, or two sorts of meanings any message has; namely *report* and *command*. Any communication, be it among nerve cells, mating butterflies or among people, achieves at a minimum two things: it conveys information regarding the events that came before, and it serves as a cause or stimulus for subsequent events. In drawing an analogy from physiology, he argues that even in the simplest case of communication it is possible to identify these two sorts of meanings: In a linear chain of neurons *A*, *B*, and *C*, the firing of *B* is both a report of a previous event, that *A* has fired, and a command for a future event, for *C* to fire.[121]

In the context of human communication, the report aspect has to do with the literal *content* of a message, which conveys information about some observation, knowledge or mental state, while the command aspect with what it practically induces.[122] The command aspect describes any message simultaneously as an illocutionary act; however, it does not imply the syntactic sentence type that we linguistically label as commands. Both of the two utterances "Wash the dishes!" and "The dishes are dirty" can have the same report and command aspects although the former has the syntax of a command and the latter not.

To take a step back in order to see the distinction from the viewpoint of meaning production, we can call these two aspects *informational* and *relational*.

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[119]Niklas Luhmann, *Soziale Systeme* (Frankfurt am Main: Suhrkamp, 1987).

[120]Jurgen Ruesch and Gregory Bateson, *Communication: The Social Matrix of Psychiatry* (New York: W. W. Norton & Company, 1951).

[121]Ibid, p. 180.

[122] It is not a requirement that both of these aspects are attended to, or even noticed. Most of the time only one of the two meanings are captured by conscious awareness.

The former covers the *retention* aspect of meaning, which Bateson calls "codification," related to how perceptive, imaginary, or intellectual processes parse experience into objects, relations and sequences, and the latter the *valuation* aspect related to the practical domain of action and interaction. These two aspects to no extent denote two distinct processes but are rather inseparably intertwined in a single process, be it individual or interactional. There are no perceptions or inferences which are independent of valuation, and there can be no valuation independent from retentive processes.

The analysis of the individual meaning-making process is neither a different kind than the communication process, nor a building block of interaction, but subsumed under the communication process. The case of absence of interaction, which Bateson defines as the case of "one-way communication" or "unobserved observer,"[123] can be regarded as the zero-level of communication.

Communicational situations higher in complexity involve perception of perception, that is, a mutual awareness of the communicative situation as such. It requires that any participant can convey and interpret cues indicating that the other is recognized as a communication partner, can modify its interpretation of cues in in accordance with the progression of communication, and can repeat or alter subsequent messages in response to whether the previous ones were missed or misinterpreted. Any gesture or utterance in a reciprocal perception situation is accompanied by the implicit message "This is a message." These features collectively indicate a new order of communication: *metacommunication*. All cues and utterances *about* the informational and relational aspects of communication are metacommunicative. Metacommunication both sets the stage for social interaction and presents a medium for the negotiation of how meaning is produced and conveyed. Relational (or pragmatic) metacommunication, in particular, serves to contextualize information and provides the interpretive ground, or "frame" as termed by Erving Goffman.[124]

The emergence of the metacommunicative order in the course of evolution implies also a new kind of interactional *system*. While the organism and the environment already have an interactive relation where the relational whole has a top-down determining effect on its parts taken individually, mutual awareness of the organisms becomes a further determinant of all their individual actions and interactions. If an individual is aware of being perceived by the other as perceiving the other, this fact of mutual awareness gives rise to an interpersonal system with efficacy and relative independence of its own. In such a social system, actions of any individual are to some degree shaped, modified and motivated by the perceived or attributed features of others. It becomes

[123]Jurgen Ruesch and Gregory Bateson, *Communication, the Social Matrix of Psychiatry*, p. 197.

[124]Erving Goffman, *Frame Analysis: An Essay on the Organization of Experience* (Harvard University Press, 1974).

further possible, with the emergence of symbolic activity, that they share, contest, or negotiate their perception and evaluation of their relationships, and even of the world.[125]

In his famous essay "A Theory of Play and Fantasy,"[126] Bateson further elaborates the notion. He argues that human communication takes place simultaneously on manifold levels of abstraction. Beyond the *denotative* level of literal *content*, he identifies two types of higher levels: *metalinguistic* and *metacommunicative*.[127] While metalinguistic levels of communication have broadly to do with messages concerning semantics and syntax, the metacommunicative levels have to do with messages concerning the communicative context and the relationship between interactants. Metalinguistic and metacommunicative messages remain mostly implicit (as knowledge or awareness) or they are communicated through non-linguistic means, but they can also be articulated, as in "'Sugar' is an uncountable noun" or "I consider you as an enemy." It is this feature of Bateson's understanding of metacommunication that Michael Silverstein endorses when he uses the term "metapragmatics" to denote both implicit as well as explicit metatalk.[128]

The evolution of language as well as the majority of complex features of interpersonal understanding depend on the advent of higher orders of abstraction, which makes possible the recognition of signs as signs. Based on his observations of playful interactions among monkeys, Bateson argues that the recognition of signs as signs is to some limited extent evident in non-human animal communication. Bateson observed that the playful interaction of monkeys bore a strong similarity to combat, but nonetheless the human observer could easily see on the one hand that the whole interaction was not combat and on the other that *for the monkeys* it was not combat. He concluded that the monkeys were signaling to one another somehow the metacommunicative message "This is play." This metacommunication, for Bateson, posed a paradox of the type Epimenides formulated, where a Cretan utters the statement "All Cretans are liars," and later analyzed by Russell and Whitehead in the Theory of Logical Types. The paradox consists in the contradiction between a negative statement and an implicit negative meta-statement included in the former. The metacommunicative message "this is play" in Bateson's interpretation can be formulated in the same form: "These

[125]Ruesch and Bateson, *Communication: The Social Matrix of Psychiatry,* p. 208-11.

[126]Gregory Bateson, "A Theory of Play and Fantasy," in *Steps to an Ecology of Mind.*

[127]In the previous work the metacommunicative level stands both for the propositions about codification and for the propositions about interpersonal relationship, while in this work the metacommunicative level is distinguished from the metalinguistic level as denoting solely cues and utterances about the relationship. It is, however, merely a change in terminology and does not pose a theoretical difference.

[128]Michael Silverstein, "Metapragmatic Discourse and Metapragmatic Function," in *Reflexive Language: Reported Speech and Metapragmatics*, ed. John A. Lucy (Cambridge: Cambridge University Press, 1993), 33–58.

actions in which we now engage do not denote what would be denoted by those actions which these actions denote."[129]

The source of the paradox, according to the Theory of Logical Types is that a term belonging to different levels of abstraction, here 'denote', is used synonymously, which is logically inadmissible. However, Bateson argues, the mental processes and communication of mammals do not conform to this logical rule, and are always prone to generate paradoxes of this type. In any interaction where verbal or non-verbal actions *stand for* but are *different* from certain other actions, and thereby in all communication where signs are treated as signs, we have a situation potentially similar to play.

Metacommunicative cues or utterances have the function of determining or suggesting how messages of a lower order are to be interpreted. They *frame* the message and thereby indicate and are part of the context. Any meaning organized in formally or functionally differentiated levels has a recursive, and potentially paradoxical relation with context.

Metalinguistic and metacommunicative rules, such as "words denote sets of objects of which they are not members"—e.g. the word 'dog' does not bite—do not follow in evolutionary terms the denotative level of human communication, but are presupposed by it. The evolution of metacommunication, thus, must have started at the pre-verbal level and we should look for it also among non-human animals.[130]

Bateson further explicates the emergence and the function of levels of abstraction through the varying representations of the relation between the map and the territory. Phenomena such as threat, deceit, or pretentious behavior observed among non-human animals exemplify, for Bateson, a primitive map-territory differentiation, where the action resembles another action, but is acknowledged (by the agent) as being different from it. He further extends this analysis to cultural phenomena such as initiation rituals, magical performances, realistic fiction in arts, usage of sacred symbols and so on, which he places in the gray area where the map and the territory are differentiated but not delineated; where one finds the "metaphor that is meant."[131]

Bateson's work on the potentially paradoxical nature of all communication has contributed significantly to the development of *cybernetic* theories of interpersonal communication, which analyze the dynamics of communication systems in terms of information flow and feedback. Metacommunication functions in social systems as an ongoing behavioral and verbal feedback that controls the interaction process, and it furnishes the dimension on which phenomena of miscommunication, disruptive patterns of interaction, systemic emergence of symmetrical and asymmetrical relations

[129]Gregory Bateson, "A Theory of Play and Fantasy", p.180.
[130]Ibid.
[131]Ibid., p. 183.

should be investigated. His clinical work in collaboration with the psychiatric circle known as Palo Alto Group is an application of the theory to the analysis of psychiatric disorders, the most famous outcome of which was the *double-bind* theory of schizophrenia proposed to explain the causes of the condition through analysis of systemic metacommunicative paradoxes.

Paul Watzlawick, Janet H. Beavin and Donald D. Jackson presented the contemporary theoretical core and vocabulary of the relational perspective in the now classic book *Pragmatics of Human Communication*.[132] They formalized the theory of interpersonal communication of the Palo Alto Group into five *axioms*:

(i) "One cannot not communicate." Since behavior does not have any opposite, a non-behavior, all perceived behavior including inertia are potentially meaningful for others.

(ii) "Every communication has a content and relationship aspect such that the latter classifies the former and is therefore a meta-communication." This distinction corresponds to Bateson's denotative and metacommunicative levels.

(iii) "The nature of a relationship is dependent on the punctuation of the partners' communication procedures." Analogous to the punctuation of words in a sentence, the parsing and ordering of individual events within the flow of communication reflects how people evaluate the interaction, allowing for different versions of "what happened," and is a determinant of the interaction.

(iv) "Human communication involves both digital and analog modalities." The simultaneous exchange of symbolic (verbal communication and symbolic gestures) and non-symbolic cues (such as intonation and body posture) allows for potentially paradoxical messages; for instance, the utterance "you are very intelligent" expressed in a cold tone communicates sarcasm.

(v) "Inter-human communication procedures are either symmetric or complementary." This distinction corresponds to Bateson's two forms of *schismogenesis*: emergence of symmetrical or complementary relationship patterns.

The fourth axiom, together with the first and the second, rephrases Bateson's fundamental philosophical insight regarding the origins and function of the *symbolic* in communication in pragmatic terms that are more relevant in the therapeutic context. Non-symbolic behavior or the analog modality of communication cannot express a negation, an absence, although it can communicate rejection, refusal, dismissal and so on. Hence, the digital modality of communication, symbolic behavior, introduces something novel in terms of

[132]Paul Watzlawick, Janet Beavin Bavelas, and Don D. Jackson, *Pragmatics of Human Communication: A Study of Interactional Patterns, Pathologies and Paradoxes* (WW Norton & Company, 1967).

what gestures can communicate. In Jesper Hoffmeyer's words, the symbolic level

> creates a distance which allows for an absence or, as it were, for a 'not'; that it is this distance which in its most primitive form was established with the monkeys in their 'play,' the ritualized indication of an absence.[133]

It is not a development that is completely traceable back to non-symbolic bodily communication, nor a substitute or replacement for it but is coupled with it in a way that potentially creates an immense depth of meaning. Coupling of different modalities or media of communication typically serves to differentiate meaning into levels, which is what monkeys' play achieves through a ritualized misperformance.

Signaling an absence or negation in the analog modality can only occur through demonstrating a part or aspect of the action that is going to be negated and not consummating it; e.g. a "bite" that does not damage as it otherwise would, and/or complementing it with another, incompatible action, gesture or expression; e.g. assuming a "threat" pose simultaneously with a "play face." Without regard to the communicative context, these actions would seem to be irrational due to the paradoxical nature of the communication. Yet these changes of form and discordant combinations cannot convey a meta-message such as "this is play" without there being a corresponding understanding of what to expect and what not. The action to be denied must be combined consistently with particular other signs and abbreviated or stylized in a way that has settled through reciprocal shaping of expectations. This way the communicators can come to share a repeatable frame, normally characteristic of digital communication, and thus rise above certain logical constraints of the analog modality. As Watzlawick and colleagues maintain, the "*ritual* may be the intermediary process between analogic and digital communication, simulating the message material but in a repetitive and stylized manner that hangs between analogue and symbol."[134] In human societies, rituals typically are not only stylized or formalized but also "canonized," thereby approach digital communication.[135]

The gradual emergence of higher levels of abstraction, further facilitated by the digitalization of communication, furnishes a social-ecological condition for the development of higher order cognitive-semiotic processes that are characteristic of person-making dispositions. With the advent of a novel order of communication, the metacommunicative order, communication comes to feature negation, relational framing, meaning creation and negotiation. As communication begins to exploit differentiated signification levels and modalities, it acquires a self-reflexive structure, which then forms the semiotic

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[133]Jesper Hoffmeyer, *Signs of Meaning in the Universe* (Indiana University Press, 1997), p. 7.

[134] Watzlawick et al., *Pragmatics of Human Communication*, p. 103.

[135] Ibid., p. 105.

basis of higher order psychological processes that typically have a metasemiotic character.

## III.3 CONSTITUTIVE VIEW OF COMMUNICATION: MODEL OR METAMODEL?

The formulation of the concept of communication in terms a constitutive process in the contemporary context is closely related with the theoretical venture of defining communication theory as a genuine discipline founded on a basic perspective as outlined in the beginning, as opposed to a conglomeration of a multitude of disciplines remaining within their own perspectives but specializing on the topic of communication. Two influential and representative formulations of the communication process from the constitutive view as a discipline-founding perspective come from Stanley A. Deetz and James Carey. Carey articulates communication from the constitutive view with emphasis on its cultural aspect as "a symbolic process whereby reality is produced, maintained, repaired, and transformed,"[136] and Deetz with emphasis on its political aspect as the process whereby "the inner world, outer world, social relations, and means of expression are reciprocally constituted."[137]

According to Deetz, the genuine perspective of the communication discipline should regard communication as a "disciplinary mode of explanation," by moving away from "studying 'communication' phenomena as formed and explained psychologically, sociologically, and economically" and instead proposing accounts of "psychological, sociological, and economic phenomena as formed and explained communicationally."[138]

This "communication perspective" regards communication not as a second-order phenomenon that demands explanation in terms of antecedent factors, but on the contrary, as a first order-phenomenon, which is an *explanans* more than it is an *explanandum*:[139] as the "primary, constitutive social process."[140]

In providing one of the earliest statements of the constitutive view as a discipline-founding perspective, Carey[141] distinguished between two disparate and complementary views of communication, namely transmission and ritual. Carey put forward a socio-cultural reading of the distinction in that he traced these two views of communication via socio-political and economic considerations back to religious origins. The commonest understanding of

[136]James Carey, *Communication as Culture: Essays on Media and Society,* p. 19.
[137]Deetz, "Future of the Discipline," p. 577.
[138]Ibid., p. 568.
[139]François Cooren, "Communication Theory at the Center: Ventriloquism and the Communicative Constitution of Reality," *Journal of Communication* 62, no. 1 (2012): 1–20.
[140]Craig, "Communication Theory as a Field."
[141]James Carey*, Communication as Culture.*

communication in industrial cultures, for Carey, is that of transmission, which he articulates as "a process whereby messages are transmitted and distributed in space for the control of distance and people."[142] He argues that the transmission view is grounded in a metaphor of transportation and arose with the age of exploration, where transportation was not merely a secular issue arising out of political and economic concerns but a deeply moral and religious one: The conquest of space amounted to the extension of God's kingdom through religious communication. The ritual view of communication is more archaic, according to Carey, and is "directed not toward the extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs."[143] He argues that the ritual view draws on another view of religion that has less to do with the delivery of a sacred message, as in mission and sermon, and more with establishing and maintaining a common, ordered form of life around a "sacred ceremony that draws persons together in fellowship and commonality."[144]

On the basis of this delineation, Carey goes on to deny the mutual exclusiveness of the two views thereby implied and argues that the transmission view can only be properly understood when subsumed within the ritual; information transmission is grounded in the *commonness* that founds a *community* and is brought about by *communication*. In reference to Ernst Cassirer, he draws on the capacity of symbols to present, create, maintain and repair reality, and describes the goal and scope of the communication discipline as to examine the actual communication process whereby "symbolic forms are created, apprehended, and used."[145]

In reference to our differentiation between the coordinative and transformative modes of communication, we can maintain that both in the reliable transmission of messages and the maintenance of shared meaning we see the operation of the same mode of communication; namely the coordinative. Transmission is never for its own sake, but for a social purpose—if not proximately, then ultimately. We share information or a perspective on states of affairs with others ultimately in order to coordinate our attitudes with respect to one another as well as to an aspect or element of the world, and to organize our actions in this world in accordance with those of others. Similarly, we maintain social meanings as well as interpersonal and broader social relationships in order to sustain the foundation on which we realize this coordination. Both of these functions, however, need to be differentiated from the function of the transformative mode of communication, which is geared towards creation, negotiation and modification of shared meanings as well as

[142]Ibid., p. 13.
[143]Ibid., p. 15.
[144]Ibid.
[145]Ibid., p. 24.

social relationships and practices. An exclusive dominance of the coordinative mode, amounting to what we have called the coordinative type, gives us a social reality akin to that of social insects. Having social meanings, practices and relationships that can be "maintained" implies that we have created or re-interpreted them in the first place, and can possibly contest, change or abandon them. Both modes are operative in tandem in communication as ritual as well as communication as transmission. The dialectical relationship of the transformative and coordinative modes thus cuts across an information/transmission-constitution dichotomy.

Deetz, on the other hand, formulates the information-constitution dichotomy in terms of the historical and social contexts in which the corresponding views of communication took shape, the social problems they answer to, and the type of socio-political order they serve to bring about. For him the *constitutive* function of communication that *produces* social meaning is primary and grounds its *expressive*, *reproductive* function. He maintains that the underlying constitutive process is (strategically) concealed by the information orientation in communication theory that only pays attention to expression and takes meaning as an independent given for the purpose of control and domination. What pertains to the communication perspective, on the other hand, is the (political) attention not only to the processes of reproduction, but to who gets to participate and how in the political and decision-making practices that *produce* social meaning, and the moral-political agenda of promoting open participation and ongoing negotiation towards approaching what Habermas called the "ideal speech situation."[146]

These statements of the constitutive view exemplify, on the one hand, a historical, moral and political conception of the conceptual topology of communication theory, which sees a dialectical opposition between two complementary views when taken as models *for* communication. This is particularly apparent from the fact that arguments for the constitutive view often attribute the moral and political mission of promoting open, participatory democracy. On the other, they both argue for a fundamental asymmetry between the two views implying a grounding relationship when taken as models *of* communication. In the latter case, it is acknowledged that there is a difference between the processes of communication denoted by the two models; the one denotes the grounded and the other the grounding social process; the difference of which is expressed concisely by Dewey in *Experience and Nature*: "Society exists not only [...] *by* communication, but it may fairly be said to exist [...] *in* communication."[147]

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[146]Deetz, "Future of the Discipline," p. 574.

[147]John Dewey, *Democracy and Education: An Introduction to the Philosophy of Education* (Mineola, New York: Dover Publications, [1916]1994), p. 4. Emphasis added.

Regarding its epistemological implications, moreover, the constitutive view as a model *of* communication can indeed claim to subsume under itself *any* other model of communication, since all social reality, including the phenomenon of communication, is symbolically constituted by communication. Yet, since communication theory is intrinsically reflexive, and any model of communication is also a model for communication, the particular ways in which communication is symbolically constituted would have different social, moral and political implications.

The constitutive view has its stronghold in what Deetz articulated as the genuine communication perspective, which attempts at turning the explanatory tables on theories of communication in any other discipline by declaring communication a first-order phenomenon; "the primary social process through which our meaningful common world is constructed."[148] The transmission view falls, as a natural result, out of the scope of this disciplinary perspective since although it is the traditional view of communication that founded the modern communication theory, it is not *communicational* in the proposed disciplinary sense. This constitutive proposal to redefine the communication discipline implies, though, two interrelated risks. First, it might be argued that to the extent that it opens up conceptual and methodological space for a genuine communication discipline, the constitutive view also closes it up and delimits it. Second, if communication from any other perspective but communicational belongs to the domain of other disciplines, one might raise doubt on whether communication theory from a constitutive view would in fact have the theoretical means general enough to problematize communication as its subject matter or *explanandum* at all, or would rather become a particular, not disciplinary, discursive perspective on culture, interpersonal relations, society, politics and so on. This second risk is evident from the quite common identification of the constitutive view with postmodern trends of social constructionism.[149]

In acknowledgment of such risks for the diverse field of communication theory, Robert Craig proposed to distinguish between *first-order models* of communication, which give an account of what communication is, from *a metamodel* of communication theory, and argued that the first-order constitutive model, exemplified by the proposals of Carey and Deetz, should be re-construed as a *metamodel*.[150] A metamodel of communication does not deal with the phenomenon of communication itself, but "pictures models of communication as different ways of constituting the communication process

[148]Craig, "Pragmatism in the Field of Communication Theory," *Communication Theory* 17, no. 2 (2007): 125–45.

[149]Take, for example, the encyclopedia entry for the constitutive view: "To take a constitutive view of communication means to presume that communication, or interaction, is a process of [...] social construction." See Nicotera,"Constitutive View of Communication," p.175.

[150]Craig, "Communication Theory as a Field."

symbolically for particular purposes."[151] The constitutive metamodel shares the social constructivist assumptions of the constitutive view, such as denying any "true essence" to meaning outside of communication and any truth value to propositions independent of the social process. Hence, Craig argues, the constitutive view falls into a reflexive paradox if it opposes the transmission model as another first-order model; in other words, it contradicts its own basic assumptions if it rejects the transmission model in absolute terms, as not corresponding to the "true" nature of the communication process.[152] Yet, the paradox is not resolved when the constitutive model is reevaluated as a metamodel that does not reject *a priori* other, none-constitutive models, as he later expressed.[153] Rather, the reflexive paradox is acknowledged as being inherent to the constitutive view. Any first-order model of communication is, then, neither true nor false, but can be seen as a useful way of constituting communication in meta-discourse for particular purposes.

He further argued that the constitutive metamodel can model the whole field of communication theory as "dialogical-dialectical field" that comprises seven traditions of communication theory in terms of their "underlying conceptions of communicative practice:" rhetorical, semiotic, phenomenological, cybernetic, socio-psychological, sociocultural, and critical.[154] The models of communication put forward within these traditions enumerated by Craig are presented as being on equal footing in that they all are alternative practices of intellectual meta-discourse. Pertaining to the metaphysical and epistemological frameworks within which they originate and are practiced, though, it is not hard to see that the traditions of communication theory which generally share a constructivist epistemology (albeit with differing degrees of anti-realism), such as the sociocultural and critical traditions, have the upper hand on the meta-meta-discursive level. The others at best have to leave their epistemological assumptions at the door in order to join in the communication theory that is united by the constitutive metamodel.

On the other hand, Craig presents how communication is theorized by each of the seven, or eight including the pragmatist, traditions in a way which is at once illuminating and strategically concealing. It is illuminating as an attempt at putting diverse and often incommensurable theories of communication in dialogue as well as in dialectical opposition, so that they do not talk past each other and can agree or disagree about what communication consists in, can merge, converge, or effect change in one another. It thematizes the differences in prioritization of problems of communication, lays out the pertaining meta-discursive vocabularies, points out the commonplaces of

[151]Ibid, p. 127.
[152]Ibid.
[153]Ibid, p. 128-129.
[154]Ibid., p. 133-5.

practical meta-discourse these traditions take for granted or challenge, reconstructs the main lines of convergence as those of possible dialogue and the main lines of divergence as those of possible critique. It achieves this, though, by reconstructing each tradition as putting forward a first-order model of communication where the ontological and epistemological debates not only underlying but also constituting the history, development, and diversification of various conceptualizations of communication are bracketed off. It would not indeed be too bold to say that the attempt consists in stripping communication theory of epistemology so as to prevent the potentially destructive effects of the postmodern epistemological critique intrinsic to contemporary communication theory on the discipline itself. At the end, the reconstructed models of communication are conjectures that can have pragmatic but not epistemological purport. Moreover, the definitions of communication attributed to the enumerated traditions are in many cases little more than historical relics. For instance, the "information processing" definition of the cybernetic tradition, which have undergone substantial "internal" epistemological critique to the extent that in each tradition almost any theory proposed in the second half of the 20th century would have to be left out in the reconstructed framework.

It is not surprising, hence, that Craig's proposal was not received without dispute. It has been argued[155] that the constitutive metamodel was not more than an attempt at assimilating all communication theory into the framework of social constructionism and of the closely related constructivist epistemic framework, and elsewhere[156] that the constitutive metamodel is itself a model of communication in the pragmatist tradition.

The early 20th century social constructivist proposals, most relevant for our purposes being those by Peirce, Dewey, Mead, Vygotsky and the sociocultural psychology school, and partly Piaget, have all endorsed some form of metaphysical realism regarding structure, agency, habit, or embodiment underlying and qualifying their arguments for social construction of knowledge and reality. Moreover, the common aim was not to do away with objectivity and embrace a relativism with respect to models or interpretation in general, but on the contrary, to engage critically with the grounds of modernist objectivity in order to redefine it in novel terms. It is justified to say that the classical pragmatist school was characteristically *post*-modern in that its agenda to re-establish continuities between thought and thing, nature and culture, as well as between history and present, which were often posited as mutually exclusive opposites in modern thought.[157] Yet, this project of rapprochement

[155]David Myers, "A Pox on All Compromises: Reply to Craig (1999)," *Communication Theory* 11, no. 2 (2001): 218–30.

[156]Chris Russill, "The Road Not Taken: William James's Radical Empiricism and Communication Theory," *The Communication Review* 8, no. 3 (2005): 277–305.

[157]Larry A Hickman, *Pragmatism as Post-Postmodernism: Lessons from John Dewey* (Fordham University Press, 2007), p. 51.

between the disparate realms of the subjective and the objective was meant to preserve the legitimacy of the empirical sciences while rejecting their moral, social and political detachment. It poses a significant contrast with the later neo-pragmatist relegation of the empirical sciences, most famously sought by Rorty, to a branch of self-referential, recursive literary discourse. In terms of their social agendas, on the other hand, the guiding ideal of classical pragmatism was conceiving a commonality that embraces plurality, as the locomotive of social change geared towards universal goals and of scientific progress. The neo-pragmatist understanding of plurality, however, is focused not on centripetal but on centrifugal paths of interpretation.

Cybernetic epistemology, and particularly the ecological constructivist proposal of Bateson, were also not grounded in a *radical* constructivist[158] epistemic framework that is, for instance, observable in Klaus Krippendorff's *recursive communication theory,*[159] who belongs among the most prominent contemporary representatives of cybernetic communication theory. Among the main elements of the theory, Krippendorff argues that:

(i) The locus of *construction of reality* is individual understanding. The others are invented in one's own construction of reality.

(ii) Language is not shared, in the sense of commonality of meaning, but is a "medium of coordination of communication practices."

(iii) Language is constitutive of communication practices.

(iv) Any aspect of communication can be understood only in terms of other aspects of communication. Communication, hence, can only be studied from within the discourse it produces.

The epistemological purport of these elements are in conflict with that of the present account in that while the radical constructivist closes up communication as a self-referential, ungrounded but grounding, independent domain of discourse, the present argument aims towards opening it up towards experience, life, and nature. If there is a self-enclosed, self-referential and recursive domain of meaning, it is not symbolic communication but the phenomenon of life itself.[160] The model of communication here proposed is grounded in the constitutive view, if it is understood as an umbrella term for a variety of first-order models of communication that conceive the communication process in terms of meaning creation rather than as a meta-model. On the other hand, if the meta-model is stripped off from its epistemological and ontological baggage and merely argues that models of communication are different ways of constituting the communication process symbolically for particular purposes, as quoted from Craig above, then it is

[158] See, e.g. Ernst von Glasersfeld, "Einführung in Den Radikalen Konstruktivismus," in *Die Erfundene Wirklichkeit*, ed. Paul Watzlawick (Munich: Piper, 1984), 16–38.

[159]Klaus Krippendorff, "A Recursive Theory of Communication."

[160] I desire to ground symbolic communication not circularly, in symbolic communication, but in pre-symbolic as well as non-symbolic communication.

indeed not clear if it says more than the tautological statement that communication models are *models* of communication.

# THE SECOND PART:
# SIGNS AND INTERPRETATION

In the second chapter I have described meaning-making processes briefly as different ways of making history efficacious, and alternatively as ways of making the past present. Now I can elaborate further on the relation between meaning and temporality, and on the continuities and discontinuities between these ways of meaning-making. The theoretical tools required for such a general inquiry are looked for in the field of semiotics. This part mainly aims at presenting a set of key semiotic notions and evaluating them through the perspective of the present work.

The semiotic perspective approaches meaning in terms of the creation, establishment, operation, and modification of sign-relations. The broad field of contemporary semiotics, as said before, emerged through a theoretical expansion of the study of sign systems over meaning, experience, and life. This expansion was brought about, on the one hand, by a *generalization* of linguistics so as to include the study of non-linguistic sign systems. Saussure conceived *semiology*, today considered a branch of semiotics, as a general science "which studies the role of signs as part of social life."[161] On the other, it was brought about by a generalization of philosophical logic so as to include non-linguistic or pre-linguistic forms of reference and inference. For Peirce semiotics, or *semeiotic*, was not exhausted by the investigation of external features of communication but comprised internal processes of meaning-making, thus the most generic properties of signification *per se*. Hence, he preferred to categorize it as the "formal doctrine of signs."[162] This formal doctrine proved to be vastly fruitful for investigating non-linguistic sign-processes as well as the so called natural signs. The sub-field of biosemiotics, setting off from the insights of von Jakob von Uexküll and Peirce, extended the field of semiotics to comprise non-human sign-processes and non-human lifeworlds, and thereby proposed to conceive all life as the seat of meaning creation. In Lotman's words, the biosphere is regarded as part of an overarching semiosphere, the universe of meaning and signification. In this generalized and holistic sense, semiosis appears as a process of meaning creation that acquires various forms and constitutes various kinds of experiential worlds. Kalevi Kull offers such a generalized and holistic description of semiosis in terms of *interpretation*:

[161]Ferdinand de Saussure, *Course in General Linguistics*, ed. Charles Bally and Albert Sechehaye, 3rd ed. (McGraw-Hill Book Company, 1959).
[162]CP 2.227.

> Semiosis, in other terms, is interpretation - including all its forms: perception as interpretation, action as interpretation, translation as interpretation, signification as interpretation, and meaningful communication as interpretation.[163]

From the Peircean perspective, all varieties of knowledge are mediated through signs. In other words, there is no immediate or non-semiotic form of perception, understanding or reflection. The world we primarily live in is not one of things or facts but a world of unities of meaning: similarities, relations and patterns of relations. Since all possible objects of knowledge are mediated by the kinds of sign interpretation an organism can realize, experience is necessarily perspectival; a point which was independently suggested in von Uexküll's *Umweltlehre* as well as further developed within the pragmatist project by Herbert Mead into a basis for a full-fledged philosophy of action.

The fourth chapter aims at explicating key notions and classifications of Peirce's sign theory that will figure frequently in the succeeding discussions. His conception of thought as an internal dialogue, the general concept of a sign and elements of signification as applicable equally to material signs (such as words) and to thoughts, varieties of meaning and interpretation as well as the pragmatist integration of thought and action in the notion of habit are central to the semiotic dimension of our investigation into the origins of personhood. The chapter also discusses the immediate implications of Peirce's semiotics for the question of continuities and discontinuities between varieties of semiosis throughout nature, which provides the framework for the discussion I undertake in the following, fifth chapter.

The fifth chapter provides a broader perspective on semiosis with a view to situating the function, scope and emergence of reflexivity along the axes of phylogeny-ontogeny and intersubjectivity-sociality. Reflexivity is explicated in semiotic terms, as a metasemiotic process. The chapter focuses firstly on varieties of signs and interpretation across communicational phenomena in nature and subsequently outlines the transformative role of socio-cultural processes of meaning construction and negotiation. Finally, it explicates the notion of meaning structures on the basis of a communicative interpretation of the biosemiotic notion of semiotic scaffolding, and describes the operation of transformative communication in ontogeny in terms of intersubjective scaffolding of nascent metasemiotic processes.

[163]Kalevi Kull, "On the Logic of Animal Umwelten: The Animal Subjective Present and Zoosemiotics of Choice and Learning," in *Semiotics of Animals in Culture: Zoosemiotics 2.0*, ed. Dario Marrone Gianfranco and Mangano (Cham: Springer International Publishing, 2018), 135–48.

# IV PEIRCE'S THEORY OF THE SIGN

Considering the scope of the present chapter and its function in the broader argument, a short dedicated introduction is in order. Although the chief aim of this chapter is to lay down the basic elements and varieties of semiosis, it has a historical outlook. This discrepancy is due, on the one hand, to the fact that any presentation of Peirce's theory of the sign needs to be to some extent historically informed in order to ensure the consistency of concepts and terms through his immense body of works as well as within the broader context of secondary literature, even in the case where, as here, the goal is pure conceptual exposition. On the other, a historical organization of the sections provides in the particular case of Peirce's theory of the sign an opportunity to structure the intended conceptual explication in the form of an inner dialogue. It can be argued that the development of Peirce's semiotics follows an internal rationale; that is, all major shifts and transformations are explainable as solutions to certain shortcomings or impasses generated by certain elements of the previous phase of the theory. Certain key terms of Peirce's later semiotics such as the ultimate logical interpretant and the dynamic object, for instance, can be adequately understood and appreciated only in reference to some problematic implications of a thesis central to his earlier semiotics, namely that of infinite semiosis or semiosis without beginning or end. The central concern of the chapter, hence, is ultimately not historical but theoretical. Moreover, as it is also implied by the word "development," of chief importance for the present work are the terms and propositions presented in the context of Peirce's later semiotics.

Peirce's prolific intellectual endeavor presents for most scholars the dynamic continuity of an evolving philosophical project,[164] inaugurated with his anti-Cartesian as well as anti-positivist critique of epistemological foundations like pure intuitions or sense data, and culminated in a pragmatist theory of meaning. Although this evidently is not the only possible interpretation of Peirce's semiotics, it is beyond dispute that Peirce continually developed his theory of the sign and proposed ever more complex and broader accounts, which are roughly grouped into three: his Early Account of the 1860s, his Interim Account of the 1880s through 1903, and his Final Account or mature semiotics developed from 1906-7 on. Alongside its increasing complexity and scope, Peirce's semiotics showed also significant revisions and shifts. On the one hand, Peirce's subsequent revisions served to promote the integration of his pragmatist theory of truth and inquiry, phenomenology and ontology with his semiotics. On the other, he abandoned or considerably modified some of his early assumptions regarding the

[164]For a renowned account of the development of Peirce's philosophy, as driven by his discoveries in logic, see Murray G. Murphey, *The Development of Peirce's Philosophy* (Cambridge: Harvard University Press, 1961). Cf. William L Rosensohn, *The Phenomenology of Charles S. Peirce: From the Doctrine of Categories to Phaneroscopy* (John Benjamins Publishing, 1974).

nature of knowledge and meaning generation. These developments are also marked by Peirce's increasing interest in speculative rhetoric, which is the third branch of his tripartite "semeiotic" or "general logic" alongside speculative grammar and speculative critic, and deals with the *efficacy* of signs. While his earlier thought is predominantly occupied with speculative grammar, or the formal and abstract science of signs as such, his later thought deals with the nature of interpretation; on what signs do and how they operate *in concreto*. Several contemporary scholars consequently see the developments Peirce's later account undertakes over his earlier work on speculative grammar as the result of a rhetorical turn in his thought.[165]

The overarching narrative of the following exposition, following the key philosophical theses and their modifications, can be loosely summarized in the form of several premises: (i) All thinking is in signs and all ideas are signs mediating between preceding and succeeding ideas, hence there are no immediate or pure ideas, (ii) while all thoughts are signs, not all signs are thoughts; some signs can refer to individuals or aspects of individuals instead of general terms, (iii) the necessary condition of signification is not actual interpretation but interpretability, hence there is an interpreter-independent element of signification (iv) it is not the case that all signs are interpreted in thoughts, some can merely and others more properly be interpreted in feelings or actions, (v) thought-signs (i.e. concepts, propositions, arguments) acquire their full intellectual purport, hence ultimate meaning, not from their mediating position within an endless series of translation of signs into other signs, but from the general kind of future conduct that would issue from their endorsement and use; hence, there is no ultimate difference in the nature of their normativity between the spheres of theoretical and practical reason.

This narrative intimately ties to our premises that semiosis is not a self-sufficient and closed system of interpretation peculiar to the linguistic community of human beings, and that signs, in terms of their function of mediating the relations of sign users with the world and with one another, are the medium for cultivating habits of action. As such, they are ultimately in the service of collective organization of action, including the pursuit of knowledge, and proximately in that of critical development of attitudes and dispositions and achievement of higher degrees of self-control.[166]

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[165]See e.g., Vincent Colapietro, "C. S. Peirce's Rhetorical Turn," *Transactions of the Charles S. Peirce Society: A Quarterly Journal in American Philosophy* 43, no. 1 (2007): 16–52; Mats Bergman, *Peirce's Philosophy of Communication: The Rhetorical Underpinnings of the Theory of Signs* (Continuum, 2009); James Jakób Liszka, "Peirce's New Rhetoric," *Transactions of the Charles S. Peirce Society* 36, no. 4 (2000): 439–76; Lucia Santaella-Braga, "Methodeutics, the Liveliest Branch of Semiotics," *Semiotica* 124, no. 3–4 (1999): 377–95; Thomas Lloyd Short, *Peirce's Theory of Signs* (Cambridge University Press, 2007).

[166]By the same token, transformative communication, which is geared towards the deliberate formation and critical modification of habits of interpretation, is ultimately in the service of and derives its meaning from coordinative communication.

The chapter begins with a general presentation of the triadic structure of signification in the first section. The second section focuses on the ideas of infinite semiosis and thought-signs central to the Early Account and discusses their philosophical context as well as some problematic implications that called for to a broadening of the taxonomy of signs and to a generalization of the field of semiotics. The third section presents the most widely referred 1903 taxonomy of signs and discusses various kinds of signs in relation to the varieties of semiosis. The fourth section places Peirce's later semiotics in the context of pragmatism and explicates some epistemological and metaphysical concerns central to the Final Account. The fifth section focuses on the rhetorical reformulation of the sign as medium of communication and of semiosis in terms of the reciprocal processes of utterance and interpretation. Lastly, the sixth section presents Peirce's famous proof of pragmatism in terms of the notion of habit and outlines his conception of habit in its relation to deliberation, self-control and temporality.

## IV.1 THE TRIADIC STRUCTURE OF SIGNIFICATION

Throughout the immense body of his works, Peirce proposed various definitions of what signification consists in and classifications of kinds of signs, which showed chronologically an ever increasing complexity. The basic triadic structure of signification is, though, the most stable and consistent backbone supporting the elaborate organism of Peirce's general logic, or *semeiotic*. It is also the most distinguishing aspect of Peirce's semiotics. In difference to more common dyadic conceptions of the sign as that which represents something else—by standing for, corresponding, or substituting—Peirce incorporates the semiotic, or interpretive effect *into* the sign process**.** Signification, hence, is to be found neither in the relation between a sign and what it represents, nor between a sign and how it is interpreted, nor in the combination of these two. What is being ruled out from the start in assuming an irreducible triadic relation is that the sphere of signification, or meaning in general, is never a purely representational or interpretational one. Thus, Peirce dismisses most determinately the exclusive application of the adjectives objective and subjective, among all, to the phenomena of signification.

A sign in the most general and broad sense is anything that stands for something other than itself to someone in some respect or capacity.[167] It needs to be further qualified, though, that a sign stands not exactly to *someone*, but to *a particular interpretation in* someone, which is the *effect* of the sign. The sign and the effect of signification are two distinct things, often of different orders. A sign can be merely *present* to someone, while it is its *comprehension* as a sign that *represents* it

[167]CP 2.228.

as a sign of something else. Signification is a single, mediated relation with three relata. In 1868, as one of the earliest definitions, Peirce designates these as such:

> a sign has, as such, three references: first, it is a sign *to* some thought which interprets it; second, it is a sign *for* some object to which in that thought it is equivalent; third, it is a sign, *in* some respect or quality, which brings it into connection with its object.[168]

This mediated relation can be conceived in two symmetrical ways: as that between a sign and an object mediated by interpretation, and as that between an object and interpretation mediated by a sign. The crucial feature is that no relatum of the signification relation is a self-standing element; each are identified relationally.

Peirce has referred to the sign also as *representation* and *representamen*. The effect of signification is most often referred to as the *interpretant* of the sign, which is more precise as well as more generically applicable than *interpreter* or *interpretation*. Lastly, signs signify their objects not as a whole but only in some respect or capacity, which needs to be represented in the form of an appropriate interpretant. It is precisely the reference to that particular respect or capacity that which constitutes the sign as such, as well as designating its type. Peirce has sometimes called the respect or capacity in which a sign signifies an object its *ground*.[169]

Peirce describes the triadic relation of signification that obtains between these three elements later as a process of *mediate determination*:

> I define a sign as anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its interpretant, that the latter is thereby mediately determined by the former.[170]

Although emphasizing interpretation as the crucial factor in signification points towards the active subjective process, designating the relation between the sign and the interpretant as one of determination seems to relegate the interpretant to a mere effect. However, if purely efficient causation in the sense of linear processes that afford no degree of freedom were the case, we could not talk about semiosis in the first place. The determination in question, thus, can be better understood as placing constraints on semiosis.[171] The reference domain, the

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[168]W 2.223.

[169]Some commentators tend to conceive the Peircean sign not as one of the terms of a triadic relation, but as a composite with three parts. Accordingly, they qualify the signifying part of the sign in distinction to the tripartite body that is the sign in the broad sense. An often used term for the sign in the qualified sense is Charles Morris's *sign-vehicle*. The sign in the qualified sense is for some the particular *form* of the sign, for others what Peirce calls its *ground*.

[170]EP 2.478.

[171]Peirce's selection of the term "determined" to describe the relation of an object to a sign and of a sign to an interpretant was not received without dispute and still is an issue of debate in the literature. Peirce uses the term as an equivalent of the German term "*bestimmt*", which he believes he understands as Hegel does. In a discussion (although not directly related to the theory of signs) with the editor W. T. Harris published in the *Journal of Speculative Philosophy,* Peirce maintains that both terms mean "fixed to be *this* (or *thus*), in contradistinction to being this, that, or the other (or in some way or other)", W 2.155-6. A bit further he expounds that "being determinate" involves having particular attributes (and

object, places constraints on what can function as a sign and on the features the sign can use to signify, which in turn affords or prohibits possible interpretants. The sign determines the interpretant by virtue of focusing attention to a particular feature of the way in which the object determines the sign. Consider a trace fossil. What is it in a limestone with markings on it that signifies a living being that perished long ago? The substrate of the markings, e.g. the properties of the limestone, are not relevant for signification, although they may be relevant in determining how effectively any trace would be preserved. The shape of the markings is to a certain extent significant, yet identical traces can be left by entirely different organisms, or worse, the markings might have been produced by natural forces. The crucial signifying element is the causal connection between the behavior of the organism such as crawling, feeding, resting and the markings on the stone, without which the traces cannot function successfully as signs. The trace fossil signifies by virtue of placing conditions on the interpretant: The interpretant must represent the *causal* connection between the behavior of the organism and the markings if signification is to take place.

These constrains or conditions can fall into three classes, as I elaborate further in the following, with respect to nature of the relations that need to obtain between the elements of the sign. We can talk about *qualitative* constraints (pertaining both to the properties of the sign and to its connection with the object), of *existential* constraints (spatial and temporal connections, causal relations), of *habitual* or *conventional* constraints (natural or acquired dispositions, laws and norms). Reference to these constraints or conditions is what Peirce meant by "ground" or "ground of the representamen" in his Early Account.[172]

Signs determine interpretants to (mediate) determination by the same object.[173] They make them refer to their objects, through them, in the way they themselves refer; that is, by bringing them to satisfy the same (type of) constraints or conditions that their objects place on them. A sign is then "[a]nything which

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not their contraries). He also links it to the actualization in thought of what was latent in thought. Considering that a sign is informative if it is to be significant, we can say that what signification achieves involves delineating some particular features of the object and of its relation with the sign in a way that renders a vague or general idea about the object more explicit and specialized. This, however, still covers only the cases where signification has to do with actual or past states of affairs. Peirce includes in his conception of semiotic influence also future objects, since an important function of signification is prediction. For this purpose in particular, he wants to divorce the concept of determination from that of causation so as to include logical consequence as well, MS 634:24 [1909] (cited in Bergman, *Peirce's Philosophy of Communication*, p. 100). Lastly, the interpretation presented above comes closest to Atkins's, and is resonant with Short's interpretation of the term as "limited". See Albert Atkin, "Peirce's Theory of Signs," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, Summer 2013 Edition, https://plato.stanford.edu/archives/sum2013/entries/peirce-semiotics/; Short, *Peirce's Theory of Signs*, p. 167-8. For other interpretations similar to Short's, see e.g. Joseph Ransdell, "Some Leading Ideas in Peirce's Semiotic," *Semiotica* 19 (1977): 157–178; Liszka, *A General Introduction to the Semiotic of Charles Sanders Peirce* (Indiana University Press, 1996).

[172]See e.g. W 1.474, W 2.55, CP 2.228.

[173]CP 4.531.

determines something else (its interpretant) to refer to an object to which itself refers (its object) in the same way."[174]

Already in his Early Account, Peirce argued that signs generate further interpretants in three possible ways and that these give us three kinds of signs. "Those whose relation to their objects is a mere community in some quality" he terms *Likenesses* (later, *icons*), "[t]hose whose relation to their objects consists in a correspondence in fact" he terms *Indices* (later, *indexes*), and "[t]hose the ground of whose relation to their objects is an imputed character" he terms *Symbols*.[175] If the interpretant is generated by virtue of some quality more or less common to the sign and its object, then the sign is an icon. If the interpretant is generated by virtue of some existential fact such as spatial proximity or causal connection between the sign and the object, then the sign is an index. If the interpretant is generated by virtue of some general, conventional connection between the sign and the object, then the sign is a *symbol*. Among early examples of icons, indexes and symbols are portraits, the weathercock, and words.[176]

This identification of three kinds of signs is also an enduring feature of Peirce's sign theory, although his thoughts regarding the nature and function of icons and indexes as well as the nature of this division changed with the development of the theory. In rough terms, Peirce regards icons and indexes in his Early Account to be of no or little relevance for philosophy. Only symbols, since they are general signs, are the objects of understanding and the rules of logic are applicable primarily to them, along with spoken and written symbols. In the following, his early theory and some related philosophical issues are discussed in order to pave the way for his mature theory.

## IV.2 THE PERPETUAL INNER DIALOGUE: PEIRCE'S EARLY ACCOUNT

Peirce's famous article "On a New List of Categories"[177] delivered to the American Academy of Arts and Sciences in 1867 and his three articles in the *Journal of Speculative Philosophy*,[178] namely "Questions Concerning Certain Faculties Claimed for Man," "Some Consequences of Four Incapacities," and "Grounds of Validity of the Laws of Logic: Further Consequences of Four Incapacities" are collectively the first explicit presentation of his theory of the sign. Peirce's Early Account presented in these articles is characterized by two central, interconnected notions various premises of which have later been circumscribed, omitted or revised: those of "thought-signs" and infinite semiosis. The former derives from Peirce's

[174]CP 2.303.
[175]W 2.56.
[176]W2.53-4.
[177]W 2.49–59.
[178]W 2.193–272.

thesis that all thought is in signs, and the latter from his thesis that an infinite chain of signs come before and after any sign.

The thesis that all thought is in signs can be traced back to Peirce's conception of representation articulated in 1865-6**.** The concept of representation plays in Peirce's early thought the crucial role of a mediator between his epistemological inquiries and his emerging general theory of signs by allowing him to translate mentalistic concepts into those of the logic of relations. As mentioned above, Peirce's earliest term for sign is *representation*. More precisely, sign is a species of representation. In 1865-6, before he has clearly formulated his theory of signs, Peirce states some of its central premises in an attempt to specify the proper subject matter of logic.[179] In 1865, in the "Logic of Sciences," he identifies representation as the *Summum Genus*, as *What is*, since whatever is given to us is an instance of what is and all these instances are representations as far as they are *taken* as instances.[180] He then identifies what representation implies in order to classify representations on its basis. Representation as such implies a "reference to an Object" (represented), a "reference to a Subject" (that is, to a representation, to which it is addressed), and a "reference to a Ground" (which determines the representation to represent that object to that subject).[181] In other words, representation stands to a subject for an object upon some ground. This is an early formulation of what later will be the triadic relation of signification. Already here we have the thesis that becomes a central premise of Peirce's theory of signs: Representation obtains by being addressed to another representation that represents it as a representation. Immediately afterwards, in 1866, he calls this second representation the *interpretant*.[182] An important feature of this thesis, which is characteristic of Peirce's Early Account but is significantly revised in his mature thought, is that the interpretant of a representation is the second representation of the same object.

Another central element that is germinally present in 1865-6 is the classification of representations on the basis of differentiating the properties of the ground, which determine those of the interpretant. This foreshadows his famous classification of signs into icons, indexes and symbols on the basis of how signs

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[179]W 1.322-336; W 1.454-471.

[180]W 1.324. In an effort not to commit to a Berkeleyan type of subjective idealism, he does not restrict representations to cognition, that is to representations which are actually addressed to a mind. Instead, he argues negatively that to assume that there are things which are not representations is to assume that there are things without attributes. An attribute is a representation of the thing in itself. Peirce uses the term as a peculiar translation of Kant's *Vorstellung*, which he labors to generalize beyond mind. It might be a clearer exposition of his idea, though anachronistic, to say that everything is at least *potentially present* and representation is (minimally) what takes a presentation as a presentation of something. He uses the same term, presumably on purpose, irrespective of the order of reflexivity, as in the formulation in W 1.323-4: "a representation which represents another as a representation is the *subject* of that representation." It must be noted that at this point Peirce does not have an appreciation of the concept of *potentiality* in difference to that of *possibility*.

[181]W 1.327.

[182]W 1.466.

generate their interpretants. However, his analysis of the ground and of the nature of determination at this point is markedly different, the major reason for which is that he does not yet recognize indexes as a type of sign. Nonetheless, he classifies representations into three and designates the proper subject matter of logic as *symbols*, which will remain the same until 1885.

Short observes an important change in the conception of the interpretant from 1865-6 to the early theory of signs presented in the three articles between 1868-9, which gives Peirce's thought on signification one of its central characteristics and foreshadows his pragmatism.[183] In 1866 Peirce writes that the interpretant, what a representation stands *to*, is "a particular remembrance or image" in one's memory, which is a "mental equivalent."[184] Short argues that while here the interpretant is an existing thought, hence significance is "past-dependent," by 1868 the interpretant is subsequent to the sign, hence signification becomes "future-directed."

Peirce's thesis that all thought is in signs builds upon his conception of thought as representation, but it is in the context of his anti-foundationalist critique directed at Cartesianism that it takes this idiosyncratic form. The most crucial leap is the idea of an endless chain of interpretants, which is the central theme of the 1868-9 articles.

Peirce argues therein that every thought interprets a previous thought and is addressed to a subsequent thought that interprets it. This process conforms to how signification obtains, since thought is a species of representation:

> we have in thought three elements: first, the representative function which makes it a representation; second, the pure denotative application, or real connection, which brings one thought into relation with another; and third, the material quality, or how it feels, which gives thought its quality.[185]

Any thought, as any sign, has some qualities pertaining to it independently of its representative function, since a sign is not the same as the thing signified. Further, the denotative or demonstrative application consists in a real connection of the sign (or of the thought-sign) with an object either immediately or through its connection to other signs of the same object. Unlike some signs such as weathercocks, a thought does not have a physical connection with an external object; its object is thought-of—in other words, intentional. Thought denotes an object only through denoting a previous thought, thus its reference to the object obtains though another thought. Lastly, in order to have a representative function at all, a thought, as any sign, must be interpreted by a thought *as* representing something. The representative function lies in being addressed to a subsequent thought.

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[183]Short, *Peirce's Theory of Signs*, p. 30.
[184]W 1.466.
[185]CP 5.290.

Consequently, every thought is both a sign for an interpretant and the interpretant of a sign. Thought and sign are the sides of the same coin distinguished only by virtue of the direction in which one approaches the dynamic continuum of semiosis. The thought-signs interpreted by a particular thought determine its object, and the thought-signs in which that particular thought is interpreted in turn determine how the object is to be represented by a still further thought. Thought represents its object only through the mediation of a preceding representation of the object, which is mediated by still another representation *ad infinitum*.

The infinite regress of thought is joined by an infinite progress. Since no thought-sign has meaning individually, a thought becomes a sign only in being interpreted as such. The meaning of a thought-sign is to be found, hence, in the development of thought in the process of interpretation. Not only that any general sign is open for further interpretation, but thought-signs must be continuously interpreted in order to have meaning. This entails that thought cannot be immediately determined by its object. Neither taking off from nor arriving at epistemic absolutes, hence, the process of inquiry is thoroughly *interpretational* and potentially endless. Signs, in particular general signs or symbols, are not static constructs but exist and evolve in the dynamism of interpretation.[186] It is this dynamic nature of interpretation that is addressed by Peirce's early notion of *infinite semiosis*.[187]

While the emphasis on the dynamic nature of sign-interpretation remains an integral aspect of Peirce's thought, the most distinguishing aspect of this early notion can be seen as deriving from its strong anti-intuitionist motive, which amounts to rejecting the possibility of "a cognition not determined by a previous cognition of the same object;" that is, of a "premiss not itself a conclusion."[188] The 1868-9 articles are devoted to ground this hypothesis along with denying the power of introspection, that of thinking without signs, and the possibility of cognizing the absolutely incognizable, as well as to explicating the implications of assuming these. He concluded, among others, that philosophy should not aim for certainty but endorse the method of successful sciences. It should not start with doubt, but with tangible premises that can be scrutinized, including our ordinary opinions and prejudices. It should trust not the individual consciousness, but to

[186]Natalia Lukianova and Elena Fell, "Beyond Meaning: Peirce's Interpretant as a Meta-Semiotic Condition for Communication," *ESSACHESS–Journal for Communication Studies* 8, no. 1 (15) (2015): 150–76, p. 152.

[187]To call Peirce's notion of infinite semiosis "early" implies merely that it is clearly characteristic only of his Early Account. Since Peirce never explicitly denounced the notion, there is debate over whether he eventually abandoned the notion. While Short insistently argues that he abandoned it alongside his revision of the doctrine of thought-signs, some Peirce scholars think that the notion of infinite semiosis is present in his mature thought as well. See David Savan, *An Introduction to CS Peirce's Full System of Semeiotic* (Toronto Semiotic Circle, Victoria College in the University of Toronto, 1988); Lizska, *A General Introduction*.

[188]W 2.193.

the multitude and the variety of arguments.[189] This implies that it must be all in all a *social* project:

> thought is what it is, only by virtue of its addressing a future thought which is in its value as thought identical with it, though more developed. In this way, the existence of thought now depends on what is to be hereafter; so that it has only a potential existence, dependent on the future thought of the community.[190]

Although all these reasons for Peirce's attack on Cartesianism and his conclusions regarding truth, knowledge and inquiry are central characteristics of his overall project, his Early Account argues for these through a quite radical thesis that he dramatically revises in the following years. In opposing Cartesianism, Peirce's early semiotics endorses some explicitly Kantian premises regarding the nature of thought alongside the long ancient and medieval tradition of semiotics, and develops them through a distinctly communicational perspective that identifies thought with internal conversation. According to Short, Peirce added to this combination of ideas the novel idea of the "continuum," which located meaning not in individual thought-signs but in the endless and continuous movement of thought, and eventually posited a "strange doctrine" of an endless "continuum of thoughts interpreting thoughts."[191] Short observes some "fatal" problems in the early doctrines of thoughts-signs and infinite semiosis which Peirce was arguably aware of and gradually corrected.[192]

His criticism centers around the problematic status of the object and the lack of explicit criteria for successful interpretation in the early doctrine. He argues that Peirce fails to explain how thoughts signify: He makes signification dependent on actual interpretation, which is then explicated as consisting in signs—the infinite progress of thought does not help in explaining how signification obtains, but merely postpones the problem *ad infinitum*.[193] On the side of the infinite regress, Short maintains that the object of thought remains outside of the series of thoughts, since the object of each thought is established by a previous thought, which is not itself the object but refers back to still previous thought. It becomes obvious that Peirce is of Kantian persuasion when we take into account his espousal that the *external* object *as such* is not knowable. He included earlier among

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[189]CP 5.316.

[190]Ibid.

[191]Short, "The Development of Peirce's Theory of Signs," in *The Cambridge Companion To Peirce*, ed. Cheryl Misak (Cambridge: Cambridge University Press, 2004), 214–240.

[192]Short claims that continental thinkers from a Saussurean background such as Umberto Eco and Jacques Derrida attribute these features which they do not see as problematic wrongly to Peirce's mature thought as well. See Short, *Peirce's Theory of Signs*, p. 45-6. This criticism must be placed within the context of his general position with respect to such readings that center around conventionalism and the idea of endless interpretation. Short claims that Eco's and Derrida's readings systematically misinterpret Peirce in a way that results in an extreme form of relativism and irrealism, and as such they actually propose not a reading of Peirce but an alternative to it. See Short, *Peirce's Theory of Signs*, p. xiii.

[193]Short, *Peirce's Theory of Signs*, p. 217.

our "four incapacities" the power to cognize the absolutely incognizable, which the external object as such is. Moreover, for Peirce an absolute first to the series of thoughts is *ideal*, not only on the ground that it is external to the series, but also because it is *individual*, while thought is necessarily general. He further declares it unreal: an ideal first, which is quite singular and quite out of consciousness. This ideal first is the particular thing-in-itself. It does not exist *as such*.[194]

Peirce had, on the other hand, even at those times a different project in mind than Kant's, which comprised formulating an account of inquiry that is historical, pluralist, social and communicational. He evidently found it at the beginning indispensable for such an account to be idealist, for otherwise the foundationalist tendencies of modern philosophy (which are characteristically Cartesian for Peirce) and of positivist empiricism could creep in. His Early Account can, hence, also be seen as his struggle to marry his pragmatist perspective on knowledge, truth and inquiry with his theory of signs.

A crucial change in perspective happens by the early 1880s when Peirce and his student O. H. Mitchell introduce quantification into algebraic logic, which previously recognized only universal quantification. This development allowed for the inclusion of singular propositions and individual variables for singular objects, *indices*, into symbolic logic. This led Peirce to recognize the *index* as a type of sign that is not general (unlike the "thought-signs") but still has a crucial role to play in cognition.[195] In 1885 Peirce writes:

> The index asserts nothing; it only says "There!" It takes hold of our eyes, as it were, and forcibly directs them to a particular object, and there it stops. Demonstrative and relative pronouns are nearly pure indices, because they denote things without describing them; so are the letters on a geometrical diagram, and the subscript numbers which in algebra distinguish one value from another without saying what those values are.[196]

It should be remarked, though, that Peirce does not talk about indexes for the first time in 1885. His trichotomy of signs in the "New List" already includes indexes (or, *Indices*) as the second type, where his classical example is a weathercock. The fundamental difference with the early doctrine is that Peirce no longer thinks that indexes require mediation by *general* interpretants in order to become significant. They have a function that cannot be fulfilled by general terms and descriptions; namely, to refer to an actual world which is distinct from a world of imagination.[197] Murray G. Murphey maintains, on the other hand, that individuality does not begin to be important for Peirce until 1885, and the index

[194]W 2.238.
[195]Short, *Peirce's Theory of Signs*, p. 49.
[196]W 5.163.
[197]W 5.163–4.

of the "New List" is not a sign that refers directly to an individual, but a general conception of the present.[198]

In the 1880s Peirce came to recognize both that signs other than symbols are of import for philosophy and that symbols can also have iconic and indexical (hence non-general) features. This recognition is arguably the most crucial step in the development of his Interim Account and broadening the scope of his logic.

Another flaw that haunts Peirce's Early Account, according to Short, concerns the infinite progression of interpretation. By making signification dependent on interpretation in an unending series of thought-signs, Peirce's conception of signification cannot avoid circularity. There is no non-arbitrary end to the series if every interpretant must itself be a sign, and we do not have an account of what *meaning* is. The infinite progression of semiosis is not problematic for many interpreters of Peirce. A common understanding of Peirce's account of signification which goes back to James Liszka's and David Savan's interpretations[199] is that signification is basically *translation*. Short maintains, on the other hand, that the translation theory of meaning fails to account for what meaning is, because it cannot be the endless translation of signs into signs.[200] The most central feature of Peirce's eventual solution to infinite progression is the collective nature of interpretation, especially of inquiry, which given enough time bestows a self-correcting and thereby convergent character to it.

It is important to note that Peirce's pragmatist perspective on truth, inquiry and reality, proposed initially independently from his sign theory, featured the idea of an ultimate, non-arbitrary conception of the object. Truth, as conformity to that which would ultimately be agreed upon by a community of inquiry given indefinite time, and reality, as that which would be the object of that ultimate public opinion,[201] is open both to a social constructionist reading as well as to a qualified realist one. Although his idealist leanings in the Early Account seem to lend support to the former, Peirce at no point gave up the conviction that there is a factor not constituted by thought, which is at least partly responsible for the ultimate convergence of opinion. Truth and reality may remain ideals, which represent only a hope,[202] yet the convergence itself points towards not a solely social factor (e.g. the community exerts a centripetal force on individual opinion) but to an at least partly external one, in the sense that what can be revealed in

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[198]Murray G Murphey, *The Development of Peirce's Philosophy* (Cambridge, Mass.: Harvard University Press, 1961), p. 299-300. Cf. W 2.49.

[199]James Jakób Liszka, "A General Introduction to the Semeiotic of Charles Sanders Peirce," *Australasian Journal of Philosophy*, 1996; David Savan, *An Introduction to CS Peirce's Full System of Semeiotic* (Toronto Semiotic Circle, Victoria College in the University of Toronto, 1988).

[200]Short, *Peirce's Theory of Signs*, p. 44. Short's criticism is in fact received quite favorably by Liszka, who acknowledges that the translation view needs the notion of (collective) teleology in order to avoid infinite progressus. See Liszka, "Teleology and Semiosis: Commentary on TL Short's Peirce's Theory of Signs," *Transactions of the Charles S. Peirce Society*, 2007, 636–44.

[201]CP 5.407.

[202]MS 408:146-7.

experience is not exhausted by its interpretation at any point. By the 1870s he expressed clearly the need for recognizing "some external permanency – by something on which our thinking has no effect,"[203] and conceived the convergence of opinion in terms that rely upon such a factor:

> Let any human being have enough information and exert enough thought upon any question, and the result will be that he will arrive at a certain definite conclusion, which is the same that any other mind will reach under sufficiently favorable circumstances.[204]

To integrate his pragmatist perspective on truth, knowledge and reality into his sign theory required nonetheless years' work and the first concrete steps came not before the radical change in perspective regarding signification in 1903, and his further classification of the object and the interpretant in his mature theory. In 1903 he acknowledged that if signification is made dependent on actual interpretation the idea of infinite semiosis becomes an absurdity. He then re-defined significance on the basis of potentiality, instead of actuality:

> It follows at once that this relation [of determining an interpretant] cannot consist in any actual event; for in that case there would be another actual event connecting the interpretant to an interpretant of its own of which the same would be true; and thus there would be an endless series of events which could have actually occurred, which is absurd. For the same reason the interpretant cannot be a *definite* individual object. The relation must therefore consist in a *power* of the representamen to determine *some* interpretant to being a representamen of the same object.[205]

Here the basis of his notion of infinite progression of semiosis, the idea that the interpretant is another sign of the same object is still endorsed, albeit in a radically qualified manner. An actual interpretant is no longer a necessary condition of signification; something can be a sign without actually functioning as one, even when there is no actual interpretant at all. The relation of determining an interpretant is a power, a potentiality that resides not in the interpretant but in the relation between the sign and the object. Thus, signification is no longer interpretation but *interpretability*, which obeys constraints that are in place prior to interpretation.

A crucial, later turning point is his acknowledgement that the interpretant need neither be a sign nor even a thought. In 1906, he recognized that the envisioned end result of inquiry, the ultimate interpretant, cannot be a sign, but should be conceived in terms of *habit of action*:

> signs which would be merely parts of an endless viaduct for the transmission of idea-potentiality, without any conveyance of it into anything but symbols, namely,

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[203]W 3.253.
[204]CP 8.12.
[205]CP 1.542

> into action or habit of action, would not be signs at all, since they would not, little or much, fulfill the function of signs.[206]

A Habit of action is not a sign, but (as I will go into later) comprises a habit of interpretation that governs conduct—not strictly individual conduct but a general form of conduct answering to a general situation. As the establishment of such habits of action, where meaning ultimately dwells, is a collective process, infinite progression arguably finds a natural end in the collective organization or action.

Peirce's theory of meaning thus moved steadily away from a semantic theory preoccupied with symbols and towards a pragmatic theory of a much broader scope. Other types of signs that are not general or conventional moved from the peripheries to the center of semiotics, and other types of effects of signification than intellectual came to be recognized. Parallel to this shift, the premises leading towards the notion of infinite semiosis underwent significant changes and the notion began to occur less and less.[207]

Peirce came to emphasize increasingly that inquiry and situated, embodied experience are not independent from each other. All percepts, concepts, models as well as theories are *mediators*, which neither capture an unshakeable point of reference to the world, nor paint a purely subjective picture of it, but are born out of the fact of *living* and they become *meaningful* ultimately by virtue of the kind of experience they can bring about and the mode of conduct they can prescribe. This characteristically pragmatist perspective finds its most explicit expression in the Final Account of 1906-10, which remained unfortunately incomplete. There he inaugurated a generalized science of semiotics which would be of unlimited scope, not reliant on the vocabulary of representations and freed from the framework of dichotomies such as ideal-real, internal-external, or fact-value.

The core body of ideas on the science of signs as such, or on speculative grammar, in the Final Account is a further elaboration and extension of the taxonomy he formulated in the Interim Account presented in 1903 through the course of the Lowell Institute lectures, which offers Peirce's most systematic and clear categorization of signs. Since the Interim Account is the most complete and the least disputed presentation of his theory of signs, it is in order to dwell on the core logic of signification in its framework before looking at the broader philosophical implications of Peirce's mature theory. The taxonomy of signs presented here will therefore be mostly based on the Interim Account and will have reference to the Final Account for certain occasional amendments and reformulations.

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[206]EP 2.388.

[207]Atkin, "Peirce's Theory of Signs."

## IV.3 SIGNIFICATION, EXPANDED: THE TAXONOMY OF SIGNS IN THE INTERIM ACCOUNT

To begin with a historical note, the most immediately noticeable difference between the Early Account and the Interim Account is that Peirce suggests in 1903 a tenfold classification of signs as a development over the trifold classification of the 1860s. Moreover, while in his Early Account Peirce is preoccupied with mental interpretants which derive from precedent signs and become signs themselves, his Interim Account drops the claim that an infinite number of signs must precede each sign, and no longer stresses the idea of infinite progression.

The 1903 classification of signs derive from three trichotomies: that pertaining to the sign as such, that pertaining to its relation with its object, and that pertaining to its relation with its interpretant. The trichotomies are based on the logic of relations. According to Peirce, the number of basic, irreducible, classes of relations is three: *monadic* (or non-relative, e.g. identity), *dyadic* and *triadic*. Triadic relations cannot be analyzed into combinations of dyadic relations, and dyadic relations cannot be analyzed into juxtaposition of monads. All other plural relations, on the other hand, are analyzable into triadic relations. As Peirce consistently maintains from the earliest formulations of his theory of signs, signification is a triadic relation, where the three relata are the sign, the object and the interpretant. Further, any sign is either monadic, dyadic or triadic in itself, in relation to its object, and in relation to its interpretant. In his earlier triadic classification of signs into icons, indexes and symbols, Peirce already identifies one of the trichotomies, the second, in similar relational terms: icons are monadic, indexes stand in a dyadic relation to their objects, and symbols relate to their objects through the mediation of an interpretant. In 1903, he finally establishes his system of classification through a three-way division by trichotomies and classifies the sign and the sign-interpretant relation as well with a coherent method.

The identification of the three relata of signification and the triadic classification of signs in the Early Account makes use of the logic of relations, as said above, but in a quite different framework than that of the Interim Account. The former effort was situated within the project of deriving the categories of being *a priori* and identifying the category to which signs belong. The 1903 analysis and classification of signs builds upon Peirce's efforts through the 1880s and the 1890s to redefine his categories in thoroughly relational terms, and by 1902-3 to reformulate them *phenomenologically*.[208] Peirce defines phenomenology, which he later renamed "phaneroscopy," as the branch of science that "ascertains and studies the kinds of elements universally present in the phenomenon, meaning by

[208]For an in-depth discussion of Peirce's shift from metaphysics to phenomenology, see Short, *Peirce's Theory of Signs*, chapter 3. For an argument against the thesis that the early version of the categories is metaphysical, see William L. Rosensohn, *The Phenomenology of Charles S. Peirce*.

the *phenomenon* whatever is present at any time to the mind in any way."[209] The Interim Account endorses the logic of relations as a formal guide to classify elements of experience, and the classification of signs follows from the most basic and general features of experience. A very brief exposition of the categories is presented in the following, without going into how their derivation is or might be justified, merely in order to illuminate those aspects of the taxonomic trichotomies that might otherwise seem arbitrary.

Peirce designates these categories as those of *firstness*, *secondness* and *thirdness*. They are defined in the broadest sense and in formal, relational terms as follows:

> *Firstness* is the mode of being of that which is such as it is, positively and without reference to anything else.
>
> *Secondness* is the mode of being of that which is such as it is, with respect to a second but regardless of any third.
>
> *Thirdness* is the mode of being of that which is such as it is, in bringing a second and third into relation to each other.[210]

As phaneroscopic categories, the three are described respectively as those of (i) (quality of) feeling, (ii) reaction or resistance, and (iii) representation, mediation or thought. That element of experience that does not admit of reduction to the other co-occurring elements gives us the idea of firstness. The typical idea of firstness is an a-temporal *quality* of feeling, a mere appearance, which is not thought of as an actual occurrence but taken as "simple positive possibility of appearance."[211] By qualities of feeling Peirce does not mean the sense of actually experiencing a feeling, in difference to what the contemporary term *qualia* tends to denote, but the qualities themselves which may or may not be realized.[212] Such a quality can be as simple as a color, yet can also be the overall quality of a quite complex experience such as listening to a certain opera. The idea of a first is that of a total impression not analyzed, judged, conceptualized or explained.

Secondness is the idea of reaction, as a simple element of the phenomenon separated from any purpose, and is characterized by the experience of effort and resistance. The experience of effort is a simple but two-sided element, which irreducibly involves the experience of the other. Attention, remembering,

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[209]CP 1.186. Although the categories are no longer established *a priori*, phenomena seem ultimately to be reduced to combinations of Firstness, Secondness and Thirdness. It is tempting to say that Peirce has never gave up searching for a metaphysical foundation. It needs to be noted, though, that in his 1903 classification of sciences, logic (under the "normative sciences") is specified as resting on phenomenology and mathematics, while metaphysics rests on phenomenology and normative sciences. Metaphysics, then, is clearly not the first philosophy. The categories, in parallel, appear to be *defended* more on a meta-metaphysical basis. That is, one-place, two-place or three-place combinations of firstness, secondness and thirdness yield a classification of all possible metaphysical systems. See EP 2. 164-5.

[210]CP 8.328.

[211]CP 8.329.

[212]CP 1.304.

experience of interruption, willing, any abrupt or pressing sensation manifest secondness. Any occurrence involves action and resistance, hence relations of secondness. While firsts are possibilities that lack *haecceity*,[213] seconds are (brute) actualities.[214]

Thirdness, on the other hand, is whatever in the phenomenon that involves mediation; that is, an irreducible triadic relation. Continuity, regularity, future-directedness or purpose exemplify thirdness in that they involve a higher-order relation that synthesizes individual, instantaneous actualities under a pattern that is not reducible to the totality of the occurrences it synthesizes, and governs not only what is and has been the case but also what is not and will/will not be the case. Thirdness involves more than possibility and actuality; it opens up the modal category of necessity. This third element in the phenomenon is the *lawful*, and it is what concerns *meaning*. "Every triadic relation," says Peirce, "involves meaning."[215] Thought, on the other hand, which Peirce describes as "synthetic consciousness, binding time together, sense of learning,"[216] is what apprehends the lawful in the phenomenon *as a third*.

As mentioned above, the categories are first formally identified as orders of relation and then acquire phenomenological content through the analysis of experience. In the context of the analysis of experience they yield the modal trichotomy of possibility, actuality and necessity, and on this basis Peirce defines the categories of being in terms of *firsts*, *seconds* and *thirds*. In their metaphysical outlook, the categories appear as those of *quality*, *fact* and *law*. It is this last terminology which features frequently in Peirce's taxonomy of signs.

Peircean trichotomies, including the sign triad, overlap with one another in terms of featuring a non-relative first, a dyadic relation involving the first and a second, and a triadic relation involving a third that mediates the relation between the first and the second. The phaneroscopic, modal and metaphysical trichotomies are analogically connected in this way. Moreover, all trichotomies can be described as constituting implication hierarchies in that every second implies a first, and every third implies a first and a second.

Signification belongs to the category of thirdness, since something becomes a sign only within a triadic relation existing between the sign, its object, and its interpretant. Each of the three subjects or elements of signification become a sign, its object and its interpretant only by virtue of the triadic relation of signification

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[213]See CP 1.405.

[214]Peirce relies heavily on Aristotle's concept *ενεργεια* in subsuming actuality under secondness. See CP 4.542: "That conception of Aristotle which is embodied for us in the cognate origin of the terms actuality and activity is one of the most deeply illuminating products of Greek thinking. Activity implies a generalization of effort; and effort is a two-sided idea, effort and resistance being inseparable, and therefore the idea of Actuality has also a dyadic form." He describes potentiality in a notebook as the "absence of determination" and actuality as "the Act which determines the merely possible" (MS 277). Necessity, in turn, is "reason given to actuality."

[215]CP 1.345.

[216]CP 1.377.

which cannot be analyzed into dyadic relations. Thus, as a triadic whole, neither the category of firstness nor that of secondness apply to signification:

> A *Sign*, or *Representamen*, is a First which stands in such a genuine triadic relation to a Second, called its *Object*, as to be capable of determining a Third, called its *Interpretant*, to assume the same triadic relation to its Object in which it stands itself to the same Object. The triadic relation is genuine, that is its three members are bound together by it in a way that does not consist in any complexus of dyadic relations. That is the reason the Interpretant, or Third, cannot stand in a mere dyadic relation to the Object, but must stand in such a relation to it as the Representamen itself does.[217]

Peirce illustrates the kind irreducibly triadic relations through the example of *giving*:[218] No combination of dyadic relations between the three subjects involved in the act of giving (i.e. the giver, the given and the receiver), for instance the combination of a person's disposing of something and another's acquisition of the same thing, cannot constitute what is properly understood by giving.

### *IV.3.1 The sign as such*

Peirce presents the three trichotomies by which signs are categorized as follows:

> Signs are divisible by three trichotomies: first, according as the sign in itself is a mere quality, is an actual existent, or is a general law; secondly, according as the relation of the sign to its Object consists in the sign's having some character in itself, or in some existential relation to that Object, or in its relation to an Interpretant; thirdly, according as its Interpretant represents it as a sign of possibility, or as a sign of fact, or a sign of reason.[219]

The second trichotomy is already familiar from the Early Account as that of icon, index and symbol. The first division, a completely novel trichotomy of signs, classifies signs in terms of what kind of being the sign is. The sign in itself can be a quality, an actual existent, or a law and these three classes are termed by Peirce respectively qualisigns, sinsigns and legisigns:

> A *Qualisign* is a quality which is a sign. It cannot actually act as a sign until it is embodied; but the embodiment has nothing to do with its character as a sign.
>
> A *Sinsign* (where the syllable sin is taken as meaning 'being only once', as in *single*, *simple*, Latin *semel*, etc.) is an actual existent thing or event which is a sign. It can be so only through its qualities; so that it involves a qualisign, or rather, several qualisigns….
>
> A *Legisign* is a law that is a sign. This law is usually established by men. Every conventional sign is a legisign. It is not a single object, but a general type which, it has been agreed, shall be significant. Every legisign signifies through an instance of

[217]EP 2.272-3.
[218]W 5.244.
[219]EP 2.291.

> its application, which may be termed a *Replica* of it.... Each single instance is a replica. The replica is a sinsign. Thus, every legisign requires sinsigns.[220]

Any quality can be a qualisign. A qualisign is merely an abstract (or, indeterminate) quality of an appearance. Since it is a quality, it can denote an object only by virtue of *similarity*. Further, a quality by itself, for Peirce, is merely logical possibility, so a qualisign cannot be interpreted as signifying a fact or a judgment. A sinsign, being an existent individual thing or event, necessarily has qualities. It will embody a qualisign if it signifies its object by virtue of a quality of its own (e.g. a warm object signifying the nearby presence of a heat source), but it can also signify merely by virtue of an existential connection with its object, in which case its qualities would be largely irrelevant (e.g. a honeycomb signifying bees). Legisigns are often designated as general types and their particular instances as tokens, or sinsigns. Yet these individual sinsigns that are instances of a legisign are peculiar in that they become significant only by virtue of a convention, habit, or rule that renders them significant. Peirce designates them, in a rather Platonic way, replicas.

The group Peirce terms legisign comprise all conventional signs but is not exhausted by them. If a particular sign's significance is dependent on there being a "law" (e.g., of interpretation) that *establishes* the relation between the sign and the object, then it is a replica of a legisign. The law in the case of legisigns is conceived quite generally, hence is not necessarily based on social agreement or conscious intent. Peirce's general *semiotic* conception of a law is what determines a habit, in the broadest sense,[221] where the habit can be inherent or acquired, natural or instituted.

Important is that the law *constitutes* significance in the case of legisigns, which sets them apart from other classes of signs. Searle's distinction between constitutive and regulative rules[222] is helpful to clarify the role played by the law in the case of legisigns: A legisign is a kind of constitutive rule in that certain qualities or facts *count as* signs in the *context* specified by the law and only by virtue of being instances of the law. Eating bread counts as receiving the Holy Communion in the context of the Eucharist, drawing a type of curve counts as expressing a normal probability distribution in the context of statistics, a particular shout counts as an alarm call informing about the presence of a certain type of predator for vervet monkeys, or offering nest-building materials counts as a mating display expressing readiness and suitability for reproduction for birds of the genus *Malurus*. The rule creates the possibility for these forms of behavior.

On the other hand, fresh claw marks on the ground may indicate that, say, a bear has just passed by that location. A zoologist can interpret the marks as belonging to a particular sub-species, in which case one could be prompted to say

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[220]Ibid.

[221]CP 1.536.

[222]John R. Searle, *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1969).

that the zoologist interprets them according to a law. Yet, the law is not responsible for the connection between the sign and the object. It is not the law that renders the particular marks significant, nor are the marks there *because* they will be interpreted that way. The marks signify *already* by virtue of the physical connection between them and the animal. Even in the case someone uses artificial claws in order to fool the zoologist, the marks would not be legisigns because the trickster merely exploits an independently existing connection between the sign and the object.

According to Short, "law" has two senses in Peirce's discussion of legisigns, although the difference is not very clearly indicated by Peirce.[223] Firstly, it means quite generally "a law that is a sign." But it also has a narrower sense: it is a law that is established *in order to* signify. The difference is particularly that a law can be significant without having been established in order to signify or can also be significant in ways other than it is meant to signify. Natural laws, for instance, can be significant but they are not established in order to signify. A social norm, on the other hand, is significant in its constitution but may also indicate the general level of individualism or collectivism of a social group. These are legisigns only in the general sense. A legisign in the narrower sense is not *any* law, but a law that is established in order to signify. The general sense serves to categorize regularities, codes, habits, conventions as a class of signs. The narrower sense specifies, among these, those which command how their instances, or replicas, shall be interpreted. Legisigns in the general sense have instances, but these may not always be *replicas*; that is, peculiar sinsigns which are significant only by virtue of being interpreted as instances of a legisign. Short proposes to use the term only in the narrow sense, and emphasizes *purpose* as a criterion to differentiate legisigns from other types.[224]

A reference to purpose can be supported by Peirce's usage of teleological language in his descriptions of legisigns and their types, and in general by his essentially teleological conception of semiosis. Yet, it actually does not help very much in delineating a narrower sense of legisigns, since teleological conceptions permeate also whatever is subsumed under the general sense. Because, for Peirce a law is significant to the extent that it prescribes what shall be, would be, or should be the case.

A more effective criterion to delineate such a narrower sense can be, although not explicitly articulated by Peirce in these terms, being

[223]Short, *Peirce's Theory of Signs*, p. 210.

[224]Cf. CP 8.335. Peirce here explicitly states that a symptom is a legisign, while Short's narrower sense rules symptoms and similar signs out. It is worthwhile to point out that to restrict legisigns to the narrower sense Short proposes would drastically diminish the scope of legisigns intended by Peirce. As in the case of symptoms, if a law is the reason for a sign's significance, whether the law is established with the purpose of signification or not, the sign in question is a replica of a legisign. Because, it is only in reference to the law that the connection between the given symptom and a particular disease is discerned.

*communicational*.[225] Besides linguistic signs, many other legisigns can be distinguished by virtue of having replicas that are media of communication. A certain manner of dressing, for instance, may signify belongingness to a social group, or a certain sound pattern signifies the approach of a police car. A mating display or an alarm call, similarly, is a sign only by virtue of being communicational, whereas heat indicating fire cannot be a replica of a legisign in the narrower sense, since it is not communicational, although it can be seen as an instance of a natural law. A detailed discussion of conventional and natural communicational signs is presented in the fifth chapter.

### *IV.3.2 The sign in relation to its object*

With regard to the nature of the relation of signs to their objects, the second trichotomy, a sign is an *icon*, an *index*, or a *symbol*:

> An *Icon* is a sign which refers to the Object that it denotes merely by virtue of characters of its own and which it possesses, just the same, whether any such Object actually exists or not. It is true that unless there really is such an Object, the icon does not act [as] a sign; but this has nothing to do with its character as a sign. Anything whatever, be it quality, existent individual, or law, is an icon of anything, in so far as it is like that thing and used as a sign of it.
>
> An *Index* is a sign which refers to the Object that it denotes by virtue of being really affected by that Object. It cannot, therefore, be a qualisign; because qualities are whatever they are independently of anything else. In so far as the index is affected by the Object, it necessarily has some quality in common with the Object, and it is in respect to these that it refers to the Object. It does, therefore, involve a sort of icon, although an icon of a peculiar kind....
>
> A *Symbol* is a sign which refers to the Object that it denotes by virtue of a law, usually an association of general ideas, which operates to cause the Symbol to be interpreted as referring to that Object. It is thus itself a general type or law, that is, is a legisign. As such it acts through a replica. Not only is it general itself, but the Object to which it refers is of a general nature. Now that which is general has its being in the instances which it will determine.... The symbol will indirectly, through the association or other law, be affected by those instances; and thus the symbol will involve a sort of index, although an index of a peculiar kind.[226]

As stated above, the classification into icons, indexes and symbols concern the ground of the sign relationship; namely, similarity, factual relation, and law, habit

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[225]It is relatively easy to show that all conventional signs are communicational in a broad sense, including public signs such as traffic lights, various artifacts such as thermometers and even external signs used in auto-communication such as abbreviations used for private reference or tying a knot in order to remember something. They are all generated with reference to an anticipated, appropriate interpretant. In the case of non-conventional legisigns, on the other hand, the criterion of being communicational delineates clearly between cases where an individual quality or fact is significant on its own albeit being lawful and those where the law itself is responsible for the significance of the sign. Further comment on the criterion of being communicational requires exposition of Peirce's mature theory, to which I come in the last sections of the chapter.

[226]EP 2.291-2.

or convention. As these grounds feature in sign interpretation, iconic signification requires comparison, indexical signification requires the identification of an actual relationship and symbolic signification requires recognition of a particular property, object or relation as the instance of a general rule.

Iconic signs possess their character as signs independently of their objects, although they function as signs only insofar as they refer to objects. The relation of similarity, the ground of signification, like in the case of the index and unlike that of the symbol, is independent from the sign-process. Building on the trichotomy of the sign as such, an iconic qualisign (the only possible type of qualisign), denotes any quality in so far as it is a sign. Peirce's example is "a feeling of 'red'."[227] An iconic sinsign is probably the most familiar type of icon. It is an object of direct experience that, by virtue of a quality it possesses, refers to an object. Peirce's example is "an individual diagram."[228] An iconic legisign, on the other hand, is general. It requires that each of its instances embody a certain quality. Peirce's example is a *type* of diagram, "apart from its factual individuality."[229]

An icon by itself is a vague form, whose denotation is "essentially indefinite."[230] It may be a mere image, an abstract and fuzzy idea, or some feeling independently of its having been excited by an actual object. Solely in terms of what renders it suitable to become sign, its quality, it belongs to firstness. Mere iconicity does not distinguish between the object and its signification. In order to be a sign, though, an icon has to have a reference; not merely a reference to a ground but to a ground and a correlate; i.e., to an object:

> An Icon is a Representamen whose Representative Quality is a Firstness of it as a First.... A Representamen by Firstness alone can only have a similar Object. Thus, a Sign by Contrast denotes its object only by virtue of a contrast, or Secondness, between two qualities. A sign by Firstness is an image of its object and, more strictly speaking, can only be an idea. For it must produce an Interpretant idea; and an external object excites an idea by a reaction upon the brain. But most strictly speaking, even an idea, except in the sense of a possibility, or Firstness, cannot be an Icon. A possibility alone is an Icon purely by virtue of its quality; and its object can only be a Firstness.[231]

Almost all signs manifest some degree of iconicity, indexicality and symbolicity since they are most often complexes, no matter which is the dominant character. Still, it is at least possible to direct the thought towards what is meant by pure iconicity. To use Peirce's example, the imitative sounds and gestures of a person who tries to communicate with another without sharing a language reflect the character of the icon, yet even these would not be pure icons since they carry

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[227]CP 2.254.
[228]CP 2.255.
[229]CP 2.258.
[230]MS 842:31-32.
[231]EP 2.273.

the purpose of communication. "A pure icon," on the other hand, "is independent of any purpose. It serves as a sign solely and simply by exhibiting the quality it serves to signify [...] It asserts nothing."[232] Considered in relation to the first modal category, possibility, a pure icon taken in isolation denotes an unlimited set of possible objects similar to it and nothing more.

A pure index, on the other hand, must be devoid of purpose, of information, and should not depend on a rule, habit or convention for its interpretation. Moreover, it should not rely on an icon in fulfilling its function. A typical example of an index from the Early Account is a weathercock, yet it involves an icon, since it resembles the direction of the wind.[233] It also conveys information through inference or through its conventionality. An exclamation such as "Oh!" comes as close as possible to the idea of a pure index, which "simply forces attention to the object with which it reacts and puts the interpreter into mediate reaction with that object, but conveys no information."[234] A pure index would denote the actual presence of some yet undescribed thing, as opposed to an object.

An index has a real connection to its object independently of being represented as such, in other words it has an indexical ground of signification. The index is genuine if this connection is an existential one, and degenerate if the relation consists in reference.[235] Genuine indexes and their objects are individuals. Since individuals must have qualities, genuine indexes are sinsigns. An indexical sinsign is an object of experience that directs attention to its object by which it is actually affected. Many natural signs such as animal tracks, or a sudden loud noise that captures attention are indexical sinsigns. An indexical sinsign may also afford information about its object, which is the case with the latter example. Indexical legisigns are general laws or types which require their instances to be affected by their objects in a way that either merely directs attention to their objects or additionally provides definite information about them. Peirce's examples are, respectively, "a demonstrative pronoun" and "a street cry."[236] Ambulance sirens or military commands can be given as further examples of indexical legisigns. Linguistic signs such as proper names, relative, indefinite and demonstrative pronouns partake of the nature of indexes since they signify on the basis of a real

[232]EP 2.306.

[233]EP 2.306.

[234]Ibid.

[235]EP 2.274. The term degenerate does not have any normative meaning here, it simply denotes that the sign does not properly manifest the order of relation (e.g. second, third) it should do. To explicate with an analogy to geometry, a line can be considered as a degenerate triangle with one inner angle measuring up to 180 degrees, or a rectangle with the two parallel sides approaching 0 centimeters. A demonstrative pronoun, for instance, is a degenerate index since it is used as an index but has only a mediated (triadic) relation to its object due to its conventionality. In difference to a genuine symbol such as a proper noun, however, it has an individual object and it needs to be uttered in some spatial or temporal relation to it (e.g. 'this' problem in reference to a previously uttered sentence).

[236]CP 2.259-60.

connection with their objects, or direct or inform the hearer how the object is to be picked out.[237]

In the context of semiotic taxonomy, the symbol is given a formal definition and is treated merely with regards to its types. The symbol is a general sign (i.e., a law, convention or regularity) whose object and interpretant are also of a general nature. Its significance depends not on its having a relation to its object, as it is the case with the icon and the index, but on its being a general rule of interpretation. Further, combinations of symbols are also symbols. Thus, a symbol might be of the nature of a term, a proposition or an argument. In order to have a clearer understanding of what Peirce terms symbol, we need to supplement this taxonomic description with his broader philosophical considerations.

The most significant characteristic feature of the symbol is that it depends on its interpretant for its significance. While nothing is actually a sign unless it is interpreted as such, icons and indexes are already potentially significant prior to being interpreted. The symbol, on the other hand, has its ground exclusively in the triadic relation between the sign, the object and the interpretant. More specifically, in the case of iconic reference the ground is signification-independent and in the case of indexical reference the ground is interpretant-independent. Symbols, on the other hand, are necessarily triadic. Peirce writes:

> An *icon* is a representamen which fulfills the function of a representamen by virtue of a character which it possesses in itself, and would possess just the same though its object did not exist.... An *index* is a representamen which fulfills the function of a representamen by virtue of a character which it could not have if its object did not exist, but which it will continue to have just the same whether it be interpreted as a representamen or not.... A *symbol* is a representamen which fulfills its function regardless of any similarity or analogy with its object and equally regardless of any factual connection therewith, but solely and simply because it will be interpreted to be a representamen.[238]

The symbolic ground, thus, seems to involve neither the properties of the sign itself nor any factual relation with its object. How do the sign and the object feature, then, in the triadic relation of symbolic signification, and what kind of interpretant is the proper interpretant of the symbol? A symbol, furthermore, is not (and cannot be) created at the moment of interpretation by the act of interpretation, as the future-tense (or, implicit conditional) in the last sentence implies. There should be, then, a higher-order relation that connects all individual acts of interpretation together as instances of the proper interpretant. Let us deal with these issues one by one, beginning with the sign itself.

The class of signs that Peirce preferred to call symbols have been characterized in the history of semiotics from Antiquity on as well as in contemporary literature most commonly in terms of their conventionality or

[237]CP 2.289.
[238]CP 5.73.

arbitrariness. Common Medieval terms for this class such as *signa arbitraria*, *signa ex institutione* or *signa ad placitum* pick equivocally conventionality as the individuating difference, while setting this class against *signa naturalia*.[239] Another contemporary characterization of the symbol, that of "code," can also be placed together with the convention conception. Peirce's conception of the symbol can be conceived in some respects as belonging to this long historical continuum, and in others as diverging from it in some radically novel ways.

Peircean symbol is on the one hand a conventional sign, which is for him a categorization fateful to the original sense of *σύμβολον* as a convention or contract.[240] He refers to Aristotle's usage of the term[241] to characterize a noun, as reflecting this sense of convention. On the other hand, Peirce proposes "habit" as a novel criterion that would incorporate but go beyond conventionality. Consider, for instance, the following passage:

> A Symbol is a Representamen whose Representative character consists precisely in its being a rule that will determine its Interpretant. All words, sentences, books, and other conventional signs are Symbols. We speak of writing or pronouncing the word "man"; but it is only a replica, or embodiment of the word, that is pronounced or written. The word itself has no existence although it has a real being, consisting in the fact that existents will conform to it. It is a general mode of succession of three sounds or representamens of sounds, which becomes a sign only in the fact that a habit, or acquired law, will cause replicas of it to be interpreted as meaning a man or men.[242]

In the subsequent passage, he similarly characterizes the symbol as a "law, or regularity of the indefinite future".[243] As in the quotation above, Peirce tends to define the symbol negatively, through lack of iconicity and indexicality. This tendency is more clearly evident in another definition from 1909, where he says that:

> [Symbols] represent their objects, independently alike of any resemblance or any real connection, because dispositions or factitious habits of their interpreters insure their being so understood.[244]

Negative definition is a common characteristic of conceptions of the symbol emphasizing arbitrariness or conventionality as opposed to being natural or innate. The notion of habit, though, proposes much more than conveyed by conventionality or arbitrariness, in that it cuts across the dichotomy between

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[239]See e.g. Umberto Eco, Roberto Lambertini, Costantino Marmo, Andrea Tabarroni, "On animal language in the medieval classification of signs," in Umberto Eco and Costantino Marmo, eds., *On the Medieval Theory of Signs* (John Benjamins Publishing, 1989); Stephan Meier-Oeser, *Die Spur Des Zeichens: Das Zeichen Und Seine Funktion in Der Philosophie Des Mittelalters Und Der Frühen Neuzeit* (Walter de Gruyter, 2013).

[240]CP 2.297.

[241]Aristotle, *De Interpretatione,* 16a12.

[242]CP 2.292.

[243]CP 2.293.

[244]EP 2.461.

natural and cultural, or innate and conventional.[245] In the following two excerpts negative definition gives way to an emphasis on a positive criterion of habit:

> [The symbol is] A Sign (q.v.) which is constituted a sign merely or mainly by the fact that it is used and understood as such, whether the habit is natural or conventional, and without regard to the motives which originally governed its selection.[246]

> I define a Symbol as a sign which is determined by its dynamic object only in the sense that it will be so interpreted. It thus depends either upon a convention, a habit, or a natural disposition of its interpretant or of the field of its interpretant (that of which the interpretant is a determination).[247]

Habit, or tendency towards action, is a general notion that comprises intellectual, cultural as well as natural habits and dispositions, as I have touched upon with respect to the legisign. Tendency to take habits is a characteristic of thought, of organismic and collective activity. In semiotic terms, we tend to produce legisigns both individually and collectively. While a synchronic analysis can suffice in identifying other kinds of signs, only a diachronic analysis can illuminate the semiotic nature of activities that are governed by habits. Furthermore, since the habit pertains chiefly to the interpretant, examination of the characteristics of the sign or the relation between the sign and its object can never suffice to identify a legisign. Symbols in particular, which are necessarily legisigns, would inescapably be described in terms or arbitrariness or their imputed character if they are analyzed dyadically, that is only with respect to their relation to their objects, because the habit of action *constitutes* the significance of the symbol.

The symbol is not a mere name. Further, it cannot be reduced to any of its occurrences or to their totality, since it does not merely state what is the case and what to do, but suggests what *would be* the case and how *would one act* in the indefinite future. It is, moreover, a "growing habit"[248] which "come[s] into being by development out of other signs,"[249] changes, strengthens and weakens, or disappears. Any sign with time can develop into a symbol by losing its dependence for its significance on its particular characteristics or on the particular factual conditions of its occurrence and becoming a general rule that governs its singular instances. Being a general rule governing its instances and having its proper interpretant embodied in a habit, the object and the interpretant of the symbol are also of a general nature.

The notion of habit of action, which may or may not be of the intellectual kind, is what enables Peirce to escape the endless chain of thought interpreting

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[245]Winfried Nöth, "The Criterion of Habit in Peirce's Definitions of the Symbol," *Transactions of the Charles S. Peirce Society* 46, no. 1 (2010): 82–93, p. 84.

[246]CP 2.307.

[247]CP 8.335.

[248]CP 2.293.

[249]CP 2.302.

thought, and to ground the sign on a broader and more general basis independently of mind or culture. Symbols are interpreted in other symbols, but their meaning does not reside in an endless chain of interpretation in symbols, but ultimately in a habit of conduct. I will return to this notion for a more detailed exposition in the context of his Later Account.

### *IV.3.3 The sign and its interpretant*

The third trichotomy of signs concern the relation of the sign to its interpretant. In 1903 this third trichotomy is characteristically couched in representational terminology, and thus divides signs into three with respect to how they are represented in their interpretants. Peirce writes:

> A *Rheme* is a sign which, for its Interpretant, is a sign of qualitative possibility, that is, is understood as representing such and such a kind of possible Object....
>
> A *Dicent Sign* is a sign which, for its Interpretant, is a sign of actual existence. It cannot, therefore, be an icon, which affords no ground for an interpretation of it as referring to actual existence. A Dicisign necessarily involves, as a part of it, a rheme, to describe the fact which it is interpreted as indicating....
>
> An *Argument* is a sign which, for its Interpretant, is a sign of law. Or we may say that a Rheme is a sign which is understood to represent its Object in its characters merely; that a Dicisign is a sign which is understood to represent its Object in respect to actual existence; and that an Argument is a sign which is understood to represent its Object in its character as sign.[250]

The trichotomy of rheme, dicisign and argument is a generalization of the traditional logical distinction *term-proposition-argument*, formulated in order to identify the general types of semiotic conditions which govern ordinary terms, propositions and arguments as well as other kinds of signs. Every sign is either a rheme, a dicisign or an argument for its interpretant, depending on whether it is *represented* in its proper interpretant as a sign of qualitative possibility, of actual existence or of law, independently of whether it is an icon, index or symbol in its relation to its object. A rheme merely directs attention to its possible object and is represented as a quality, a dicisign asserts the actual existence of its object and is represented as an index, an argument provides grounds for its assertion and is represented as a symbol.

A rheme or rhema [from ancient Greek *ῥῆμα*] is the simplest kind of sign that suggests to its proper interpretant only a possible qualitative determination. Although Peirce arrives at the concept of rheme by generalizing the concept of *term*, Peirce's definitions of a rheme are very close to that of a *predicate*, because when Peirce speaks of a term he always means a predicate (including a copular verb in cases where one is required). A term is commonly understood as the equivalent of a common noun, and it requires a copular verb in order to become

[250]EP 2.292.

the predicate of a proposition. Peirce points out, however, that a common noun cannot be a basic element of speculative grammar. It is a peculiar form derived from the usage of a small number of languages and even when common nouns are used, in the overwhelming majority of cases they are always part of a verb.[251] A rheme, on the other hand, contains a verb within itself. It is equivalent to a "blank form" of a proposition, which would be obtained by erasing certain parts of a proposition in a way that if its blank spaces would be occupied by proper names or demonstrative pronouns the result would be a proposition.[252] For example, '___ likes to read', '___ is a painter', '___carries ___' or '___ gives ___ to ___' are rhemata or terms, while 'to read/reading' or 'painter' are not. A rheme does not contain any indicative elements, or lacks at least that one indicative element which would function as its *subject*.[253] This analysis, however, fits best Peirce's understanding of concepts and less apparently, for instance, icons. In less formal terms, it is a sign that is interpreted not as one of actual instantiation of a quality, relation or pattern but as one of possible instantiation, such as paintings. We can arrive at an analogy to blank propositions by imagining a painting of a cityscape. It only represents the possible qualities of a city, with no indication of whether there is such a city or whether the depiction is realistic. But if it was titled, for instance, "View of Delft," it would cease to be a rheme.

All icons are necessarily rhematic, for reasons which would be apparent from characteristics described above. A rhematic index merely directs the attention towards its object or evokes an idea through a real connection with its object, but its proper interpretant represents it as an iconic sign; that is, as a sign of qualitative possibility and not as a sign of actual existence or law. Rhematic symbols are general signs which, owing to certain habits, dispositions or rules, signify general concepts. Replicas of rhematic symbols are interpreted as signs representing instances of those general concepts.[254]

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[251]For Peirce's discussion of the copula "is" in reference to several ancient and modern languages, see EP 2. 221; 2.285.

[252]See, e.g., EP 2.221; EP 2.299; CP 4.438.

[253]What Peirce terms the rheme or rhema is called in logic today a *propositional function*. The term propositional function appears for the first time in Alfred North Whitehead and Bertrand Russell's *Principia Mathematica*. Peirce wrote in the tradition of term logic, but his move towards understanding terms as unsaturated propositions implied a critical departure from the traditional term logic. Peirce develops the concept of the rheme as early as 1892 in "The Critic of Arguments" [CP 3.415-424]. Together with Gottlob Frege, who in the same year in "Über Begriff und Gegenstand" proposed to think of concepts in terms of functions, Peirce contributed significantly towards the development of the modern notion of propositional function. See Alfred North Whitehead and Bertrand Russell, *Principia Mathematica,* Vol. I, 1st ed. (Cambridge University Press, 1910); Gottlob Frege, "Über Begriff Und Gegenstand," *Vierteljahresschrift Für Wissenschaftliche Philosophie* 16, no. 2 (1892): 192–205.

[254]For Peirce, replicas of rhematic symbols are rhematic indexical sinsigns of a peculiar kind. They are indexical since they evoke an already formed idea (a symbol) by virtue of standing in a real connection to those objects they denote. The replicas of the word "butcher" signify the general concept through experiential or general knowledge about butchers, thus have a connection to actual butchers. Even in the case of imaginary objects such as unicorns or utopias, actual descriptions have to mediate signification.

The concept of dicisign is a generalization of the concept of proposition to comprise various types of ordinary propositions as well as any other informational sign.[255] A dicent sign, or a dicisign, is a sign that conveys information without providing any reasons. It is represented in its interpretant as referring or relating to something real independently of being represented as such, hence as an index of an actual fact. Besides being represented in its interpretant as actually referring or relating to its object, a dicisign also describes its object and thus can have a truth value. It is worth pointing out that while indexicality concerns whether there is a real connection between the sign and its object independently of how this connection is represented in the interpretant, a dicent sign is one that is represented in its interpretant as an index of a fact; that is, it is an index of an index. The shout "Oranges!" heard while walking down a street calls to mind the idea of a street vendor in a way that the idea is summoned as a direct effect of the shout: "Some street vendor is selling oranges." In difference to rhemes which are described by Peirce also as simple signs or substitutive signs, dicisigns are described as double-signs or informational signs.[256]

A dicisign has two parts that are represented as connected. Peirce terms these two parts the *subject* and the *predicate*, whose semiotic functions are, respectively, to indicate its object and to embody information concerning its object. Since it has two functionally separate parts, the proper interpretant of a dicent sign represents the object of the sign to be different from the sign itself[257] (but does not distinguish between the sign and its interpretant; in order for that the dicent sign must become part of an argument). Regarding the possible types of dicisigns, a dicent sinsign involves a rhematic indexical sinsign which indicates the object and an iconic sinsign which affords information concerning it. Similarly, a dicent indexical legisign involves an iconic legisign which signifies the information and a rhematic indexical legisign which denotes its subject. A dicent symbol, on the other hand, involves a rhematic symbol, a general idea, as its predicate and a rhematic indexical legisign as its subject.[258]

In a qualified sense, a dicent symbol acts like a rhematic symbol for being connected with its object by way of its relations to other general ideas. But its proper interpretant represents it as being actually affected by its object to the

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[255]The notion of proposition should be carefully taken here as what is *assertible* and not as the *assertion* itself, let alone as the linguistic expression thereof. See CP 2.315.

[256]EP 2.275.

[257]MS 800:5.

[258]The subject function is fulfilled most commonly by a rhematic indexical sign, be it a sinsign or a replica of a legisign, and it might be wondered how some rhemes can indicate an object, since Peirce defines a rheme as being similar to an unsaturated predicate which by definition lacks indexicality. Proper names seem to be the most confusing case. Peirce argues that a proper name is indeed at bottom an index, which through the establishment of a habit, convention and the like comes to be interpreted each time as an icon of an index and can further develop into a replica of a rhematic symbol. Thus, a proper name is a rheme which can be the subject part of a dicent sign. Common rhematic symbols such as "dog" or "tailor", on the other hand, cannot become subjects unless they are specified by a rhematic indexical legisign such as the quantifiers "all", "every", "some" and "no."

effect that the existential fact or law it suggests is purported to have a real connection to the indicated object. Its interpretant, thus, takes it to be a dicent indexical legisign and it is indeed one if it is true of an actual fact.[259] In other words, a dicent symbol is a general proposition which is either particular, e.g. "Some chicken flies," or universal, e.g. "No chicken flies." The interpretant of a particular dicent symbol represents it to indicate (or purport to indicate) an existential fact, while a universal dicent symbol is represented by its interpretant to indicate (or purport to indicate) a real law.[260]

The connection between these two parts, in Peirce's terms *syntax*, is also significant. The syntax, according to Peirce, is represented to be an index of what corresponds in the represented fact to the relation between the subject and predicate.[261] The subject-predicate structure of ordinary propositions (dicent symbolic legisigns) exemplifies the double function of reference and description using the syntax of language. But not only linguistic symbols can be dicisigns, and the syntax in question is not necessarily that of speech. Gestures, paintings, figures, combinations of different cues can express non-linguistic propositions, or quasi-propositions. A pictorial map comprises several such propositions, although their syntax is different than that of speech. Peirce illustrates the syntax of indexical dicisigns through the example of a photograph.[262] For Peirce, the fact that the print is virtually a section of the rays projected from an object renders it a dicisign. The print is the quasi-predicate of the photograph and the section of the rays is its quasi-subject. In other words, the print is an index that turns the section of rays into an icon, or forces us to regard it as an icon.[263] It is neither a mere index, which only individuates an object but does not *assert* anything, nor a mere icon, whose connection to an actual object is inessential; e.g. a painting of a landscape.[264] The connection of the print with the section of the rays is the syntax of the indexical dicisign; it is a *fact* concerning the photograph in itself. Peirce's famous example of an index that affords information concerning its object, a weather cock, similarly involves the fact that the wind determines its direction in a way that the direction of the weather cock becomes an icon of the direction of the wind, thus the sign as a whole becoming a quasi-proposition. Every dicisign involves or represents a fact, and in the case of indexical dicisigns a fact itself can be the syntax.

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[259]EP 2.294-5.

[260]EP 2.299.

[261]EP 2.282.

[262]Ibid.

[263]EP 2.307.

[264]If, on the other hand, a legend was placed under such a painting it would also become a dicisign, since the added indexical element turns the icon into an icon of an actual entity. The same can be said about a painting of an imagined object. A painting titled "Imaginary Landscape" becomes an index of the painter's idea, which is iconically reflected in it.

One upshot of the concept of dicisign is that it allows to approach propositions in such a way that makes no reference to language or even to mind or consciousness as being among the defining criteria. Rather, linguistic communication or cognitive representation are acts which involve propositions of a particular kind and such propositions are always accompanied by other communicative or cognitive acts. Such is the concept of judgment, which for Peirce is not fit to be an element of general logic, for it involves not only a proposition but also an act of mental assent.[265] The concept of dicisign, hence, gives leeway to approach a much broader set of information-bearing processes, such as biological communication, as involving propositional characteristics.[266]

While the rheme and the dicisign are generalizations of the ideas of term and proposition, the argument is no generalization, since a sign appealing to the interpreter's reason for its justification can only be a verbal one.[267] An argument not only affords information concerning its object but also provides reasons for its being true or false. In terms of how a sign appeals to its interpretant, only an argument may be *submitted* or *suggested* to its interpretant, while a rheme my only be *presented* and a dicent sign is either presented to or *urged* upon the interpretant.[268] An argument may (perhaps) also be simply presented for contemplation or urged upon the interpretant through insistence, but the proper, characteristic appeal of an argument is to call for reasoning in the generation of each of its actual interpretants. Peirce's analysis of arguments is thus at the same time an inquiry into the types and properties of reasoning, because for Peirce an argument is not merely a set of propositions but an end-directed process. Propositions making up an argument are different from mere propositions in this respect; they constitute a whole which, instead of having a compelling effect on the interpreter, act on the interpreter "through his own self-control, representing a process of change in thoughts or signs, as if to induce this change in the Interpreter."[269] In this particular regard, argumentation is a special form of communication where primarily not utterances (signs) but semioses (processes of sign interpretation) are addressed at one another, and thereby the quintessential medium of mutual persuasion. I will take up this point again in the next chapter.

Peirce discusses arguments chiefly in epistemological terms. He identifies three types: Besides the commonplace deductions and inductions, he proposes abductions as his genuine contribution to the philosophical investigation of reasoning. Deductions are interpreted in their interpretants as belonging to a general class or arguments, whose premises, if true, will in the long run lead to true conclusions. They can be either necessary or probable; that is, can either

[265]EP 2.275.

[266]See, e.g., Frederik. Stjernfelt, *Natural Propositions: The Actuality of Peirce's Doctrine of Dicisigns* (Docent Press, 2014).

[267]Short, *Peirce's Theory of Signs*, p. 232.

[268]CP 8.338; MS 318.

[269]CP 4.538.

profess to invariably produce true conclusions from true premises or be represented as concerning probability, frequency, likelihood, or as analogies. Deductions in themselves are not concerned with truth but only with validity. They are, moreover, the only type of necessary argument. Inductions and abductions both deal with conjectures and cannot be necessary. Experimental verification of predictions and arguments from random samples are typical examples of inductions. Their justification is evidential; they deal with what actually is the case. Neither deduction nor induction introduce new ideas. Abduction, on the other hand, is the method of producing propositions which, according to Peirce, alone can bring about novelty in thought.[270] They are close to what in general are called explanatory hypotheses and conform to the following scheme:

> The surprising fact, C, is observed;
>
> But if A were true, C would be a matter of course,
>
> Hence, there is reason to suspect that A is true.[271]

Peirce bestows a particular importance on the logic of abduction as the characteristic mode in which both practical judgment and scientific inquiry progresses, as neither deduction nor induction can accommodate surprising or unfamiliar states of affairs. Abduction is, Peirce writes:

> a method of forming a general prediction without any positive assurance that it will succeed either in the special case or usually, its justification being that it is the only possible hope of regulating our future conduct rationally, and that Induction from past experience gives us strong encouragement to hope that it will be successful in the future.[272]

Any inquiry, according to Peirce, follows the pattern abduction-deduction-induction, where abduction sets forth a hypothesis the necessary conclusions of which are to be inferred through deduction, to be then tested and generalized through induction. In case of any error, failure, or inadequacy, alternative hypotheses are proposed through abduction and the inquiry proceeds following the same path.

Concluding the typology of signs based on the three trichotomies, it is worthwhile to have a brief look at the guiding taxonomic principles. Upon analyzing the sign-object-interpretant relation in terms of three trichotomies with respect to first, the sign *per se*, second, the relation between the sign and the object, and third, the relation between the sign and the object as represented in the interpretant, Peirce arrives at his ten-fold classification of signs. The reason for the limitation of the number of classes to ten is that there are several restrictions upon possible combinations. Firstly, the sign places constraints on the

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[270]CP 5.172.
[271]CP 5.189.
[272]CP 2.270.

possible types of object, which in turn places constraints on the possible types of interpretant. Secondly, each trichotomy divides along the lines of quality, existential fact and law, where a law mono-directionally implies facts and qualities, and the facts mono-directionally imply qualities. A qualisign can only be iconic, a sinsign can only be iconic or indexical, and a legisign can be any of the three. Similarly, iconic signs can only be rhematic, indexical signs can be either rhematic or dicent, and symbols can be any of the three. This implicational structure fits into the general implication hierarchy of semiosis: the interpretant implies the sign and the object, and the sign implies the object, but the reverse is not the case: an object does not imply a sign, and the dyadic sign-object relation does not imply an actual interpretant. Within the three trichotomies legisigns imply sinsigns and qualisigns because they have individual instances which have significant qualities; arguments imply dicents and rhemes (or propositions and terms); and symbols imply indexes and icons. In other words, where symbolic reference is possible, indexical and iconic reference must be possible as well, but the reverse does not hold.

These restrictions are guided ultimately by logical reasons, because the classes are obtained on the formal level by recursive application of the categories. A qualisign, for instance, is a first by itself, in relation to its object and to its interpretant, a rhematic indexical sinsign is a second by itself and in relation to its object but is a first to its interpretant, an argument is a third whose relation both to its object and to its interpretant is triadic. The ten classes of signs therefore are as follows: qualisign, iconic sinsign, rhematic indexical sinsign, dicent indexical sinsign, iconic legisign, rhematic indexical legisign, dicent indexical legisign, rhematic symbol, dicent symbol, argument.[273]

## IV.4 A PRAGMATICIST SEMIOTICS: PEIRCE'S FINAL ACCOUNT

Peirce's Final Account goes significantly beyond a formal analysis of the elements of signification in that it is characterized by his effort to synthesize various aspects and branches of his philosophy. Peirce's later philosophy focuses mostly on semiotics and its relevance with respect to broader philosophical topics. The central thread of this synthesis is the connection between semiotics and his philosophy of inquiry, which he developed over the years under the label of pragmatism. Semiosis is re-construed in Peirce's later philosophy as being akin to the process of inquiry, under which Peirce conceives all kinds of evolving, self-controlled and end-directed action. Combined with his increasing interest in rhetoric, sign-processes are examined through their development and within the actual practical context where they are realized. Peirce's final conception of semiosis, hence, integrates all areas of the broad field of semiotics: pragmatics,

[273]EP 2.294-5.

semantics and syntax, that is, the domain of the interpretant, that of the object and that of the sign.

This effort results at times in unconsummated experimentations in terminology and several loose ends in argumentation. A particular problematic topic is his final classification of signs into sixty-six classes along ten divisions, which appears in his 1908 letters to Lady Welby.[274] Although there has been rigorous work on Peirce's final classification,[275] it is uncertain whether there can be any decisive account since many aspects of the typology are under-developed and incomplete, and Peirce himself admits that of these sixty-six classes he has "a clear apprehension of some, an unsatisfactory and doubtful notion of others, and a tolerable but not thoroughly tried conception of others."[276] Another problematic topic is his various propositions for a three-fold division of the interpretant.

A most pressing issue bearing upon the intended reconciliation of Peirce's semiotics with his broader philosophical project is still the status of the object and the interpretant, for although he has acknowledged the reality of the object by incorporating genuine indexicality in his system and unfettered the interpretant from the endless chain of signs by introducing the notion of habit of action as the ultimate interpretant, he further needs to concretize the hitherto abstract notions of the object and the interpretant in accordance with his pragmatist position on the metaphysical and epistemological questions.

The object in the semiotic triad of the Interim Account is not more than a neutral place-holder. The first outcome of Peirce's integration of the notion of semiosis with the process of inquiry is the acknowledgement of two objects, one that is represented at any given point in semiosis, and another that would be known at the end of the process of inquiry. The former is the *immediate* object of the sign and the latter its *dynamic* object. It is important to emphasize the centrality of the process of inquiry in his final notion of semiosis, since otherwise it is easy to misconstrue what Peirce intends to achieve with this distinction. He describes the immediate and dynamic objects always together, and at places his descriptions may suggest at first sight a distinction similar to the Kantian one between the phenomenal object and the *Ding an sich*, or to that between the intentional and the real object. One such example is his description of the immediate object as one whose being is dependent on its representation in the sign, and of the dynamic object as "the Reality which by some means contrives to determine the Sign to its Representation."[277] The ambiguity is eliminated when the notion of reality is elucidated from his proposed pragmatist perspective, as he does in the following formulation from a letter to William James:

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[274]EP 2.483–91.

[275]See e.g. D. Savan, *An Introduction to C.S. Peirce's Full System of Semeiotic* (Toronto: Toronto Semiotic Circle, 1988); Priscila Farias and João Queiroz, "On Diagrams for Peirces 10, 28, and 66 Classes of Signs," *Semiotica* 2003, no. 147 (January 18, 2003): 165–84.

[276]EP 2.483.

[277]CP 4.536.

> As to the Object, that may mean the Object as cognized in the Sign and therefore as Idea, or it may be the Object as it is regardless of any particular aspect of it, the Object in such relations as unlimited and final study would show it to be. The former I call the *Immediate* Object, the latter the *Dynamical* Object.[278]

The adjective "dynamical" is explained in two ways that come to mean the same when considered from the perspective of Peirce's philosophy of inquiry; the dynamical object is either "the Object as Dynamical Science [...] can investigate it"[279] or the "really efficient"[280] object. Thus, the dynamic object is not the unknowable thing in-itself, but nonetheless the *real* object. On the one hand, it is not independent of mind, but it is ultimately "something forced upon the mind in perception, but including more than perception reveals."[281] Thus, Peirce elucidates, it is an object of actual (not merely possible) experience.[282] On the other, the dynamic object is real in the sense that reality is what the process of enquiry, given unlimited time and means, asymptotically approaches. The immediate and dynamic objects, hence, are not ultimately two ontologically different kinds of objects, but are distinguished with respect to how the object functions in the process of semiosis. As Ransdell puts it, "the immediate object is the object as it appears at any point in the inquiry or semiotic process", it is "what we at any time suppose the real object to be."[283]

The interpretant similarly is divided into the *immediate*, *dynamic* and the *final* interpretant. The dynamic interpretant is "whatever interpretation any mind actually makes of a sign."[284] The dynamic interpretant is a single event, and any sign will have different dynamic interpretants in each actual event of interpretation.[285] It is fitting to describe it as the actual effect produced by a sign, because it "derives its character from the Dyadic category, the category of Action."[286] The immediate interpretant is the interpretant *potentially* represented in the sign. In reference to the three degrees of clarity of thought he proposed in 1878 in "How to Make Our Ideas Clear," Peirce identifies the immediate interpretant in a letter to William James dated 1909 with the first grade of conceptual clarity:

> The first was such familiarity as gave a person familiarity with a sign and readiness in using it or interpreting it. In his consciousness he seemed to himself to be quite *at home* with the sign. In short, it is Interpretation in Feeling.[287]

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[278]CP 8.183; EP 2.495.
[279]Ibid.
[280]CP 8.343.
[281]EP. 2.478.
[282]EP 2.478.
[283]Joseph Ransdell, "Some Leading Ideas in Peirce's Semiotic," *Semiotica* 19 (1977): 157-178, p. 169.
[284]CP 8.315.
[285]Short, *Peirce's Theory of Signs*, p. 188.
[286]CP 8.315.
[287]EP 2.496.

Vincent Colapietro elucidates the expression "interpretation in feeling" by drawing attention to the difference between "feeling" as the first phenomenological category, firstness, and that as the first degree of clarity in interpretation, firstness of thirdness—or, thirdness in its firstness. In the second case the feeling in question is not a qualitative possibility *per se*, but "is bound up with actions and habits," "taken as a qualification of some action."[288] In Short's terms, the immediate interpretant is the "grounded interpretability" of the sign.[289] In other words, it is the interpretant the sign is fit to produce, not that which it actually produces, and can be actualized in infinitely many different dynamical interpretants. Peirce adds that it is what is ordinarily called the *meaning* of the sign.[290]

The immediate interpretant of a given sign corresponds to its immediate object, since the immediate object is the object of the sign as it is represented in its immediate interpretant. Any dynamic interpretant must actualize an immediate interpretant of the same sign, since actual interpretation requires at least the recognition of a sign as the already familiar sign of a previously cognized object. When one hears the utterance "brace for impact!" he or she knows already certain things about the it such as its being an instruction, made in a means of transportation, that it concerns a possible crash and so on prior to paying attention to the context, to examining the situation as to how best to proceed or to fearing for his or her life. Savan emphasizes the priority of the immediate interpretant in the process of semiosis by describing it as "the total unanalyzed impression which the sign might be expected to produce."[291] Any dynamic interpretant may further contribute to the content of the immediate object of the sign as it will be represented in future immediate interpretants. The dynamic interpretant will also be judged for misinterpretation with respect to the immediate interpretant, since any given sign can have different dynamic interpretants but only one immediate interpretant appropriate to the purpose of the sign's interpretation. In addition, a different immediate interpretant will suggest a different sign. A portrait can be the sign of a woman, but it can as well be the sign of innocence. Although the image is the same, these are two different signs.

The immediate and the final interpretants share in common, in difference to the dynamic interpretant, that they are not singular and not actual. The final interpretant, in difference to the dynamic interpretant, "does not consist in the way in which any mind does act but in the way in which every mind would act."[292] It corresponds to the dynamical object of the sign, and is the outcome of the

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[288]Vincent Colapietro, "Habit, Competence, and Purpose: How to Make the Grades of Clarity Clearer," *Transactions of the Charles S. Peirce Society* 45, no. 3 (2009): 348–77, p. 349.

[289]Thomas Lloyd Short, "Life among the Legisigns," *Transactions of the Charles S. Peirce Society* 18, no. 4 (1982): 285–310.

[290]CP 4.536.

[291]Savan, *An Introduction to CS Peirce's Full System of Semeiotic*, p. 53.

[292]CP 8.315.

interaction of the immediate and the dynamic interpretants through the process of semiosis as it reaches to its culmination. The truth of the final interpretant does not consist in any singular state of affairs, nor in any singular action, but in the conditional that "[i]f so and so were to happen to any mind this sign would determine that mind to such and such conduct."[293]

It becomes evident from the preceding that the tripartite analysis of the interpretant follows the general taxonomic criteria Peirce employed in the interim classification of signs. Namely, the "significate effect"[294] of any given sign can be (i) a qualitative possibility, an idea (the immediate interpretant), (ii) an actual, singular occurrence (the dynamic interpretant), or (iii) general; that is, the general form of a habit (the final interpretant). In the terminology of the categories, the immediate, dynamic and the final interpretants can then be called respectively the first, the second and the third interpretant.

Now, the final interpretant in the context of inquiry can be seen as a sort of *definition*, upon which a community of inquirers would ultimately reach through experience and deliberation, if the process were to be carried out long enough. This is, though, only one aspect, i.e. the conceptual one. The other is the convergence of various patterns of action that would ensue from the acceptance of the sign in possible different circumstances and contingent upon possible different motives: the ultimate general habit of action. Both these aspects are inseparably present in the final interpretant, and the conceptual clarification of the final interpretant, under its definition aspect, would require the clarification of the general habit of action that ensues from it. The final or the third interpretant, hence, is the link that conjoins the chain of semiosis to action governed by a generalized habit, in which the sign exhausts its function as a sign. The following passage from 1902, from when he has not yet come up with the notions final interpretant and dynamic object, illustrates very concretely the final interpretant and the dynamic object as revealed in it:

> If you look into a textbook of chemistry for a definition of *lithium*, you may be told that it is that element whose atomic weight is 7 very nearly. But if the author has a more logical mind he will tell you that if you search among minerals that are vitreous, translucent, grey or white, very hard, brittle, and insoluble, for one which imparts a crimson tinge to an unluminous flame, this mineral being triturated with lime or witherite rats-bane, and then fused, can be partly dissolved in muriatic acid; and if this solution be evaporated, and the residue be extracted with sulphuric acid, and duly purified, it can be converted by ordinary methods into a chloride, which being obtained in the solid state, fused, and electrolyzed with half a dozen powerful cells, will yield a globule of a pinkish silvery metal that will float on gasolene; and the material of *that* is a specimen of lithium. The peculiarity of this definition—or rather this precept that is more serviceable than a definition--is that it tells you what the word lithium denotes by prescribing what

[293]Ibid.

[294]CP 5.475; 5.473.

> you are to *do* in order to gain a perceptual acquaintance with the object of the word.[295]

A definition of the type "that element with the atomic number of 3" or a description such as "that material whose salts have mood stabilizing effects" are immediate interpretants of the symbol lithium representing its immediate object depending on the *possible* purpose presupposed in the immediate interpretant. The "peculiar" definition presented by Peirce in the passage, on the other hand, describes a habit, which is the ultimate effect of the sign; i.e. it is a precept for attaining the dynamic object. In emphasizing the pragmatist conception of truth as "any revelation of reality," as a community of inquirers will ultimately come to understand it,[296] Ransdell holds that the dynamic object is to be regarded best as the aim or the purpose of the process of semiosis, and that the final interpretant and the dynamic object are ideally identical.[297] The statement that semiosis involves reference to an object translates then, according to Ransdell, into the statement that all semiosis is an essentially purposive process. While Ransdell's interpretation is compelling in that it brings into focus the centrality of the notion of purpose in Peirce's conception of semiosis, we need to bear in mind also that the final interpretant is neither solely a definition, which is a *sign*, nor something completely alien to a definition, but a habit of action. More precisely, it is

> The deliberately formed, self-analyzing habit,—self-analyzing because formed by the aid of analysis of the exercises that nourished it,—is the living definition, the veritable and final logical interpretant.[298]

The *living* definition is the reflexive habit formed through a process of experiential testing and self-correction, and the final interpretant must express this habit that it is embodied in. The final interpretant and the dynamic object could have been ideally identical *if* they were both of the nature of signs, for instance concepts. This can be true for the immediate interpretant and the immediate object, although the two are still functionally different. The final interpretant and the dynamic object are, on the contrary, not *ideal*. Kruse captures this important point in saying that the dynamic object is extra-semiotic,[299] and we can add that in regards to its teleological nature the final interpretant is so as well. It is the very designation of the final interpretant as a habit of action that allows Peirce to escape the endless chain of thoughts interpreting thoughts. The final interpretant is the purposive, reflexive habit which governs action and the dynamic object is what

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[295]CP 2.330.

[296]CP 6.169.

[297]Joseph M. Ransdell, "Semiotic Causation: A Partial Explication," in *Proceedings of the C. S. Peirce Bicentennial International Congress*, ed. Kenneth L Ketner et al. (Lubbock: Texas Tech Press, 1981), 201–6, p.203.

[298]EP 2.418.

[299]Felicia E Kruse, "Nature and Semiosis," *Transactions of the Charles S. Peirce Society* 26, no. 2 (1990): 211–24. Cited in John Deely, "Building a Scaffold: Semiosis in Nature and Culture," *Biosemiotics* 8, no. 2 (2015): 341–60.

cannot be absolutely expressed in a sign but to which action can reliably accommodate itself. They are both *real* in so far as the real is the asymptotic homeostasis of the general form of action with the general patterns of the world, whether they be facts or values and whether they concern intellectual or practical action. The tripartite analysis of the interpretant, hence, equally applies to norms.

There is yet a slight ambiguity in the way in which the final interpretant has been explicated so far, which in part stems from Peirce's own writings on the topic. We have not clearly distinguished between the conception of the final interpretant as it pertains to its *truth* and that pertaining to its *meaning*. Consider the following two descriptions:

> …there is certainly a third kind of Interpretant, which I call the Final Interpretant, because it is that which *would* finally be decided to be the true interpretation if consideration of the matter were carried so far that an ultimate opinion were reached.[300]

> I do not deny that a concept, proposition, or argument may be a logical interpretant. I only insist that it cannot be the final logical interpretant, for the reason that it is itself a sign of that very kind that has itself a logical interpretant. The habit alone, which though it may be a sign in some other way, is not a sign in that way in which that sign of which it is the logical interpretant is the sign.[301]

It is clear that Peirce's concerns behind these two formulations are quite different. In the former the final interpretant is the *true* one, in the latter it is the interpretant in which semiosis is consummated; in other words, it is the kind of interpretant which itself is not a sign, one whose meaning does not depend on there being a further interpretant to represent it. Moreover, notice that the term "habit" features in the latter but not in the former, which interestingly employs the term "opinion"—clearly a *sign*, which can in principle admit of further interpretation. The notion of habit is an intrinsic element of Peirce's theory of meaning, while it comes to bear upon his conception of truth only as a factor of Peirce's synthesis of his theory of inquiry with his theory of meaning. A "true" proposition, for instance, may well have a symbolic form. The analysis of its meaning, on the other hand, would consist in a potentially infinite translation of symbols into other symbols, and we would, for all eternity, not hit upon *the* meaning of the proposition. That is, we would not reach the highest (third) grade of clarity in understanding if the logical analysis is not complemented with a "pragmatistic" one. Peirce's famous pragmatic maxim addresses precisely his proposal for a method to clarify our conceptions:

> It appears, then, that the rule for attaining the third grade of clearness of apprehension is as follows: Consider what effects, that might conceivably have

[300]EP 2.496.
[301]CP 5.491.

> practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object.[302]

The meaning of a symbol, then, ultimately consists in the totality of its conceivable practical bearings, that is in the totality of "all general modes of rational conduct which, conditionally upon all the possible different circumstances and desires, would ensue upon the acceptance of the symbol."[303] To put it concisely, *the* meaning of a symbol consists in the habit of action in which it is embodied, and the analysis of meaning should aim towards ascertaining that habit. The *distinctness* of a concept, attained only when the concept is fully (i.e., pragmatistically) cleared, consists in the difference its acceptance would make in terms of the kind of conduct it prescribes. Negatively expressed:

> a conception can have no logical effect or import differing from that of a second conception except so far as, taken in connection with other conceptions and intentions, it might conceivably modify our practical conduct differently from that second conception.[304]

Notice that the pragmatist notion of meaning has no intrinsic relation to the notion of truth. In fact, one can apply the maxim to conceptions pertaining to *any* phase in the process of inquiry, as well as to any other intellectual interpretant from completely different domains. Not only third interpretants, but the first interpretants as well require a description of the habit of action they are embodied in, so as to be clearly understood. Thus, an interpretant might be a "last" in two senses, with respect to truth or to meaning. These two senses are often united in Peirce's discussions of the final interpretant. It needs to ne noted, however, that the semiotic analysis of interpretants covers a much wider domain than the theory of inquiry or the pragmatist method aim towards. While the latter obviously has a more general application than the former, its proper domain is not meaning in all its forms, but strictly intellectual interpretants. Semiotic analysis, on the other hand, can potentially apply equally to all possible kinds of immediate, dynamic and final interpretants. The notion of habit of action has a particular application in the context of pragmatism: not all habits (including dispositions, learned skills and even instincts), but reflexively formed, self-controlled, dynamic habits applicable to rational conduct are the relevant kind in the pragmatistic analysis of intellectual interpretants. Any kind of habit pertaining to production and interpretation of signs, on the other hand, can be conceived as an interpretant in a semiotic analysis, independently of whether it reveals *the* meaning of a sign or not.

Concerning this ambiguity, Short maintains that these two different aspects under which an interpretant can be seen as a last should be captured with two

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[302]CP 5.402.
[303]CP 5.438.
[304]CP 5.196.

different terms.[305] He argues that the *final* interpretant relates to truth, while the *ultimate* interpretant relates to meaning. This move can indeed find partial support in Peirce's writings, although he most often uses two terms interchangeably (sometimes even together) to designate the third interpretant.[306] But Short goes further in suggesting that the designation "ultimate" applies to all interpretants which are themselves not signs, independently of pragmatist considerations. Hence, even a mere feeling or a motor reaction arising in relation to the interpretation of a sign are ultimate interpretants. We can talk about ultimate and not-ultimate *forms* of different kinds of interpretants. In his terminology, "ultimate" becomes roughly identical to "non-verbal."[307] It can therefore be said that Short transfers the term from the domain of *pragmatism* to a discussion of the *metaphysical* classification of interpretants. In a further step, he applies his reconstructed concept of ultimate interpretant back to the context of inquiry, where he argues that the immediate, dynamic and final interpretants, as they relate to the process of inquiry can be conceived as being ultimate or not. Hence, a final interpretant needs not be an ultimate interpretant (e.g., a true definition), whereas an immediate interpretant that is eventually rejected (e.g. the phlogiston theory of combustion) can be expressed in reference to its ultimate form; i.e., in reference to the totality of its practical bearings.[308] I will return to this issue shortly in relation to the controversial metaphysical classification of interpretants.

Let us now leave the topic of inquiry aside, since the tripartite analysis of interpretants only in parallel with the process of inquiry limits the appreciation of the actual breadth of the notion of final interpretant, which becomes apparent when the focus is laid on the end-directed, i.e. purposeful character of the final interpretant. The processual and progressive character of semiosis is emphasized when the purpose is to know reality, yet this constitutes but one possible purpose. On a more general consideration, the final interpretant is "the interpretant ideally adequate to the purpose for which the sign is being interpreted."[309] Thus the smoke one sees rising above the trees means the idea of fire; an idea of the general form, a possibility for an experience (e.g. being burned), or a possibility of action (e.g. running away) for its immediate interpretant, while it may elicit fear or a fleeing response as its dynamic interpretant, and its final interpretant would be, for instance, that smoke would generally signify an impending physical harm to those who do not immediately distance themselves from it. This final significate effect is the end of the process of semiosis by virtue of a general purpose underlying action in the world; namely, the disposition of an organism to protect its vital being.

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[305]Short, "Interpreting Peirce's Interpretant : A Response To Lalor, Liszka, and Meyers," *Transactions of the Charles S. Peirce Society* 32, no. 4 (1996): 488–541.

[306]See e.g. CP 8.314.

[307]Short, "Interpreting Peirce's Interpretant," p. 521.

[308]Short, p. 521.

[309]Short, *Peirce's Theory of Signs*, p. 190.

When we shift our focus from the knowledge of reality to other possible forms of semiotic purpose, the notions of immediate and dynamic object also require a reevaluation. Peirce claims that all signs have immediate and dynamic objects, yet some of his often employed examples of signs such as musical pieces or commands lack, for some interpreters, an object.[310] The problem concerns symbols less than it does iconic and indexical signs. Peirce, though, explicitly speaks of real and represented objects in relation to such iconic and indexical signs. The object of a command such as "Ground arms!" uttered by an officer is, according to Peirce, "the will of the officer that the butts of the muskets be brought down to the ground."[311] The command is the index of the officer's will, not as a psychological state but as a desired type of action. Short argues that the type of action commanded is the dynamic object, or the real determinant of the sign, since it is in reference to what the success of actual action, the dynamic interpretant, will be judged as to whether it fulfills its aim, i.e. to do what is commanded.[312] If the officer does not utter the command properly or if the desired action cannot be adequately conveyed by that particular utterance, collateral experience or deliberation based on that will attest to a difference between the immediate and final interpretants and consequently to a difference between the immediate and dynamic objects.[313] He adds that it is the aim of military training that the distinction between immediate and final interpretants to a minimum.

From a rhetorical perspective, where the sign translates into the medium of communication, we can say that any utterance has a basic and common sense—the content of communication, an actual effect on the interpreter—the response, broadly considered, and a purpose with which it is ideally uttered and interpreted. The immediate object is embodied in the first and the dynamic in the last. Consider Peirce's peculiarly concrete exemplification of the three interpretants in a letter to James:

> …suppose I awake in the morning before my wife, and that afterwards she wakes up and inquires, "What sort of a day is it?" *This* is a sign, whose Object, as expressed, is the weather at that time, but whose Dynamical Object is *the impression which I have presumably derived from peeping between the window-curtains*. Whose Interpretant, as expressed, is the quality of the weather, but whose Dynamical Interpretant, is *my answering her question*. But beyond that, there is a third Interpretant. The *Immediate Interpretant* is what the Question expresses, all that it immediately expresses, which I have imperfectly restated above. The *Dynamical Interpretant* is the actual effect that it has upon me, its interpreter. But the

[310]See e.g. Justus Buchler, *Nature and Judgment* (New York: Columbia University Press, 1955), p.155; Douglas Greenlee, *Peirce's Concept of Sign* (The Hague: Mouton, 1973), p.56. Cited in Mats Bergman, *Peirce's Philosophy of Communication: The Rhetorical Underpinnings of the Theory of Signs* (Bloomsbury Publishing, 2009), p. 97.

[311]CP 5.473.

[312]Short, Peirce's Theory of Signs, p. 201-2

[313]Ibid.

> Significance of it, the *Ultimate*, or *Final*, *Interpretant* is her *purpose* in asking it, what effect its answer will have as to her plans for the ensuing day.[314]

This framework is capable of being applied to all cases of communicative interaction, including commands and questions. As evident in the above example, the notions of the immediate and dynamic object and their distinction are fundamental also in judging the dynamic interpretant for misinterpretation. The dynamic interpretant of any sign can be judged with respect to its immediate and dynamic objects. This can be said to constitute the most basic function of the distinction, as it applies in the case where the purpose is to know reality but goes much further.

In the case of a musical piece, Peirce explicates, the object of the sign is the complex of composer's musical ideas, which "usually consist merely in a series of feelings."[315] According to Short music, being a pure icon, is a limiting case where the immediate and the dynamic objects are identical, because it signifies only what it contains.[316] He argues that nonetheless music is a sign with its correlates, the object and the interpretant: "The feeling as contained in the sounds is the sign, in itself is the object, in the experience of the listener is the interpretant; the distinctions among these three are relational, not substantive."[317] Misinterpretation is possible here as well, since we can identify the basic telic structure of semiosis. Those feelings are objective possibilities and one can objectively ask whether the interpretant is adequate in attaining its purpose.[318]

These two cases and many others of the sort has led Peirce, though, to elaborate his account of interpretants from a different angle. The triad of immediate, dynamic and final interpretants is often regarded as archetypal, although Peirce not rarely introduces other tripartite divisions of the interpretant the most important of which seems to be *emotional*, *energetic* and *logical*. In his widely quoted manuscript titled "Pragmatism," he introduces the latter as a basic division and employs it in giving his pragmatist proposal a proof based in his sign theory. There he writes of the interpretant:

> In all cases it includes feelings; for there must, at least, be a sense of comprehending the meaning of the sign. If it includes more than mere feeling, it must evoke some kind of effort. It may include something besides, which, for the present, may be vaguely called “thought”. I term these three kinds of interpretant the “emotional”, the “energetic”, and the “logical” interpretants.[319]

Liszka argues that according to the "received view" on Peirce scholarship, all other divisions are more or less synonymous with the division into immediate,

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[314]CP 8.314.
[315]CP 5.475.
[316]Short, *Peirce's Theory of Signs*, p. 205.
[317]Ibid.
[318]Ibid.
[319]MS 318; EP 2.409.

dynamic, final.[320] Several others, most prominently Short and Fitzgerald, maintain that the division into emotional, energetic and logical constitutes a distinct one.[321] While Fitzgerald argues that the latter is a division of the dynamic interpretant, for the reason that they are actual effects, Short holds that the emotional-energetic-logical trichotomy concerns the possible *types* of interpretant and thus cuts across the immediate-dynamic-final trichotomy.[322] The fact that the emotional, energetic and logical interpretants do not appear in Peirce's final, 1908 classification of signs besides the immediate-dynamic-final trichotomy apparently speaks against Fitzgerald's and Short's claims. Also does several statements by Peirce where he seems to merge the two trichotomies.[323] Short cites, on the other hand, CP 8.333 and CP 4.536 in arguing that Peirce hints at the emotional-energetic-logical trichotomy as an issue separate from the claim that any sign has three interpretants.[324] More importantly, Short argues that the emotional-energetic-logical trichotomy is a metaphysical classification, while the other refers to stages in the process of semiosis. At any one stage the interpretant may be, according to Short, of three different types. The following excerpt from The Logic Notebook lends some support to Short's interpretation as it subdivides each of the three interpretants into types:

> [The immediate interpretant] may be a quality of feeling, more or less vague, or an idea of an effort or experience awaked by the air of previous experience or it may be the idea of a form or anything of a general type.
>
> The *Dynamical Interpretant* is the actual effect produced upon a given interpreter on a given occasion in a given stage of his consideration of the sign. This again may be 1st a feeling merely, or 2nd an action, or 3rd a habit....
>
> The *Final Interpretant* is the ultimate effect of the sign, so far as it is intended or destined, from the character of the sign, being more or less of a habitual and formal nature.[325]

The intricacies surrounding the divisions of the interpretant do not concern us any further at this point, but several aspects of the emotional-energetic-logical trichotomy are important from a broader philosophical perspective. First of all, it is a tangible attempt on Peirce's side at putting fleshing out his general assertion that the interpretant is not necessarily intellectual. Although Peirce has almost

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[320]James Jakób Liszka, "Peirce's Interpretant," *Transactions of the Charles S. Peirce Society* 26, no. 1 (1990): 17–62, p. 20.

[321]See also Michael Shapiro, "Dynamic Interpretants and Grammar," *Transactions of the Charles S. Peirce Society* 24, no. 1 (1988): 123–30. Broadly in line with Short's interpretation, Shapiro concludes that Peirce's final theory of the interpretant yields nine types through the two trichotomies. Together with the division of logical interpretants into ultimate and non-ultimate, we eventually arrive at twelve types.

[322]John Joseph Fitzgerald, "Peirce's Theory of Signs as the Foundation for His Pragmatism," 1962; Short, "The Development of Peirce's Theory of Signs."

[323]See e.g. MS 318:15-7; CP 5.475-6.

[324]Short, "The Development of Peirce's Theory of Signs," p.235.

[325]MS 399 [1906, Oct. 23].

solely focused on what he later termed logical interpretants, he always also argued against their exhaustiveness, albeit mostly only in principle. By turning his attention to possible types of interpretants and the nature of their interrelation in his later work, he finally ventures into extending the scope or application of his semiotic taxonomy to meet the demands of his philosophical stance on meaning. Peirce has often argued in his later work that the study of the interpretant is the only veritable study of meaning.[326] The varieties of interpretant addressed by the emotional-energetic-logical trichotomy may be said, on the one hand, to complement the disembodied understanding of meaning investigated only with regards to its formal properties (e.g., abstract/possible, singular/actual, general/necessary) through the immediate-dynamic-final trichotomy. The emotional interpretant, for example, is more than a mere recognition of a qualitative possibility.[327] Short has a sound pragmatic point in arguing for the distinctness of the two trichotomies, rather independently of his strictly scholarly argument; and it is that if experience and action are not recognized as valid semiotic classes of interpretants, then the final interpretant (the true or ideally adequate interpretation) of a sign has to be construed necessarily as a logical interpretant.[328] That would amount to arguing that the meaning of an artwork should be looked for only in art critique, or that of a social practice in sociology. There is a way in which the meaning of a poem, however, is revealed in experience, which is significant independently of its translation into a general formula. There are non-intellectual ways of apprehension, in other words, action and affect can be construed in terms of meaning-making processes.

Moreover, emotional and energetic interpretants can be conceived not only as the end results of semiosis, but also as starting points of subsequent semiosis; that is, as genuine signs. Just as logical interpretants can also be signs for subsequent semiosis, an emotion, for instance, can bear informational value for the semiotic system and lead to further emotional, energetic or logical interpretants. One of the central functions of affective states such as moods and emotions is that they operate as signs of states of the world and are often translated into judgments as well as motivations for situated action.[329]

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[326]See e.g. CP 5.475. On a general note, with the introduction of this novel differentiation Peirce is arguably finally in a position to establish the interpretant as a notion different from and broader than interpretation. The interpretant refers not only to the outcome of active subjective process of comparison, association or inference, but equally importantly to what signs do to a receptive subject, their impact and residue, even without any active associative or creative effort. This broader sense is already implicit in Peirce's conception of the process whereby an interpretant is formed as one of *determination*, in the sense of *Bestimmung*. But in the light of this novel consideration, we are able to conceive in a more concrete manner what is potentially implied in this notion. Emotional interpretant is a pertinent example.

[327]CP 5.475.

[328]Short, "Interpreting Peirce's Interpretant : A Response To Lalor, Liszka, and Meyers," p. 516.

[329]An established research line in social and cognitive psychology, known as feeling-as-information theory, has studied for over 30 years how emotional interpretants, to use the Peircean terminology, are interpreted as signs in further energetic and most importantly logical interpretants. For one of the

This interpretation is still in line with the spirit of Peirce's semiotic project, since he has indeed been keen on keeping the scope of semiotics so broad as to place the intentionality of thought processes *within* a general logical architectonic, where other variants of meaning are equally supported. In one of the places where he clearly illustrates the variety of meaning, he writes:

> This [meaning] may be nothing but a feeling or emotion, which is all that a performance of instrumental music, for example, commonly expresses. Or the Sign being a command, such as the order 'Ground Arms', its Meaning may be the impulse to obey, which the sign excites. A question is a sort of command. Or the Sign may be an appeal to reason by an argument consisting of known premisses, the synthesis of which, which Synthesis will be its meaning, may be a new thought. Or the Sign may be an assertion, or 'Proposition', to use the logical term, when the Meaning is the substance of an assent to it. Or it may be a mere suggestion to imagination or memory, such as single word may convey. Many 'Utterances', as all acts of using Signs will here be called, are purposeless. But a serious Utterance is usually intended to influence either a single act or the reasoned conduct of the Interpreter or Interpreters, and its meaning is that general kind of Conduct that it virtually recommends.[330]

Hence, we can speak also of the *kind* of interpretant ideally adequate to the purpose with which a sign is uttered and interpreted. An energetic interpretant is the one ideally adequate to the purpose of a military command, so compliance with the command would be its final interpretant. Thus, not all final interpretants are logical interpretants and vice versa.

## IV.5 The dialogical turn

As I have touched upon previously, Peirce's General Logic has three branches: speculative grammar, speculative critic or logic proper, and speculative rhetoric or methodeutic. Now, most of what has been said in relation to Peirce's Later Account pertains to his work in the third division, because I have on purpose largely left out the incomplete mature classification of signs. What remains now is to focus on the key notions and propositions that evolve out of Peirce's mature semiotic under a more distinctly rhetorical light.

One goes beyond speculative critic and steps into speculative rhetoric as one moves from the formal conditions for the truth and validity of particular arguments (i.e., the study of correct reasoning) to the norms of actual processes of discovery, interpretation and evaluation, i.e. with how ideas change and grow.

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earliest empirical studies on the topic and a later, comprehensive presentation of the theory, see Norbert Schwarz and Gerald L. Clore, "Mood, Misattribution, and Judgments of Well-Being: Informative and Directive Functions of Affective States," *Journal of Personality and Social Psychology* 45, no. 3 (1983): 513–23; Norbert Schwarz, "Feelings-as-Information Theory," *Handbook of Theories of Social Psychology* 1 (2011): 289–308.

[330]MS 637: 33v-34v [1909, Oct. 3-13]. Cited in Bergman, *Peirce's Philosophy of Communication*, p.161.

This last branch of general logic has as its main topic the embodiment of meaning. It is "the science of the essential conditions under which a sign may determine an interpretant sign of itself and of whatever it signifies, or may, as a sign, bring about a physical result."[331] Peirce conceives speculative rhetoric as where the classical study of rhetoric meets the study of methodology of the sciences in general (including metaphysics). In other words, he attempts to relocate the old and ever persistent question of method in a "universal art of rhetoric, which shall be the general secret of rendering signs effective."[332] The designation "methodeutic" reflects Peirce's conception of this last branch as the "method of methods,"[333] that is, as the normative science of how sign relations (should) give rise to other or novel sign relations in concrete contexts of semiosis. Pragmatism, the method for making intellectual concepts clear, makes up most of the methodeutic together with the ethics of discourse and terminology. I will turn to Peirce's pragmatism as I refine the lens on methodology in the next section, but for the time being we can set aside the question of method and focus on a most fundamental and relevant question: What kind of conception of semiosis comes to light when speculative rhetoric, rather than speculative grammar and speculative critic, is assumed as the theoretical lens?[334] The immediately observable difference is that while the formal approach begins with logical and categorical terms and operations to locate in turn concrete cases of semiosis within already established schemata, the rhetorical approach begins with "men and their conversation"[335] to generalize in turn structures found there to all cases of semiosis within and without human persons.

Let us go back to the very structure of signification, and look at what irreducible triadicity implies in the context of concrete experience. What does it mean that any thought, notion, or perceptual judgment is a sign in the same way any word, utterance, picture, or diagram is a sign? In order to answer this question, we must begin with a more fundamental one: What is implied in our meaningful relating to any aspect of experience? To begin with, there is nothing in experience that is absolutely alien to us. It is a fact of experience as universal and firm as that there is nothing in experience absolutely identical to some other element or to itself in another moment. Familiarity is the first qualification of anything that can become present to us. What does this familiarity consist in? It consists in the power to bring to mind something else. This "something else" is given independently of its being brought to mind by that other; it is an element of

[331]EP 2. 326.

[332]Ibid.

[333]CP 7.59.

[334]Considerations that arise out of a rhetorical analysis of semiosis would of course feed back into the classification of signs, which actually is the case with Peirce's later taxonomy. It should also be noted that my concern with speculative rhetoric here is restricted to the general analysis of semiosis; many central topics of rhetoric such as assertion, justification, audience and persuasion are consequently left out.

[335]CP 8.112.

past experience. Now, this relation between what is present and what is evoked in its becoming present gives rise to another element, distinct from the former and the latter, which involves the evoked element but also the difference between it and the second element that evoked it. Thus anything becomes present by relating to two other things; to what comes before it and to what it gives rise through being related to the former. It is neither a first nor a last but an intermediate which becomes potentially meaningful through relating to a (relative) first and actually so by giving rise to a (relative) last, which is put into relation with the first through the intermediary.

Experiencing something as meaningful does not stop but only begin with familiarity. This intermediary, which puts into relation a first and a last through itself, can become present in many different ways. Beyond having a power to evoke something previously given, it might present itself also in its individuality, in its being an occurrence. Then the fact of its occurrence and the manner in which it relates to a first become part of its meaningfulness. It might also present itself as an occurrence instantiating a certain pattern. Then it becomes meaningful in relating to that pattern. The same goes for the first and the last elements. What the intermediary relates to, in giving rise to the last element, can be a vague idea, a vivid memory, a concept, an expectancy or a certain disposition. The last element that issues from the first through the intermediary, in turn, can be an idea, a feeling, a certain response, or some propensity to feel, act or think in a certain way.

Now, does this consideration of how something becomes meaningfully present in experience apply in the same way to how feelings, concepts, judgments or dispositions come to be and to bear effects? I have already hinted at how these can be considered as first and lasts; the crucial question is now how they can be considered as intermediaries.

What do we mean when we say that an idea, in the broadest sense, exists? What would be its manner of existing? As an isolated mental entity? Can there be an idea which neither springs forth from nor gives rise to another idea, such as an image or a proposition, a feeling or disposition? If there can be such an idea, how could it be possibly or actually real? The reality of any idea consists in its relations to other actual or possible ideas, affects or actions. What is meant is not merely internal or merely external relations, such as shared conceptual contents or temporal sequence, but genetic ones. Every idea is borne out of other ideas, affects or actions and grows into still others. Moreover, it has no reality outside of this movement. Any actual idea is determined by some preceding element and determines a subsequent one to be determined by the former through itself. Both of these determinations are intrinsic to its identity, which comprises the whole of this development. An idea, then, *essentially* addresses itself to (at least) two other elements of experience. Its mode of existence is, in the broadest sense, *mediation*.

The limiting case of mediation would be where some mere effect is transmitted, as when domino blocks transmit the impact to neighboring others. A

clearer case of mediation would be where a structure is transmitted, as when an ice crystal grows inside a supersaturated solution. A still clearer case would be where, instead of mere transmission, some form addresses the form-bearing/generating capacity of some subject and gives rise to another, different form, as when a cry of fright evokes compassion. Still further, this capacity of the subject might potentially feature in, hence mediate, the relation between the former two elements; for instance, when a question is posed possible appropriate answers are already assumed in the act of posing the question. We thereby arrive at an essential feature of all mediators, which can be better articulated through a slight reformulation: A mediator addresses at least two subjects, not directly two effects, structures or ideas, where a subject is to be understood *only* as that which is adequately receptive to determination; that is, open to be properly affected by and able to properly respond to what is indirectly presented to it. A semiotic mediator is whatever that brings a subject into a relation of mediate determination with another. Ideas, then, can only be conceived as semiotic mediators, as signs or "thought-signs," since their mode of existence is mediation between certain determinations of subjects.

Obviously, there is also a content bearer, or vehicle aspect to thought-signs, as exemplified in the difference between a proposition and a sentence expressing it in a natural language. When we say that a *general* or *abstract* idea mediates, what we mean is not exactly that the idea as general or abstract, but its *embodiment* in something of a more concrete nature, such as models, images, associations, words or sentences, since types can only mediate through their tokens. This is not to say that thought can be understood as capable of enjoying separate existence. While the embodiment of a thought in this particular sign instead of that may often be accidental, the fact of embodiment is essential. As Peirce states in an unpublished text from 1906:

> …being dialogical, it [thought] is essentially composed of signs, as its Matter […] One selfsame thought may be carried upon the vehicle of English, German, Greek, or Gaelic; in diagrams, or in equations, or in graphs […] Yet that the thought should have *some* possible expression for some possible interpreter, is the very being of its being.[336]

Consequently, in mediating between different determinations of subjects, thought-signs *convey* something of a more general nature then what they immediately call to mind. This is what is meant when we say that thoughts are both *in* signs and *are* themselves signs. Communication has all these implications at once; namely mediation, change and transmission.

The notion of mediation is of crucial importance in order to argue against any substantial logical difference between thought and communication, and between internal and external signs. The term representation and its varieties such as representamen, which Peirce initially used often in place of sign, are not as fit

[336]CP 4.6; MS 298. 6-7.

for this purpose, because in ordinary usage representation is a two-place term.[337] Aware of this difficulty, Peirce took pains to endow it with a triadic structure in formulations such as "X represents Y to Z." The same goes for the relation of "standing for" or "substituting." When using dyadic terms, one can easily fall into the trap of reducing a genuine triadic relation into a combination of two dyadic relations. A clear example would be analyzing signification into a representation relation between a word and a thing, and an interpretation relation between a word and a thought.[338] An additional, equally serious difficulty concerning the use of notions like representation or substitution in defining the sign process is that they come close to being meaningless in the case of indexes. What does a command or a pointing finger represent, stand for or substitute? In his mature thought Peirce came to conceive the sign more as a "medium" and less in terms of representation:[339] he says that "a sign is plainly a species of medium of communication, and medium of communication is a species of medium, and a medium is a species of third,"[340] or, alternatively, it is "any medium for the communication or extension of a Form."[341] The triadic structure intuitively captured in the notion of mediation is the logical denominator of thought and communication, and is common to internal and external, or material, signs alike.

A Form may only be communicated or extended if the form is embodied in a subject independently of (that particular) communication, and in another as a result of communication. This mediation, as hinted at above, involves two kinds of movements. The first is the determination of a sign by something independent from the action of the sign; sign-production or, conveniently, *utterance*. The second is the determination of a subject through the action of the sign: *interpretation*. What we tend to call mind is the kind of receptivity that can realize both of these two movements, or double-determination. Any movement of thought—and thought has to move—has to be embodied in signs. Since no sign comes in isolation but is generated from other signs and generates further signs, these two movements which are distinct in the movement of thought are united in the sign. It is necessary, not that any sign has an actual utterer and an interpreter, but that these two determinations or potentialities for determination are involved in the sign. The triadic relation of signification is, hence, embedded

[337]It should be noted that Peirce's conception of representation was modelled on literal uses of the term such as a lawyer's representation of somebody in front of a judge. While in such cases triadicity is most evident, mental representations are often conceived dyadically.

[338]See also Winfried Nöth, "From Representation to Thirdness and Representamen to Medium: Evolution of Peircean Key Terms and Topics," *Transactions of the Charles S. Peirce Society* 47, no. 4 (2011): 445–81.

[339]For an account of the conceptual development from representation to medium of communication, see Bergman, *Peirce's Philosophy of Communication: The Rhetorical Underpinnings of the Theory of Signs, pp. 92-137*.

[340]EP 2.390 [c. 1906]. He retrospectively admits in a notebook that his terms have been too narrow, and instead of ''sign'' he should have used ''medium.'' See MS 339:283 [1906].

[341]EP 2.477.

within the interaction of two minds or quasi-minds, as Peirce expresses it in a famous passage quoted earlier:

> signs require at least two Quasi-minds; a *Quasi-utterer* and a *Quasi-interpreter*; and although these two are at one (*i.e.,* are one mind) in the sign itself, they must nevertheless be distinct. In the Sign they are, so to say, *welded*. Accordingly, it is not merely a fact of human Psychology, but a necessity of Logic, that every logical evolution of thought should be dialogic.[342]

Thus, speculative rhetoric gives us an essentially dialogical conception of semiosis. In line with the old Platonic conception, Peirce clearly acknowledges that all thought is necessarily a sort of dialogue, "an appeal from the momentary self to the better considered self of the immediate and of the general future."[343] Now, thinking achieves this double-determination through its temporal structure and the functional split in the conscious self. A thought is a sign uttered by the ego of a previous moment, addressed to a future thought, effect, or a resolution. To the degree that the subject is endowed with memory and imagination, and is proficient in using signs, the thought can switch between utterance and interpretation. What Peirce adds to the Platonic picture is the semiotic and perspectival conception of the self, where the semiotic subject can and does assume the perspective of a community—a conception which will find further elaboration and sophistication in Mead's distinction between "I" and "me." The model case of semiosis, then, is clearly hetero-communication, where there is an addresser and an audience. The person accomplishes semiosis in thought through becoming its own audience. In parallel, the paradigm that guides the definitions and classifications of the sign is the communicated sign.[344]

Semiosis generally takes place between two subjects, which need not be persons: "for a chameleon and many kinds of insects and even plants make their livings by uttering [an interpreting] signs, and lying signs, at that."[345] There are obvious cases, on the other hand, where it is impossible to identify an utterer. Symptoms, for instance, are hardly uttered by an ill body, or thunders by an approaching storm. This points towards an asymmetry between the respective roles of the utterer and interpreter in the constitution of a sign. Something can become a sign even without being uttered, as long as it is interpreted as such. We can imagine a solitary astronaut in a distant planet finding and interpreting signs with no utterers. Considered form the perspective of human experience,

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[342]CP 4.551. The term quasi-mind has to be understood in the context of Peirce's broader metaphysical argument that thought, or in its more general form "thirdness", is not restricted to the human being but appears in the organic world and develops there. Although this topic is not relevant here, the term has not been taken out in order not to misrepresent Peirce's rhetoric as being confined to the human cultural realm.

[343]EP 2.477. Notice also the clearly rhetorical underpinnings of the dialogical conception in that the appeal is to a *better* considered self.

[344]See also Mats Bergman, "C. S. Peirce's Dialogical Conception of Sign Processes," *Studies in Philosophy and Education* 24, no. 3–4 (2005): 213–33, p. 220.

[345]MS 318:17.

however, there is also the *semblance* of utterance that any sign manifests. We tend to assume an exhaustively meaningful world, although there cannot be any evidence for this assumption in the phenomena. This semblance may be linked to a quasi-transcendental property of the human mind, although Peirce neither goes down that road nor is interested in doing so. An account that is relatively more faithful to the Peircean perspective would be to say that our most basic mode of sign interpretation is rhetorical. Our interpretation of the phenomenal world and our own experience is in terms of uttered meanings; a structure which manifests itself all the more clearly in less systematically reflective or motivated forms of semiosis. We might not so rarely find ourselves tempted to ask "why?" even in most inappropriate situations such as earthquakes or death of loved ones. We can most easily couch a biological explanation in design terms simply because it is a more parsimonious manner of thinking and speaking. Every parent interprets the movements and expressions of his or her infant as being uttered, when they are often not. This semblance does not imply a repudiation of the phenomenal world on the grounds that it is replete with virtuality or fiction, but indicates some crucial and fundamental feature of human semiosis.[346]

Thought is discursive not only figuratively, but in the most literal sense. But most interestingly, ordinary empirical inquiry too is communicational in its structure as much as practical discourse is. The question "why?" is primarily a social one, addressed typically to persons in order to learn their *reasons*. It is addressed only secondarily to quasi-utterers, in which case its object is, most generally, a *cause*. Arguably, our familiarity with causes stems originally from our familiarity with explanations that cite some cause as a reason. From such a vantage point, the relation between reasons and causes, both answers to the why question, seems to be more than a superficial one. This relation can be identified from a genetic perspective, besides a transcendental one, on the basis of the peculiar ecological conditions of the development of the human psyche, which are ultimately contingent but factually necessary. The nature and origin of this communicational structure in human thought that is effective even in the absence of utterance is thus a most suitable question for philosophical psychology, though not for a general logic and hence not relevant for Peirce.

But this affinity should never close up the fundamental difference between practical discourse and empirical inquiry: While the chief aim in practical discourse is persuasion (accommodation to the other's view being secondary), the nature does not allow being persuaded. Thus, the scientist must eventually accommodate at the face of recalcitrant phenomena after series of failed attempts at *ad hoc* explanations. This difference makes a crucial difference in the respective attitudes of successful scientists and of successful rhetoricians, politicians, or of any who do not work with empirical hypotheses: While it is an "event" if the latter

[346]See also Roberta Kevelson, "C. S. Peirce's Speculative Rhetoric," *Philosophy & Rhetoric* 17, no. 1 (1984): 16–29, p. 24.

do not persevere in their position, it is merely a sign of merit for the former to be most flexible.

The asymmetry between utterance and interpretation does not suggest, on the other hand, a quasi-Berkeleyan reduction of significance to actual interpretation. There are also cases where there are signs but no actual interpreter, such as a poem that has never been read or automatically generated statistical data that have not been analyzed. What we have in such cases is potential significance, and the interpretant of such signs is a "would be."[347] A sign which would determine an interpretant if there is (or was) an interpreter is no less a sign, since it already has this potential in itself independently of actual interpretation.[348] Acknowledging the reality of possible semiosis has philosophical implications broader than the scope of logic. As Colapietro nicely puts:

> [A]n implication of saying that nothing is inherently a sign is that *we* initiate the process of semiosis by taking up some stance toward a complex. In contrast, an implication of asserting that there are signs independent of our interpretations is that, at least in some cases, we are not the initiators but the respondents to a world that is always already meaningful to some degree.[349]

Semiosis, then, involves the reciprocal interaction of the two movements, utterance and interpretation, and as such can be minimally considered as coextensive with life and agency. All semiosis, on the other hand, presupposes possible semiosis, which implies that semiosis can only take place in a potentially meaningful world. The world, including the nonliving nature, is part and parcel of the interpreting act. The assumed quasi-utterer of a sign, then, is not merely an ineradicable formal element of the semiotic mind, but has some footing in the world independently of interpretation and hence cannot be reduced to a fiction or stance.

The study of dialogue on all accounts gives us a paradigmatic or "wonderfully perfect kind of sign-functioning,"[350] hence the question of how sign processes are generally realized *in concreto* most naturally belongs to speculative rhetoric. The divisions of the object and the interpretant I addressed in the preceding are ultimately fleshed out in this reformulated schema of utterer-sign-interpretant-interpreter. From a strictly communicative perspective, the immediate interpretant would be the intentional interpretant, i.e. a determination of the utterer's mind; the dynamic interpretant would be the effectual interpretant, i.e. a determination of the interpreter's mind; and the final interpretant would be the communicational interpretant, i.e. a determination of that mind where the minds of the utterer and interpreter are fused. Peirce explicates that this mind, which he

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[347]EP 2.409.

[348]CP 5.287; CP 2.275.

[349]Vincent Michael Colapietro, *Peirce's Approach to the Self: A Semiotic Perspective on Human Subjectivity* (Suny Press, 1988), p. 21.

[350]EP 2.391.

also calls *commens*, "consists of all that is, and must be, well understood between utterer and interpreter, at the outset, in order that the sign in question should fulfill its function."[351] From a psychological point of view, we can also say that the communicational interpretant involves the simultaneous assumption or coordination of the utterer and the interpreter perspectives. Denotation, he maintains in the following passage, requires that the denoted object is put in relation to the object that does or would determine the communicational interpretant.

I have said that the utterer and the interpreter are not strictly necessary for semiosis, but they are the elements of the paradigmatic case of semiosis, and not mere appendices. Going from the speculative rhetoric back to the speculative grammar, we arrive at the idea that some ingredient of the utterer and some ingredient of the interpreter "not only are so essential, but are even more characteristic of signs than the utterer and the interpreter themselves."[352] These must play most generally and to differing degrees of completeness the semiotic roles of the utterer and the interpreter, and must be of the nature that the utterer and the interpreter cannot be conceived independently of these. That ingredient of the interpreter that must be present even in the absence of an actual interpreter, for which Peirce long had a place in his logical system, is the interpretant: the potential or actual significate effect of the sign. It can be, as previously discussed, a cognition, emotion, behavior, a disposition or even a potential determination in the absence of an interpreter; i.e., what would determine an interpreter if there were one. Let us turn to that relatively more mysterious ingredient of the utterer, which Peirce calls, provisionally for the sake of explication, merely the quaesitum.

Since it is the utterer who produces, expresses or represents the sign and not the other way, our quaesitum is something that "cannot be fully revealed or brought to light by any study of the sign alone, as such" but whose knowledge requires some collateral experience.[353] To illustrate, let us imagine that while reading some excerpt from the *Summa Theologiae* a student comes across the phrase "the Philosopher." If the student does not know its reference from previous knowledge, by that excerpt alone he can only come to the conclusion that some certain preceding philosopher, whose identity is self-evident to the particular audience that Aquinas addresses at the time, had made so central and decisive contributions to the topic at hand that his ideas must have been taken as the basis of subsequent examination. If the student is interested beyond slight curiosity in ascertaining the identity of this philosopher, he can acquire an edition of the complete work and check the index of names, the editor's notes, the introduction or consult a faculty member on the issue. Thus, the student needs to undertake a more thorough examination of the utterer of the sign from various sources, not of

[351]EP 2.478.
[352]EP 2.404.
[353]Ibid.

the sign itself, in order to ascertain its significance. Or, imagine that you encounter a complete stranger walking towards you on an empty street, who begins all of a sudden to laugh heartily. You would probably first entertain the possibility that the stranger is laughing at you and try to see if there is something odd about your appearance. Next, you could look behind yourself to see if there is another possible object of interest there. You could also look for an indication of mental disorder. As you walk past the stranger and walk onto the main street, you would pay more attention than usual to the states of affairs, and if you happen to hear or see anything that might be of relevance such as a pantomime performance around the corner, somebody saying "Oh, I just saw that man again!" or another person looking at you amusedly, you would use that information to eliminate or strengthen one of your hypotheses. Here again, ascertaining the significance of the sign requires that one looks beyond the sign and relies on collateral observation. This quaesitum is what is termed, in a more abstract and obscure manner, the *object* of the sign. If there is an utterer and an interpreter but no context, it is that which the utterer has in mind but does not, need not or cannot express. If there is a context, it might also be an aspect or element of that context, such as the summer heat when one utters "It is too hot!" If there is no utterer, as when the remnants of a species endemic to another continent are interpreted as a sign of migration, it might be those circumstances, events or relations that led to the production of the sign. If the sign is considered as a type rather than an individual, its object would be altogether different. For instance, a radio broadcast considered as a sound transmission technology rather than a sign of a traffic accident that took place in Berlin on the 2nd of July, has as its object the ideas and methods applied in devising the radio, which are evidently not revealed by the radio but ascertained by "collateral experience" (the general knowledge of how a radio works). The object as well as the utterer, then, are prior in the order of determination relative to the sign, but posterior relative to the interpretation of the sign.[354] It would be wrong to say that the sign expresses, represents, stands for, reveals or substitutes its object, since the object does not admit of any of these. The sign may, on the other hand, describe its object or in some manner indicate what kind of collateral experience would lead to the object.

The embodiment of a form in the utterer, then, is the dynamic object of the sign, since it determines the utterer independently of the sign. The object of a sign in a certain sense is what that sign represents it to be, hence it is the immediate object, but it is the dynamic object that truly determines the utterer. Thus, the "real" object of a sign is the dynamic object, whether it corresponds to the immediate object or not, since it is what determines the utterer. This relation between the dynamic object and the sign, being not one of expression or

[354]Cf. Bergman, "C. S. Peirce's Dialogical Conception of Sign Processes," p. 223, n 11. As Mats Bergman rightly points out, (material, external) signs can be argued to precede utterers from a developmental perspective.

substitution but of signification to a third element, also confirms the need for interpretation, since the sign can never transmit or lay bare its object. The triadic relation of mediate determination through signs precludes an identification of semiosis with transmission, where the medium of communication could be conceived as a vehicle and would function best to the degree that it is transparent. Evidently, semiosis comprises the "ideal" case of information transfer without noise as one asymptotic limit, since diachronically semiosis brings about establishment of habits and as habits settle semiotic mediators gain transparency. The nature of the object is also an important factor. A commonly observable empirical fact and a political opinion, when communicated, definitely require extremely different degrees of contribution from the interpreter. When we write a shopping list or inform someone about the weather forecast of that day, the communicative process comes very close to information transfer, although being still irreducibly triadic. However, such cases are far from being paradigmatic for an understanding of semiosis. In inner as well as interpersonal dialogue obviously utterers and interpreters are hardly senders and receivers. Everyone who made a resolution to change a certain behavior in the future knows pretty well how different it is from implanting an idea of the present self in the mind of the future self.

Moreover, semiotic development demands that mediators are recognized and treated as such. In order to effect any lasting change through signs, in oneself or in another, signs must be rendered as opaque as possible. Thus, semiosis in the stronger sense of learning or habit-change through communicative interaction or thinking is at the same time *metasemiosis*.

## IV.6 THOUGHT, ACTION AND HABIT IN THE PRAGMATIST THEORY OF MEANING

After the first appearance of the pragmatic maxim, or "the principle of pragmatism" as James called it, in the 1878 article "How to Make our Ideas Clear," Peirce's pragmatism underwent cycles of reformulations, illustrations and attempted proofs. In the 1903 series of Harvard Lectures on Pragmatism, Peirce endeavored to examine the pros and cons of his proposal, as well as to distinguish his brand of pragmatism from more popular versions that appeared after the term found its way into the academic discourse through James. A third phase in its development is the series of *Monist* articles between 1905-7, where Peirce ventured once more to distinguish his proposal from other variants, to be followed by a discussion of the consequences of adopting pragmatism and finally a proof of pragmatism. The envisioned proof never appeared on print, but Peirce left behind six drafts of what was going to be the third article in the series, and a separate

manuscript dated 1907, MS 318, involving several different variants, collected under the title "Pragmatism."[355]

The most significant elements of this long evolution for our purposes are (i) the basic premises of pragmatism, (ii) the intricate relation of pragmatism to realism vis á vis nominalism, (iii) the foundation of the proof in phenomenology and semiotics, and finally (iv) the unification of thought and action under the category of habit through the notion of purpose, increasing in relevance in this order.

In the sixth Harvard Lecture titled "The Nature of Meaning," Peirce enunciates the most basic premises of pragmatism as follows:

> [F]*irst*, that there are no conceptions [broadly construed, "any representation in any kind of cognition, virtual, symbolic, or whatever it may be"[356]] which are not given to us in perceptual judgments, so that we may say that all our ideas are perceptual ideas. This sounds like sensationalism. But in order to maintain this position, it is necessary to recognize, *second*, that perceptual judgments contain elements of generality, so that Thirdness is directly perceived; and finally, I think it of great importance to recognize, *third*, that the abductive faculty, whereby we divine the secrets of nature, is, as we may say, a shading off, a gradation of that which in its highest perfection we call perception.[357]

The first proposition does not require exposition, since it is a re-statement of an old Aristotelian idea. The second states that perceptual judgments permit deduction of universal propositions from them. The third proposition construes perceptual judgments as an extreme case of abductive inference, extreme because perception is not under conscious control and is beyond logical criticism. Yet, he claims, logical analysis would reveal a likeness of an inferential structure within perception, although the act of perceiving does not consist of discrete steps, but is continuous. The abductive structure consists in that perceptual judgments yield likely quasi-hypotheses, from which perceptual predictions are deduced, to be in turn verified (or modified) inductively, i.e. in further accumulation of experience. He concludes that "a conception can only be admitted into a hypothesis in so far as its *possible* consequences would be of a perceptual nature."[358] Possible, because he is not proposing a crude verificationism, but an open ended, provisional and approximative agreement with future facts. The pragmatist maxim would then be concluded from these propositions, and designated as the only efficient method for good abductive reasoning. Peirce will revise his strategy significantly in the following reformulations of the proof of pragmatism, and base it not on perception but on phenomenology and semiotics. Yet his famous principle regarding the relation of conceptions to perception and action, presented in the following lecture, remains a central tenet of pragmatism:

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[355]EP 2.398-433.

[356]CP 5.181. The excerpt is from the seventh lecture, where Peirce reformulates the three propositions.

[357]EP 2.223-4.

[358]EP 2.225. Italics are added.

> The elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action; and whatever cannot show its passports at both those two gates is to be arrested as unauthorized by reason.[359]

He uses this principle in formulating the stance of pragmatism on the question as to the reality of "thirdness" in the first *Monist* article (1905) titled "What Pragmatism is."[360] The pragmatist regards thirdness as an essential element of reality. But this commitment is qualified through positing an inseparable connection between thought, action and feeling: Thirdness depends on secondness (the category of action) and firstness (the category of feeling), because thirdness governs only through action, just as a court can only govern through a sheriff,[361] and action can only arise in feeling. Here he states that the most distinctive tenet of pragmatism is that it assumes an intrinsic connection between rational cognition and rational purpose, which is also the reason behind the preference for the name of the doctrine.[362]

This article stands out with respect to its reliance on the notion of *belief* as habit of action, and its reformulation of the grounds for the characteristically anti-foundationalist and anti-skepticist stance of pragmatism. The article begins by arguing that pragmatism in the strict methodological sense in which Peirce proposed it (and renamed "pragmaticism"[363] in order to avoid conflation with other popular meanings the term has acquired since its proposal) is a doctrine for the clarification of intellectual concepts.[364] Instead of initially presenting a formal definition, Peirce unites the manifold basic propositions of pragmatism under the obscure preliminary maxim "Dismiss make-believes,"[365] which broadly prescribes starting philosophical inquiry from the actual state of mind any inquirer finds himself or herself readily in, i.e. laden with the vast manifold of already formed beliefs, and exerting deliberate and ongoing self-control over those beliefs until one reaches that ultimate state of fixation of belief where there is no room for further self-control. "Universal doubt" or appeal to "first sense-impressions" unconvoluted by cognitive elaboration are Peirce's typical examples of such make-believes. Instead of resorting to obscure notions of metaphysical truth and falsity, one should recognize that all that one actually deals with is beliefs and doubts.

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[359]CP 5.212.

[360]EP 2.331-45.

[361]This famous analogy is originally formulated with respect to the relation of final causation to efficient causation, in order to argue against the notion that ideas or conceptions are devoid of efficiency. Any "ideal" regularity is a regularity of the future; it is a *potential* regularity and it cannot be potential if its lacks efficiency. See CP 1. 213.

[362]CP 5.412. He alludes to Kant's usage of "pragmatisch" in difference to that of "praktisch" to elucidate why his doctrine cannot be understood as a philosophy of *praxis*.

[363]CP 5.414. While adding the extra syllable Peirce proposes that the former term should denote a family of loosely affiliated doctrines, such as the "radical empiricism" of William James and the "humanism" of Ferdinand C. S. Schiller, and the latter his particular, original contribution.

[364]CP 8.191.

[365]CP 5.416.

Knowledge of the "Truth" can then be translated into the attainment of "a state of belief unassailable by doubt."[366] This analysis of the notion of truth is a clear application of the pragmatist maxim.

Belief, when pragmatistically analyzed, is the establishment of an enduring habit of mind, which shares with other habits the quality of being "perfectly self-satisfied" until it is inescapably disturbed.[367] Doubt, on the other hand, cannot designate a universal state of mind of inquiry. Unlike belief, it is not a habit but its privation. It is a momentary mode of irritation that calls for an effort to attain a habit.[368] One can recognize the presence of doubt most clearly in its practical implications, as one does belief, and one should not *pretend* to doubt when many beliefs inescapably lurk in the background and continue to guide one's endeavor. This dynamic interrelation of doubt and habit finds a more pronouncedly naturalist reflection in Dewey's genetic analysis of the process of inquiry in terms of a "problematic situation," which marks the phase where the existing habits of the human organism are no longer adequate and the interruption in the satisfactory continuation of action brings about not merely a cognitive but also a practical as well as existential uncertainty, to be followed by critical inquiry until a satisficing solution leads to the establishment of a new habit.

That belief is a habit of action is an analysis Peirce has carried out in many other places. In an often quoted passage he says that "genuine belief, or opinion, is something on which a man is prepared to act, and is therefore, in a general sense, a habit."[369] He continues by stating that every habit has some generality, and as such refers to *indefinite* future; it is a *would-be*: "a general (fact) cannot be fully realized. It is a potentiality; and its mode of being is *esse in futuro*."

The Peircean conception of habit is, like Dewey's, closely connected to the concept of action: "different beliefs [or, habits] are distinguished by the different modes of action to which they give rise."[370] Peirce is not interested as much in individual actions, which are not generalizable, as in *kinds* of action. A habit can be described only by describing the *kind* of action which it prescribes, conjoined with the specification of the motive and the conditions.[371] What he means by habit is, thus, something of a higher order than action. It is a species of thirdness, while action taken by itself exemplifies secondness. It thus also has characteristics close to those of conceptual thought.

On the basis of these considerations, Peirce says in the following *Monist* article titled "Issues of Pragmaticism" that "[t]he term 'reasoning' ought to be confined to such fixation of one belief by another as is reasonable, deliberate, self-

[366]Ibid.
[367]EP 2.337.
[368]EP 2.336-7.
[369]CP 2.148.
[370]CP 5.398.
[371]EP 2.418.

controlled."[372] He then reformulates the pragmatic maxim on the basis of the notions of generality and potentiality, or real possibility:

> The entire intellectual purport of any symbol consists in the total of all general modes of rational conduct which, conditionally upon all the possible different circumstances and desires, would ensue upon the acceptance of the symbol.[373]

Finally, in the manuscript MS 318 titled "Pragmatism" we have what comes closest to a proof. This time Peirce proceeds entirely on the basis of his semiotics, which by 1907 is completely integrated with his pragmatism. The concept of the ultimate logical interpretant is the key to the proof. He begins with the premise that all cognition is thoroughly inferential, and any thought refers back to a sign and is a sign for a further interpretant. He proceeds by stating that concepts, propositions and arguments (the three kinds of symbol) are logical interpretants, but cannot be the ultimate logical interpretants since they themselves are signs that require logical interpretants. The ultimate logical interpretant must be, then, a habit. Because a habit is the only determination of an interpreter which involves generality without being a sign. He writes:

> Intellectual concepts [...] essentially carry some implication concerning the general behavior either of some conscious being or of some inanimate object, and so convey more, not merely than any feeling, but more, too, than any existential fact, namely, the "would-acts," "would-dos" of habitual behaviour; and no agglomeration of actual happenings can ever completely fill up the meaning of a "would-be."[374]

The ultimate logical interpretant is then a habit of action. Hence:

> ...the most perfect account of a concept that words can convey will consist in a description of the habit which that concept is calculated to produce. But how otherwise can a habit be described than by a description of the kind of action to which it gives rise, with the specification of the conditions and of the motive?[375]

The ultimate interpretant of a symbol, the habit of action, is the totality of its intellectual purport.[376] We thus arrive at a re-statement of the pragmatic maxim and the proof obtains.

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[372]CP 5.440.

[373]CP 5.438.

[374]CP 5.467.

[375]EP 2.418.

[376]Upon Peirce's presentation of pragmatism, a rather straightforward criticism attributed Peirce the position that thought consists or finds its purpose in action. He responds to such interpretations of pragmatism quite explicitly in a footnote (CP 5.402, n. 3):

> No doubt, Pragmaticism makes thought ultimately *apply* to action exclusively -- to *conceived* action. But between admitting that and either saying that it makes thought, in the sense of the purport of symbols, to consist in acts, or saying that the true ultimate purpose of thinking is action, there is much the same difference as there is between saying that the artist-painter's living art is applied to dabbing paint upon canvas, and saying that that art-life consists in dabbing paint, or that its ultimate aim is dabbing paint.

A last question which has been only implicitly touched upon is obviously how time is related to conduct. A pragmaticist analysis of time also grounds Peirce's conception of self-controlled conduct in modal categories. In the "Issues of Pragmaticism" he poses the question as to how the general determinations of time bear upon conduct. The past, he writes, is the *existential* mode of time, since the past affects us not like any abstract principle would, but like an actual entity does.[377] The past belongs to the mode of actuality. This is not to mean that the sum total of *faits accomplis* have an immediate effect on us, since we do not assume the same for any given existent. The past bears upon conduct as its basis, since any experience, discovery or fact needs to become completed, closed (and necessarily reduced) in the form of knowledge, memory or disposition to become applicable to conduct. Any kind of existential judgment, similarly, is about a past state of affairs, be they millions of years ago or just prior to the act of assertion, since an existential claim cannot address the present. Future, on the contrary, belongs to a completely different modality. While the past is in the determinate mode, the future is in the indeterminate. This is also supported by how different modes are conceived in the most subjective sense. We commonsensically think that every future event or state of affairs is either necessary or possible. Both cases concern indeterminate knowledge, since knowledge is determinate if certainty can be achieved by recourse to a direct recollection.[378] In the case of indeterminate knowledge vis à vis the alternatives, we can either say that the knowledge of one among them excludes the others, or that more than one state of affairs is not excluded by any knowledge. The former is the case of necessity and the latter that of possibility. But in terms of modality, necessity and possibility are collectively different from actuality.[379] Whether future is "destined" or "undecided," it is not actual in that it acts only through the idea of it.[380]

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Pragmaticism makes thinking to consist in the living inferential metaboly of symbols whose purport lies in conditional general resolutions to act.

[377]CP 5.459.

[378]CP 5.454.

[379]Peirce's conception of the three modalities as forming two main classes can be recalled as a recurrent theme in any Peircean trichotomy. The dynamic interpretant as opposed to the immediate and the final, the sinsign as opposed to the qualisign and the legisign, the index as opposed to the icon and the symbol and so on.

[380]CP 5.459. As a general note, Peirce concerns himself in these passages not with the objective modality of time *per se*, although he is much closer to Aristotle than to Kant on the ontological as well as logical status of time. He writes that the substance of Aristotle's view of time, which has been considered by many to be naïve but most profoundly captures the logical difference between past and future time, is that "[t]he past is ended and done; the future is endless and can never have been done" (CP 6.96). General assertions about the past, for instance, can be made only when we take it to be an object of *possible* experience, thus an object of *future* research. This difference in the logical status may concern chiefly our subjective attitude towards time, a possibility which Aristotle also recognizes, but it does not prevent one from arguing for the reality of time. On the contrary, in order to deny the reality of time, or to equate it with the form of the internal sense, one needs to take similar steps concerning the reality of change (See CP 6.132).

How do then the future and the present bear upon conduct? The chief and peculiar significance of the future lies in that the future facts, experiences or acts are the *only* ones subject to some measure of control or inference. To begin with the latter, we can say that any critically arrived conclusion, including even the purely mathematical or logical ones, is either explicitly or implicitly in the future tense, the conditional mood also being a species of the future tense.[381] The meaning of a reasoned conclusion makes reference to deliberate conduct, and deliberate conduct is by definition subject to (some measure of) self-control. Thus, only future conduct deserves to be called deliberate. Some inferences seem, on the other hand, to refer to the past *as* past. Peirce designates such inferences as acritical, implying that the meaning of their conclusions, pragmatically speaking, are not made clear enough. In order to become part of any belief, such conclusions must be made to bear on future conduct. What about, then, the meaning of beliefs regarding that part of the past that falls outside of any direct recollection or "established" facts, such as the conjectured past? Peirce argues that the meaning of such a belief as well makes reference to the future as any other belief, because "the meaning of its being believed to be in connection with the Past consists in the acceptance as truth of the conception that we ought to conduct ourselves according to it."[382] The difference between my believing that I was a gifted or mediocre child, or that the first hominids switched to bipedalism in the savanna or in the sea is to be found in how I would conduct myself in assenting to the truth of one or the other.

How, then, the present, the fleeting instant bears upon conduct, since it neither provides a basis for it nor gives any room for inference? What is "given" in the present can evidently not be of the nature of facts or ideas. Moreover, when we say something is "present," to the extent that we can refer to it, our experience as well as conception involves a kind of otherness that is not to be found in concepts, propositions or recollections. It is the kind of otherness proper to external objects. The crucial point though is not externality in the spatial sense but in the sense of compulsivity or resistance to the will. We can be conscious of feelings, for instance, but not of a *self* who has these feelings, which has to be inferred. Thus if the present can be said to harbor any objective reference at all, it is characterized by the immediate otherness given in passive sensation; by the compulsivity of what is present. Accordingly, Peirce designates the attitude of the present as *conative*: the consciousness of the present consists in that of "a struggle over what shall be."[383] Hence, with regards to this tense in-between status of the

[381]CP 5.461. Regarding mathematical or logical consequences, it would be seen upon consideration that they can easily be articulated in the future tense: e.g. If all men are mortal and Socrates is a man, he will die or if two lines are parallel to each other, they will not intersect at any point.

[382]CP 5.461.

[383]CP 5.462.

mode of the present (neither indeterminate not yet determined) Peirce calls it the "Nascent State of the Actual."[384]

[384]Ibid.

# V METASEMIOSIS AND MEANING STRUCTURES

This chapter extends and complements a central discussion inaugurated in the previous chapter, the nature of semiosis, with reference to the question of what kind of role sign-use plays in the phylogenetic and ontogenetic emergence of the dispositions that are characteristic of persons. In the first section, I conceptually delineate metasemiosis from semiosis and argue for a semiotic continuity thesis; namely, that sign processes of differing complexity permeate nature and the idiosyncratic properties of human semiosis should be understood against the background of a broader continuity of semiotic mediation. Secondly, I focus on communicational signs with reference to the traditional dichotomy of natural and conventional signs. Third section deals with how communicational signs appear and spread among individuals, groups and generations in phylogenetic and ontogenetic time. Fourthly, I dwell on the role of social learning and the question of culture with regards to sign processes and beyond the human social niche. In the fifth section I pay closer attention to metasemiotic mediation, in other words reflexive semiosis, and its nature and function within the context of communicative social interaction and higher-order cognition. The sixth and last section is devoted to the explication of the notion of semiotic scaffolding. I connect this semiotics-focused re-construal of the broader notion of scaffolding that is found in developmental and educational psychology and cognitive science to the concepts of transformative communication, levels of meaning and meaning structures I have introduced in the first part of this thesis. In connection to the fifth section, I argue, on the conceptual level, that transformative communication plays a constitutive role in the emergence of a range of higher-order cognitive-semiotic dispositions prerequisite of personhood. Chapters VI and VII, subsequently, concretize this proposal with regards to how communicative interactions contribute to cognitive-semiotic development.[385]

## V.1 SEMIOSIS AND METASEMIOSIS

Semiosis is customarily described as sign action or sign process. It generally denotes any activity or process which consists in or involves signification. Peirce rarely uses the very term *semiosis*, but at one of the few places he does so, he offers a definition in terms of the irreducible triadic relation between the three elements of the sign process:

[385]Some of the ideas that are developed in this chapter figure, in a more limited fashion, in Uygun Tunç, "Transformative Communication as Semiotic Scaffolding of Cognitive Development."

> …an action, or influence, which is, or involves, a cooperation of three subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs.[386]

As I have touched upon previously, Peirce does not intend to restrict semiosis to the mental interpretation of signs. Semiosis covers the whole range of actual and possible irreducibly triadic processes. Following this generalized framework for semiotic analysis, the field of biosemiotics[387] generally regards semiosis as a phenomenon coextensive with life.[388] This is to say, all organismic processes and organisms' interactions with their environment are driven, regulated or constrained by sign processes, beginning with the establishment of the most basic organic functions of recognition, measurement and qualitative differentiation realized by the cell membrane. The question of whether we can apply semiotic notions such as interpretation, evaluation and translation outside of the linguistic realm, and to living nature, is obviously a contested one whose answer depends on where one draws the line about what counts as sign-related or meaning-involving phenomena—a semiotic threshold. Phenomenologically oriented approaches to semiotics, for instance in the relatively new field of cognitive semiotics, typically formulate the criteria for attributing a phenomenon the status of a sign process in terms of *metasemiosis*; that is, of higher-order cognitive processes which represent processes of signification, and elements thereof, as being such. In echoing Piaget's description of a *semiotic function*, Göran Sonesson formulates such a "metasemiotic" criterion by stating that something is a sign only when "expression and content are differentiated *from the point of view of the subject*."[389] Piotr Konderak explicitly identifies metasemiosis as a condition for semiosis, where metasemiosis is understood as a case of metacognition. His criteria for identifying a "semiotic system" comprise metaknowledge concerning the usage of signs, conscious awareness of alternative interpretations, recognition

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[386] CP 5.484.

[387]While the establishment of the field under this name goes not further back than the 90s, most notably through the works of Thomas Sebeok and Jesper Hoffmeyer, the origination of a big part of biosemiotic notions and principles (such as realism with respect to relations) as well as the meaning and signification focused approach to living nature can be dated back, among other sources, to biological structuralism already in place since the 70s, studies of animal communication in zoosemiotics and the Rashevsky-Rosen school of relational biology beginning around the 60s, the works of Jakob von Uexküll's theoretical biology in the 20s, and to Peirce's generalized logic. As partly similar perspectives that have developed in parallel, we can also note biohermeneutics (following the hermeneutic tradition) and biosemantics (Ruth Milikan). See e.g. Helmuth Plessner, *Die Stufen Des Organischen Und Der Mensch: Einleitung in Die Philosophische Anthropologie* (Walter de Gruyter, 1975); Sergey V. Chebanov, "Biohermeneutics and Hermeneutics of Biology," *Semiotica* 127, no. 1–4 (1999): 215–26; Ruth Garrett Millikan, "Biosemantics," *The Journal of Philosophy* 86, no. 6 (1989): 281–97.

[388]Kalevi Kull et al., "Theses on Biosemiotics: Prolegomena to a Theoretical Biology," *Biological Theory* 4, no. 2 (2009): 167–73. The proposition that semiosis is coextensive with life goes back to Thomas Sebeok.

[389]Göran Sonesson, "The Meaning of Meaning in Biology and Cognitive Science: A Semiotic Reconstruction," *Sign Systems Studies* 34, no. 1 (2006): 135–214, p. 152; Göran Sonesson, "New Consideradons on the Proper Study of Man — and , Marginally , Some Other Animals," *Cognitive Semiotics* 4, Supplement (2009): 133–68.

and correction of mistakes in interpretation, evaluation of uttered signs in regards to their suitability and similar others.[390] While Konderak leaves the possibility of artificial sign-using systems open, if semiosis requires metacognitive knowledge and complex meta-representational capabilities, only humans seem to qualify as sign-users. Jordan Zlatev, on the other hand, works with a broad notion of semiosis that is not restricted to the sign process but applies to all meaning-involving phenomena.[391] But he resonates with Sonesson in taking the consciousness of the difference between expression and content or referent to be a minimum requirement for the sign process.[392]

Endorsing a notion of semiotic continuity is clearly not a requirement for a synchronic analysis of cultural sign use. If our purpose is to understand the idiosyncratic features of human meaning-making in their emergence and development, however, which is my chief concern here, restricting sign processes to those that involve higher-order, reflexive awareness, knowledge and control would not be very illuminative. In order to understand how human meaning-making processes unfold and change in developmental time, we need to explicate their characteristic (some perhaps unique) features *within* a broader account of semiotic continuity. Employing a broad sign concept allows one to emphasize the ontogenetic origin and role of metasemiosis vis-á-vis phylogenetically established foundations of interpretation, without resorting to exclusivity or ontological difference in conceptions of semiotic mediation. It is thus not the only, but apparently the most parsimonious way for any phylogenetically informed approach in semiotics to construe signs as semiotic *mediators* which determine their interpretants by constraining the space of possibilities in a certain direction, inducing an action, or by conducing to the production of another sign. As a mediator, the sign can also enable representation without itself being recognized as a representation.

Furthermore, it would be not very illuminative to assume that sign processes appear on the evolutionary and as well as developmental stage along with the capacity for conscious, higher-order representations. Taking into consideration the widely acknowledged constitutive role of sign use in the development of various higher-order cognitive processes, we also beg the question of cognitive development if we assume that sign processes appear in development only after various meta-representational and metacognitive capabilities are in place. If we approach these distinguishing features, instead, from a perspective of difference within semiotic continuity, we simply need to explicate the differences in the sign

[390]Piotr Konderak, "The Conscious Semiotic Mind," *Studia Semiotyczne* t. XXXI, no. 1 (2017): 67–89, p. 83-4.

[391]Jordan Zlatev, "Cognitive Semiotics: An Emerging Field for the Transdisciplinary Study of Meaning," *Public Journal of Semiotics* 4, no. 1 (2012): 2–24, p. 2.

[392]Jordan Zlatev, "The Semiotic Hierarchy: Life, Consciousness, Signs and Language," *Cognitive Semiotics* 2009, no. 4 (2009): 169–200.

process when a receptive agent is able to treat signs as being distinct from what they signify and to reflect on its own processes of interpretation as such.[393]

Deely implies such a perspective of "difference within continuity" in his famous description of the human being as "the semiotic animal,"[394] who not only engages in semiosis but also conceives relations obtaining in the world in semiotic terms. In a similar vein, Susan Petrilli maintains that human meaning-making involves not only semiosis but also *semiotics*; that is, sign processes that take as their object other sign processes.[395] The word "semiotics" is used here obviously in the sense of "metasemiosis," which does not solely come "after" semiosis to investigate its grounds and methods but is most definitely semiosis in the fullest sense, just as metadiscourse is discourse, metacommunication is communication and metacognition is cognition.

We need to emphasize, however, that from a semiotic continuity perspective, metasemiosis does not mark an all-or-non state of enlightenment or a reflexive leap in evolution or development either: It is rather a matter of higher semiotic freedom and versatility; hence, a phenomenon we need to approach in broadly gradualist terms. Higher semiotic freedom and versatility imply, before all else, that the relation between the sign, its object and interpretant can be weakened and more variably established through various mediating processes between perception and action. The term metasemiosis in this sense comprises a range of cognitive-semiotic abilities from sign-object differentiation to recognition of interpretation possibilities and coordination of alternative interpretants. We can thereby regard the appearance of metasemiotic mediation as a multifarious aspect of a holistic development, which introduces more and more levels of mediation into processes of meaning-making. A most crucial implication of this development is that action can be delayed, postponed or even not at all realized. Jesper Hoffmeyer and Frederik Stjernfelt conceive this sophistication in terms of an increasing "subdivision, articulation and differentiation into a range of autonomous parts and aspects of the originally holophrastic [perception-action]

[393]I should note that especially in the field of cognitive semiotics, for instance in Zlatev's work, there is in fact a serious interest in such "genetic" questions as the evolutionary and developmental origins of the specifically human meaning-making processes, which is reflected in the broad notion of semiosis and in the idea of a semiotic hierarchy structured along semiotic thresholds. Strategically, the broadening of the notion of semiosis allows for the delimiting of that of the sign as belonging to a certain level where semiosis is metasemiotically mediated (in the sense I described above). Arguably, this move shifts the problem of ambiguity and fuzziness involved in the concept of the sign to that of semiosis. I prefer to keep the notions of sign process and semiosis coextensive, and to apply logical, not psychological criteria in differentiating the various ways in which the elements of signification can be interrelated (i.e. to rely on logic of semiosis rather than psychology of semiosis). As it will become clearer in the following discussion, this will allow us to explicate the particular relation of proximate processes realizing semiosis (e.g. metacognitive, affective, or more strictly somatic) to certain semiotic possibilities in the domain of communication.

[394]John Deely, "The Semiotic Animal," *Semiotics* (2003): 111–26.

[395]Susan Petrilli, *Sign Studies and Semioethics: Communication, Translation and Values*, vol. 13 (Berlin: De Gruyter Mouton, 2014), p. xviii; Susan Petrilli, *The Self as a Sign, the World, and the Other: Living Semiotics* (Routledge, 2017), p. 3.

loop," which is "already committed to proto-propositions guiding action reliably."[396] The metaphorical description *holophrastic* is intended to picture the starting point of an ongoing differentiation of the loop of "proto-propositions," in Peircean terms non-symbolic dicisigns with energetic interpretants, where its implicit, germinal subject-predicate structure is differentiated only from the perspective of the analysis and hence not available for access and control on the part of the organism.[397] Metasemiotic mediation would, accordingly, serve to the further sophistication, articulation and finally recognition and voluntary control of such propositions. From this vantage point, we can say that metasemiotic capabilities do not result in the *emergence* of semiotically mediated *kinds* of action and communication. While metasemiotic processes are mental and intersubjective, thus properly psychological phenomena, semiosis does not have such an implication. Instead, action and communication admit of levels of semiotic and metasemiotic mediation, leading, at each point, to the "attainment of higher degrees of semiotic freedom, higher degrees of combinatorial complexity, and higher degrees of selection between articulate semiotic possibilities."[398]

What needs to be added, from the perspective of the present work, is that the gradual intervention of metasemiotic mediation in cognition is not only parallel to but also depends on the gradual appearance of levels of metasemiotic mediation in communication. As I suggest, metasemiosis is a particular kind of communicative process in form and origin. One that involves the mutual recognition of the communicative interaction as such and the reciprocal anticipation of intentions and responses. Minimally, one that involves the mutual perception of being perceived, as Bateson would put it. These features, however, are not essential to communicative interaction as such, but pertain to metasemiotically mediated communication. In the context of the semiotic continuity thesis this proposition implies, on the one hand, the existence of communicational signs that are not uttered and interpreted via metasemiotically mediated processes, as well as the existence of other, non-communicative processes whereby communicational signs can be established. On the other, it

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[396]Jesper Hoffmeyer and Frederik Stjernfelt, "The Great Chain of Semiosis. Investigating the Steps in the Evolution of Semiotic Competence," *Biosemiotics* 9, no. 1 (2016): 7–29, p. 27. "Proto-propositions" can also be compared to what Paul Grice, in resonance with Peirce, calls a "sentence-like" (thus "complete") non-linguistic utterance-type. See H Paul Grice, "Utterer's Meaning and Intentions," *The Philosophical Review* 78, no. 2 (1969): 147–77.

[397]Hoffmeyer and Stjernfelt, "The Great Chain of Semiosis." Hoffmeyer and Stjernfelt give the example of the bacterium *E. coli* swimming up a sugar gradient. Recognition of the surface shape of the sugar molecule serves the predicate function "—is sugar" and the spatiotemporal localization of that shape serves the subject function so that together they are interpreted in an energetic interpretant equivalent to the proposition "In this direction (S) there is sugar (P)." Due to their undifferentiated subject-predicate structure, such proto-propositions are often indicative and imperative, or descriptive and directive at the same time. See "pushme-pullyu representations" in Ruth Garett Millikan, "Styles of Rationality," in *Rationality in Animals*, ed. M. Nudds and S. Hurley (Oxford: Oxford University Press, 2006), 117–26. Cf. also Bateson's distinction between report and command aspects in any message, discussed in the section III.2.

[398]Hoffmeyer and Stjernfelt, "The Great Chain of Semiosis," p. 27.

implies that metasemiotic mediation constitutes a particular process whereby sign relations can be established and modified within interpersonal as well as intrapersonal communication. Metasemiotic mediation concerns chiefly, then, the manner how and the time-order within which sign relations come about and change—not their metaphysical status. If the proposition is true, one would expect all communicative interactions to share common semiotic structures and metasemiotic mediation to have an origin in social interaction.

## V.2 THE NATURAL/CONVENTIONAL DISTINCTION AND COMMUNICATIONAL SIGNS

Metasemiotic criteria such as the differentiation of the sign and the object apply only to the proper interpretation of a certain group of signs. Some signs function *only* when they are not only seen as meaningful but as differentiated from what they signify. A still life with fruits functions as a painting only when the viewer will not attempt to grab a painted fruit. Not coincidentally, the utterance or production of such signs also requires the same differentiation. Those signs which *have to* be generated and used in a metasemiotically mediated way broadly coincide with what are traditionally called *conventional* signs. Typical examples, besides linguistic signs, are maps, traffic lights, thermometers and the like. What is common to conventional signs in most general terms is that their significance depends on there being a rule of interpretation that is established with conscious semiotic intent. Not only one must know how to interpret words, pictures, traffic lights, maps or thermometers appropriately, in difference to interpreting cues pertaining to vocalizations, movement of cars, territories or changes in temperature, but also a conscious semiotic intent, i.e. an anticipation of the proper interpretant, is involved in the very establishment of their rule of interpretation. In other terms, in conventional signs utterance and interpretation typically are truly welded; that is, in order to utter them one needs to simultaneously interpret them. Thus, conventional signs become the paradigm or even, possibly, the only example of sign-hood if metasemiosis is posited as a condition of semiosis.

In Peirce's taxonomy conventional signs are legisigns, since any sign whose proper significance depends on there being a rule of utterance and interpretation is an instance of a legisign. As we have briefly discussed in the context of Peirce's taxonomy of signs, it is also possible to define a narrower meaning of legisign by adding the qualification that the rule is inherently semiotic; that is, it is there in order to signify. I proposed to call this narrowly defined sense *communicational* legisign. Conventional signs belong, then, to the sub-class of communicational legisigns. But what about the qualification of being uttered and interpreted in a metasemiotically mediated way, which I associated with conventionality? Articulated in different terms, the question concerns whether an inherently

semiotic rule is established *only* with conscious intent. The answer, I argue following Peirce, is negative. Although conventionality has been a central taxonomic criterion in scholastic semiotics, there is significant merit in regarding it as a mere descriptive attribute. Thus, conventional signs do not exhaust the class of legisigns, not even the narrowly defined group of communicational signs. How the rule of production and interpretation happens to be established is, for Peirce, by itself not a taxonomic criterion—as long as it does not effect a change in the logical structure of the sign. Peirce's ingenuity arguably lies in his formulation of strictly *logical* criteria for semiotic taxonomy. From the Peircean perspective, thus, all general communicational signs can be regarded as legisigns by virtue of being rules that constitutively govern the production and interpretation of their instances.

As Hoffmeyer and Stjernfelt also imply with the notion of holophrastic proto-propositions, we can arrive at a continuous conception of legisigns by positing metasemiotic awareness or knowledge as a further level of mediation in sign interpretation instead of a condition of sign interpretation *per se*. Short similarly argues that it is not consciousness and intentionality that are essential to the production and interpretation of legisigns, but a shared purpose that governs utterance and interpretation, regardless of whether this purpose is present to the consciousness or not.[399] It is therefore worthwhile to briefly investigate how legisigns can be produced and interpreted independently of metasemiotic capabilities in order to better understand what the significance of metasemiosis exactly consists in.

Not only communicational signs that are socially established, but phylogenetically and ontogenetically ritualized gestures,[400] species or genus specific expressions such as emotion expressions and various learned communicative behaviors can be seen as species of legisigns.[401] All successful communication requires legisigns, whether or not they are established and interpreted with conscious intent. To illustrate through a most counter-intuitive example, the stimulus features of the food-begging behavior of a newborn chick (such as the acoustic cues pertaining to the begging call, the color of the chick's mouth etc.) that elicit foraging and feeding response in its parent signify a need

[399]Short, "Life among the Legisigns" 18, no. 4 (1982): 285–310, p. 298. The term purpose obviously invites a vast and multifaceted discussion of telic directionality in nature that I cannot go into within the scope of this chapter. It suffices, for present purposes, to say that legisigns characteristically admit of a telic analysis.

[400]See e.g. Katja Liebal and Josep Call, "The Origins of Non-Human Primates ' Manual Gestures," *Philosophical Transactions of the Royal Society B: Biological Sciences* 367, no. 1585 (2012): 118–28; Simone Pika, Katja Liebal, and Michael Tomasello, "Gestural Communication in Young Gorillas (Gorilla Gorilla): Gestural Repertoire, Learning, and Use," *American Journal of Primatology* 60, no. 3 (July 14, 2003): 95–111.

[401]Cf. Zlatev, "The Semiotic Hierarchy: Life, Consciousness, Signs and Language," p. 184; Sonesson, "The Meaning of Meaning in Biology and Cognitive Science: A Semiotic Reconstruction," p. 203. In Sonesson's classification, on the other hand, the latter appear in *mediational semiosis*, which he distinguishes from sign based semiosis.

for nourishment to the parent through the connection between the sign (i.e., the begging call) the and the object (i.e., need for nourishment) existing in the corresponding instincts on both parts, which serve the functions of signifying and interpreting. The corresponding instincts specify the rule for the production and the interpretation of the sign. A begging call is different from a mere shout or cry, which are indexical sinsigns; it is definitely a type, the instances of which must fulfill the requirements specified by the rule. In more concrete terms, it is species-specific. Considering the ground of its replicas, it is an indexical legisign in that the sign and its object stand in a significant causal/spatiotemporal relation to which the interpreter's attention is directed through the rule: the chick's hunger determining its calling out, which the parent interprets as an indication of need for nourishment. It might be suggested that a begging call is a legisign only in the broad sense, thus not very different from symptoms of illness. It needs to be brought to attention, though, that on the utterer's side the call is produced not merely like a symptom is produced; i.e., as a sign that is potentially significant independently of interpretation. *How* the sign would be interpreted, and *that* it will be interpreted are somehow included in the very production of the sign. That is, it has a (albeit unconscious) *communicative purpose*. Therefore, a begging call is a communicational legisign. Moreover, a begging call for its interpreter has both indexical and iconic aspects: It draws attention to its individual utterer and identifies the needy infant of that particular species through iconic cues. Thus, it functions as an informational index or quasi-proposition; i.e., an indexical dicisign. A similar analysis can be applied even more evidently to the waggle dance of honey bees, first noted by Aristotle and later deciphered by Karl von Frisch.[402] Through the waggle dance, successful foragers inform other members of the colony about the distance and quality (through iconic features) as well as the direction (through indexical features) of nectar or water sources, or suitable nesting sites. The waggle dance thus can be clearly identified as a communicational dicisign.

What about symbols? While they are often regarded as a unique feature of human semiosis,[403] there is a plethora of examples of communicational signs in non-human animal communication, which lead some semioticians to argue that some non-conventional communicational signs should also be seen as symbols or manifesting a degree of symbolicity.[404] What would be then the criteria to identify non-conventional symbols? Within the Peircean framework (which most semioticians endorse in investigating natural signs) symbols and other legisigns are differentiated on the basis of their respective grounds, or relation to the dynamic

[402]Karl von Frisch, *The Dance Language and Orientation of Bees* (Cambridge, MA, US: Harvard University Press, 1967).

[403]Or even as the defining feature of the human being, e.g. the *animal symbolicum* of Ernst Cassirer.

[404]See e.g. Nöth, "The Criterion of Habit in Peirce's Definitions of the Symbol"; João Queiroz, "Dicent Symbols in Non-Human Semiotic Processes," *Biosemiotics* 5, no. 3 (2012): 319–29; Short, "Life among the Legisigns" 18, no. 4 (1982): 285–310.

object determining them. Short's criterion is helpful here. In the case of iconic and indexical legisigns, the law of interpretation refers the interpreter to iconic or indexical grounds; that is, to the qualitative, causal, spatiotemporal or mereological relations between the sign and object. In the case of symbols, the law itself is the ground.[405] Iconic legisigns require that their instances manifest some quality, indexical ones that they stand in a genuine (causal, spatiotemporal or mereological) relation to their objects, and symbols that their instances refer interpretants to the rule they instantiate. Short identifies the above mentioned example of the honey bee waggle dance, for instance, as being an indexical legisign so far as the steps of the dance indicate spatial directions, but as a symbolic legisign by virtue of the way in which they determine the other bees to go in the indicated directions. They mean what they mean *only* because they are interpreted properly in the purposeful behavior of the departing bees.[406]

A further case manifesting this central feature of symbolic signification could be the semiotically dense world of mating displays, which commonly feature certain postures, vocalizations, expressions or behaviors that have no other function than to create in the interpreter the impression that the displaying individual would be the right mating choice. In such cases, the connection between the gesture and the sexual desirability of the potential mate can be found on no other ground than the sexual interpretation of the gesture. A mating display does not indicate, although it will be interpreted *as if* it indicates, that the performing individual is of the desirable sort for reproductive purposes; this point becomes yet clearer when we consider that such displays can often be misleading.

Certain alarm calls, on the other hand, can be given as examples of non-conventional communicational signs that manifest some degree of semantic referentiality. African vervet monkey alarm calls have often been presented as a case of semantic communication by virtue of having categorical reference.[407] Four distinct types of calls have so far been identified, which are produced in reference to four different kinds of predators and interpreted in four qualitatively different kinds of behaviors. For instance, while the "leopard" call is responded by climbing into trees, the "eagle" call is responded by looking up in the sky. Besides showing flexibility with regards to content, they show some flexibility in their production and interpretation as well. Depending on the context, similar calls may elicit different responses or different calls may elicit the same response.[408] Recently,

[405]Short, "Life among the Legisigns", p. 295.

[406]Ibid., p. 298.

[407]See e.g. Robert M. Seyfarth, Dorothy L. Cheney, and Peter Marler, "Vervet Monkey Alarm Calls: Semantic Communication in a Free-Ranging Primate," *Animal Behaviour* 28, no. 4 (1980): 1070–94.

[408]Robert M. Seyfarth et al., "The Central Importance of Information in Studies of Animal Communication," *Animal Behaviour* 80, no. 1 (2010): 3–8.

indications of referential communication have been investigated in avian vocal communication as well.[409]

Human communication also features a wide range of foundational communicational signs that are neither strictly conventional and learned, nor natural and inherited. When we take into account the pragmatic richness of various emotion expressions, manual and bodily gestures that we share with other great apes, such as crying, frowning, reaching out one's palm, clapping or embracing,[410] we may more easily recognize the purposive, regulative processes governing their production and interpretation. The triadic signification structure of these and similar communicational signs come to the fore only as a historically mediated one, which obviously eludes analysis when we remain on the level of seemingly dyadic synchronic processes. Thus, semiotic habits established in phylogenetic time need not be regarded as being of a different ontological *kind*. Moreover, "many semiotic abilities involve the integration of both phylo- and ontogenetic aspects."[411] The so-called natural communicational signs both constitute the initial common ground upon which more complex forms of communication might develop, the child and the parent not being total strangers to semiotic mediators of each other, and never go out of use by virtue of their crucial role in giving context, pragmatic valence and depth to communication.

Emotion expressions present a suitable case to see the different paths through which communicational signs come about and take shape, as well as how their production and interpretation can admit of unlimited degrees of metasemiotic mediation. In line with the Darwin's influential account,[412] the term expression has traditionally been associated with a sense of mere reflex or reaction that can acquire semiotic value only in terms of indicating the presence of an emotion. However, emotion expressions are far from being mere *indexes* of psychological states in the way symptoms of illness are indexes of bodily states. Human facial expressions characteristically show a dramatically high degree of variation. For instance, just as we can unambiguously recognize sadness on the face of a newborn, we can also reliably read subtle culture specific displays of sadness, or can fall victim to deception or mockery. Probably the most charitable perspective on the semiotic depth of expressions was articulated by Roland Barthes, when he famously wrote:

> Perhaps "weeping" is too crude; perhaps we must not refer all tears to one and the same signification [...] Which is that "I" who has "tears in my eyes"? Which is that other self who, on a certain day was "on the verge of tears"? [...] If I have so many ways of crying, it may be because, when I cry, I always address myself to someone,

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[409]See Toshitaka N. Suzuki, "Semantic Communication in Birds : Evidence from Field Research over the Past Two Decades," *Ecological Research* 31, no. 3 (2016): 307–19.

[410]Verena Kersken et al., "A Gestural Repertoire of 1- to 2-Year-Old Human Children: In Search of the Ape Gestures," *Animal Cognition*, 2018.

[411]Hoffmeyer and Stjernfelt, "The Great Chain of Semiosis," p. 20.

[412]Charles Darwin, *The Expression of the Emotions in Man and Animals* (London: John Murray, 1872).

> and because the recipient of my tears is not always the same [...] but it can also be oneself: I make myself cry, in order to prove to myself that my grief is not an illusion: tears are signs, not expressions.[413]

For similar reasons, however, most expressions are already signs unlike what is implied by Barthes. Because whether they are differentiated and stereotyped through adaptation pressures, abbreviated through reciprocal shaping of expectations or formed through social convention, they are utterances addressed to a determinate interpretant. The difference in their genesis can be an indicator of the underlying cognitive mechanisms, but in all cases they are communicational legisigns; i.e., habits of social interaction. Even if an expression were completely innate and produced in a more or less automatic manner, its utterance would have a proper interpretant which permits one to attribute a social purpose.

The observation that the most basic human facial expressions of emotion such as joy, anger, sadness, fear or disgust show universality across cultures and even species suggests an evolutionary origin in line with Darwin's account.[414] A common perspective is that these expressions originally had non-communicative, physiological functions and were co-opted to serve communicative ones. To illustrate, the behavior of constricting face openings which commonly expresses disgust is thought to originally serve to reduce dangerous inhalations and later to be co-opted to warn others of dangerous actions or possibly even ideas.[415] Notwithstanding, a ubiquitous and uniform expression can serve quite sophisticated social motives, or can even bear no actual, indexical connection to the emotion it is taken to express—such as the ritual crying at the Sikh funeral ceremony Antam Sanskar. This is so because expressions of a phylogenetic origin are also subject to metasemiotic mediation and thereby can be both natural yet conventionalized to the utmost degree in their form and with regards to the norms of production and interpretation. Obviously, the innate semiotic habit cannot suffice in mediating the complex social interactions of humans and most primates, since it cannot manifest sensitivity to the typically highly variate and dynamic social contexts and to the subtle differences between particular addressees and audiences. In order to meet such social, situated demands, the innate semiotic habit needs to be subjected to other, higher-order habits regulating its actualization. These, on the other hand, have to be acquired in ontogeny.

In this regard we can invoke the account of Alan Fridlund, who argues that expressions do not function like indexes do, but are social mediators that co-evolve with their recipients (i.e., interpretants) and develop through the

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[413]Roland Barthes, *A Lover's Discourse: Fragments, trans. Richard Howard* (Middlesex: Penguin, 1990), p. 181-2.

[414]Paul Ekman and Wallace V. Friesen, "Constants across Cultures in the Face and Emotion," *Journal of Personality and Social Psychology* 17, no. 2 (1971): 124; Ekman, "Facial Expression and Emotion," *American Psychologist* 48, no. 4 (1993): 384.

[415]Azim F. Shariff and Jessica L. Tracy, "What Are Emotion Expressions For?," *Current Directions in Psychological Science* 20, no. 6 (December 1, 2011): 395–99.

internalization of social norms.[416] As we develop, the account goes, we acquire the capacity to liberate the expressions from the underlying emotions, which implies that we become increasingly capable of inhibiting, delaying or otherwise regulating their production. We further become able to pretend with them, or even use them as meta-signs to refer to concepts or names of emotions, for instance as done in a game of charades. Facial expressions come under top-down control to the degree that social norms can exert influence on individual cognition and behavior, which is to say that the development of metasemiotic mediation is directly related to the internalization of the patterns and norms of social interaction. Expressions begin to show context and audience sensitivity to the degree that interactions can be socially mediated within a shared yet ambivalent semiotic space. In time not only overt, complete actions but also states and attitudes can be addressed to the responses of others. For instance, a slight frown can signal disagreement instead of an impending confrontation and thereby allow the other to negotiate the interpersonal conflict.

To some extent, also the emotion expressions of non-human primates manifest such context and audience sensitivity: There is no unambiguously "angry" chimpanzee, since the expression can derive from a social dominance motive, serve the intention of deterring the other from an action, it can be produced as a bluff or as an indicator of potential aggressive behavior.[417] Moreover, the meaning of particular expressions may interact with those of other signs they are used in conjunction with—a quite common feature in human metacommunication. For example, a begging gesture (outstretched hand with palm up) can convey different kinds of requests depending on whether it is combined with an "angry" facial expression or with a "joyous" one. Thus, expressions can also be used as cues to frame messages conveyed by other signs. We can then reasonably suggest that metasemiotic mediation features and develops within a social semiotic space characterized by ambivalence, negotiation and change. Such a space is created in the first place by the interaction between already existing and emerging habits of social interaction.

These and many other cases suggest that various semiotic properties are instantiated across (even distant) species or at least have precursors. Sign processes (of differing degrees of complexity) are common to organisms in their capacity as meaning-making entities. The main differences between operations of the so-called natural communicational signs and that of the conventional ones boil down to differences in the processes by which the rules of utterance and interpretation can be established, modified and shared, and consequently to the nature of the

[416]Alan J. Fridlund, *Human Facial Expression: An Evolutionary View* (Academic Press, 2014).

[417]Anne Zeller, "Component Patterns in Gesture Formation in Macaca Sylvanus of Gibraltar," *Canadian Review of Physical Anthropology* 4, no. 2 (1985): 35–42; Anne Zeller, "The Inter-Play of Kinship Organisation and Facial Communication in the Macaques," in *Evolution and Ecology of Macaque Societies*, ed. J. E. Fa and Donald G. Lindurg (Cambridge: Cambridge University Press, 1996), 527–50.

proximate processes realizing the sign utterance and interpretation. As I discuss in the subsequent section, such rules can originate and be passed down in phylogenetic history, within social interactions, through social learning, or through the very operation of communicational signs within communicative interaction. Two different genetic paths, for instance evolutionary adaptation and iterated social interaction, can bring about two semiotically similar gestures, where the particular path would imply completely different organismic capabilities employed in the production and interpretation of the gestures. Inherently metasemiotic criteria such as conscious differentiation between the sign and the object, or the mental representation of an intentional object pertain to the domain of such proximate processes realizing semiosis, but not among the criteria for attribution of sign status or those of semiotic taxonomy. As Peirce kept on insisting,[418] these criteria should be stated in the more general logical terms, not in contingent and specific psychological terms. To put it differently, the definition and classification of semiosis should not be based on the proximate processes realizing semiosis in a group of sign users and contexts, since semiosis per se is not a topic in the philosophy of mind, or in psychology. More importantly, such an approach risks losing sight of a unified phenomenon of a scope much wider than that of linguistics, psychology or anthropology. The way in which human use of signs are similar to a wide range of other instantiations of semiosis is equally interesting and illuminating as the peculiarity of how some sign processes are realized in the human socio-cultural context.

The various paths through which rules of utterance and interpretation are established and modified, the genetic history of legisigns, can elucidate how communication and cognition can become entangled in a way that gradually opens up further semiotic possibilities for both, and cuts across the natural-conventional dichotomy. The notion of semiotic habit is illuminative in portraying this idea. Habits can be relatively fixed or flexible, can be determined by and determine other habits, and can pertain not only to organismic processes but also to intersubjective processes as well as social relations. If we regard communicational signs as being instantiations of semiotic habits, in the sense Peirce suggests, then we can conceive the genetic history of the sign as that of the semiotic habit. This history would clearly reflect in how plastic the semiotic habit is, how specific or general it is in determining its instantiations, its tendency to give rise to further possibilities for semiotic mediation, and its susceptibility to the influence of other psychological or social processes. The chief significance of metasemiotic mediation would then be found in creating, modifying and extending semiotic habits within both intersubjective and intrasubjective semiotic processes. Transformative and coordinative communication differ exactly in regard to the capacity of the former not only to rely on but also to establish and shape semiotic habits within social

[418]See e.g. CP 5.485.

interaction through initiating and sophisticating metasemiotic mediation, thereby welding the social and mental processes.

## V.3 GENESIS AND ACQUISITION OF SIGNS IN PHYLOGENY AND ONTOGENY

Classical ethologists discuss the evolution of communicational signs, following Konrad Lorenz, in terms of a process of ritualization.[419] Ritualization consists in that an action that takes place in a feeding, defense or locomotion context comes to be interpreted by the other members of the species to signify something about the state of the agent or the environment. Throughout phylogeny, these actions can be co-opted and modified to serve a communicative function. Under selection pressure, the ritualized gestures acquire a stereotyped form: they become repetitive and highly differentiated; i.e., exaggerated or abbreviated and characteristically incomplete as individual actions. Niko Tinbergen called such phylogenetically ritualized gestures *derived activities*;[420] that is, actions that originally served a different function but were modified to serve a communicative function, for instance when what was originally an aggressive pose or foraging behavior comes to signify fertility in the form of a courtship display.

Ritualization appears to be one of the central processes by which semiotic habits of communication can be established in phylogeny. Although the production and interpretation of phylogenetically ritualized gestures follow an inherited rule, this does not imply that such gestures are absolutely fixed and merely reactionary. Their utterance and interpretation demand at least appropriateness of the situation, and can show some diversity depending on the social or situational roles and positions of the utterers and the interpreters. It has been suggested that primate alarm calls satisfy some minimal semantic and pragmatic conditions of flexibility that they can be called intentional. Communicative gestures used in more interactive situations such as play and nursing are used in a still more flexible and controlled manner.[421] A phylogenetic origin in the case of great ape gestures, moreover, does not suggest that the gestures are not used intentionally or in a context-sensitive and other-sensitive manner.[422]

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[419]Konrad Lorenz, "Über Die Entstehung Auslösender 'Zeremonien,'" *Die Vogelwarte* 16 (1951): 9–13.

[420]Nikolaas Tinbergen, "Derived Activities; Their Causation, Biological Significance, Origin, and Emancipation during Evolution," *The Quarterly Review of Biology* 27, no. 1 (1952): 1–32.

[421]Joëlle Proust, "The Evolution of Primate Communication and Metacommunicaton," *Mind & Language* 31, no. 2 (2016): 177–203, p. 182.

[422]Emilie Genty et al., "Gestural Communication of the Gorilla (Gorilla Gorilla): Repertoire, Intentionality and Possible Origins," *Animal Cognition* 12, no. 3 (May 2009): 527–46.

In any case, if the gestures are of phylogenetic origin, one expects to find the same gestural repertoire in all members of the species. On the other hand, some species, especially among primates, have a wide repertoire of flexibly used gestures which are apparently not of phylogenetic but ontogenetic origin. Especially the widespread occurrence of idiosyncratic gestures across all species of great apes and the degree of variation in the individual gestural repertoire seems to be incompatible with a phylogenetic origin.[423]

Primate communicational signs can apparently also originate in social interaction and be acquired within an individual's lifetime. Researchers of child linguistic development and non-human primate communication propose an *ontogenetic* process of ritualization as a candidate for a common process of gesture formation.[424] Michael Tomasello and colleagues focus on the bodily movements of non-human primates and describe the process as one of progressive abbreviation of an instrumental behavior, where the interactants mutually shape each other's responses in iterated interactions through reciprocal anticipation until a point where an abbreviated version of the behavior is produced in anticipation of a habituated response. For instance, a juvenile chimpanzee initiates play (e.g., wrestling) by jumping on a peer and slapping on the head. Through iterated interactions, the recipient begins to anticipate the play initiation by observing the raised arm of the initiator before the slap occurs and responds appropriately only when this movement is produced. With time the initiator anticipates the anticipation of the recipient and a mere raised arm gesture becomes a communicative gesture produced intentionally, in order to initiate play.[425] Hubert Montagner describes ritualization in early infancy of humans in more communication-rich terms, as a process of differentiation of expressions, postures, touches, smells or vocalizations that acquire the status of signs through joint exploration of communicative possibilities.[426] Even in the absence of any mature sign-user, any two or more human infants typically engage in such explorations and eventually settle a manifold of ritualized communicational signs through attaching significance to and anticipating each other's movements and expressions.

Ritualization can be indicated as a process that can turn mere movements, postures or expressions produced without social intentions to signs for expressive

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[423]Simone Pika, Katja Liebal, and Michael Tomasello, "Gestural Communication in Young Gorillas (Gorilla Gorilla): Gestural Repertoire, Learning, and Use," *American Journal of Primatology* 60, no. 3 (July 14, 2003): 95–111; Katja Liebal and Josep Call, "The Origins of Non-Human Primates ' Manual Gestures," *Philosophical Transactions of the Royal Society B: Biological Sciences* 367, no. 1585 (2012): 118–28.

[424]Michael Tomasello et al., "The Development of Gestural Communication in Young Chimpanzees," *Journal of Human Evolution* 14, no. 2 (1985): 175–86.

[425]Niko Tinbergen, *The Study of Instinct* (Oxford University Press, 1951); Michael Tomasello and Josep Call, *Primate Cognition* (Oxford University Press, 1997), p. 300.

[426]Hubert Montagner, *L'enfant et la Communication: Comment des Gestes, des Attitudes, des Vocalizations Devièннent des Messages* (Paris: Stock, 1978).

communication in dyadic interaction (i.e., peer-peer, infant-caregiver) and to signs for referential communication in triadic interaction, which signify social intentions in relation to the environment.[427] A prime example of triadically used gestures is obviously pointing. A very similar trajectory has long been suggested for the appearance of pointing in development.[428] Infants' pointing gesture has been thought to originate in incomplete reaching/grasping movements or as a self-oriented gesture that supports own attention processes, which are interpreted by attentive others as being communicatively significant and responded accordingly. As the infant comes to understand the connection between the movement and the others' answering to his or her intention, the movement begins to occur less in order to enact something in the environment and more in order to influence others' actions in relation to the environment while gradually becoming differentiated and stabilized in form—in short it acquires a communicative significance.[429]

The phenomenon of ritualization in ontogeny indicates that the minimal "communication situation" described by Bateson can be satisfied in communicative interactions across many primate species. Anticipation of anticipation, as I illustrated above, implies the gradual establishment of a situation of perception of being perceived within the interactive situation, because in each subsequent interaction one has to register both own particular movement or expression and the response.

Ritualization of gestures within interaction can arguably provide a context for a metasemiotic dimension to appear through a differentiation of levels of communication. As I have previously touched upon, Bateson suggested on the basis of his observations of the playful interactions of monkeys that ritual could be a means of conveying two different, conflicting messages with a single gesture. The paradoxical meaning of the play situation hinges on differentiating between the sign (e.g., the bite) and its naturally associated object (e.g., hostile attitude) to a degree that the sign, in combination with other signs or contextual cues, can be made to represent another object (e.g., amical attitude) while at the same time retaining the close relation to the former. A most plausible candidate for a

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[427]Ana M. H. Carvalho and Maria Isabel Pedrosa, "Communication in Early Infancy: Some Reflections from an Evolutionary Perspective," in *Communication and Metacommunication in Human Development*, ed. Jaan Valsiner and Angela Uchoa Branco (Information Age Publishing, 2004), 83–105, p. 88-92.

[428]Lev Vygotsky, *Mind in Society: The Development of Higher Psychological Processes*, ed. Michael Cole et al. (Cambridge, Mass.: Harvard University Press, 1978). Original manuscripts c. 1930-1934.

[429]How infants acquire pointing remains still an under-researched question, yet there are studies which suggest imitative learning as an alternative or subsequent path. See Fabia Franco and George Butterworth, "Pointing and Social Awareness: Declaring and Requesting in the Second Year," *Journal of Child Language* 23, no. 2 (1996): 307–36. It has also been suggested that ritualized pointing differs from imitatively learned pointing in that the latter is understood and used as a mutually shared communicative gesture while the former can be produced in a self-oriented way, without understanding others' use of pointing. See Tomasello, *Constructing a Language* (Harvard university press, 2009), p.33.

metacommunicative sign that frames the bite is the primate "play face" morphologically rather similar to human smile, which, though probably evolved as an emotion expression common to a range of mammalians, comes in primates under some degree of voluntary control and is used as a communicational sign or meta-sign.[430] After Bateson, some clues into similar observations of play have been found among dogs and many other species.[431] In all cases, play seems to be a grey area where the sign is differentiated as a sign but can still treated be as if it is identical with its object.

From this perspective, we can underline a semiotic, if not necessarily cognitive, commonality in various forms of ritualization from the narrowly defined phylogenetic and ontogenetic ones to cultural or traditional ritualization. A ritualized sign involves an element of "convention" (to varying degrees) in the sense that it co-originates and evolves with its interpretant, but is clearly different from a conventional sign in that it preserves an internal (not merely historical) connection to the original action out of which it develops via displacement, abbreviation or differentiation. Moreover, it is not merely a conveyor of some meaning but urges or invites the interpreter to give an appropriate response, thus it has an inalienable performative status. In connection, although it is not a complete action taken by itself, it is something that has to be enacted.

On a more general level, ritualization can be conceived as a process that can introduce representation into communication as an efficient mediator, since a ritualized gesture is the representation of an action rather than being an action itself and its consequences are not in itself but in what it represents.[432] Piaget draws attention to a similar connection between ritualization and representation in the context of children's symbolic play. For Piaget, the ritualization of behavior constitutes the first step towards symbolic play and the internalization of thinking, because it introduces a differentiation between meaning and action.[433] Although Piaget's emphasis is on the *cognitive* differentiation between sign and meaning as the locomotive of this process, ritualization appears to be not primarily about conscious processing of representations (e.g., the attachment of a different meaning to an action) but transformation of action in a communicative context, so that (social) meaning comes to govern action instead of being merely dependent on it.

## V.4 SOCIAL LEARNING AND THE QUESTION OF CULTURE

[430]See also Suzanne Chevalier-Skolnikoff, "The Primate Play Face: A Possible Key to the Determinants and Evolution of Play," *Rice Institute Pamphlet-Rice University Studies* 60, no. 3 (1974).

[431]See e.g. Gordon M. Burghardt, *The Genesis of Animal Play: Testing the Limits*, A Bradford Book (MIT Press, 2005).

[432]Ana M. H. Carvalho and Maria Isabel Pedrosa, "Communication in Early Infancy," p. 90.

[433]Piaget, *La Formation Du Symbole Chez l'enfant: Imitation, Jeu et Rêve, Image et Représentation*.

Ontogenetic ritualization, in contrast to phylogenetic ritualization, can bring about a great variety in the individual repertoire of communicational signs and also lead to idiosyncratic signs between few individuals. While it accounts for the origin of some novel and flexibly used communicational signs, it does not indicate a process whereby established signs are passed on to other individuals, groups or generations. If the ritualized sign is not transferred to other contexts, though, it can be very short-lived and moreover, one would not expect a lower variation in idiosyncratic gestures inside social groups than between groups. This brings us to an alternative way in which semiotic habits in general, and communicational signs in particular, can be acquired in ontogeny; namely, social learning through imitation and observation.

Social learning is often defined in the literature operationally as "learning that is influenced by observation of, or interaction with, another animal or its products."[434] Although there is considerable variation among social learning processes, two main scenarios cover the significant differences in their contexts. One can either learn by imitating a sign that is directed at oneself or by observing others in interaction and imitate the sign or signs they are using without participating in the interaction. The latter is also called third-person imitation.[435] Social learning can also be coupled with active teaching on the part of the imitated party, which in turn can range from mere demonstration to monitoring the performance of the learner and adjusting the task accordingly. Both second-person and third-person imitation are central to and characteristic of human semiotic development, but it is a matter of dispute the extent to which social learning occurs among other primate species.

The signs acquired via social learning would be already fully formed. Consequently, one can expect uniformity of idiosyncratic signs within the group and possibly their transmission across generations. Thus, the question of social learning is directly related to that of culture. Obviously the evolutionary and ethological perspective on culture, unlike the anthropological one, has tended towards having a broader conception of culture. We can even say that it is now almost a matter of consensus among ethologists and even psychologists that culture is not a monolithic phenomenon. Nonetheless, the field of research on primate social cognition and communication is generally divided along the line of emphasizing continuities or differences with respect to human social cognition, in a way that recapitulates the ongoing debate on non-human animal culture within the research field.[436]

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[434]Cecilia M. Heyes, "Social Learning in Animals: Categories and Mechanisms," *Biological Reviews* 69, no. 2 (1994): 207–31, p. 207.

[435]Liebal and Call, "The Origins of Non-Human Primates ' Manual Gestures," p.123.

[436]For a general overview of the decades-long debate on non-human cultures where both ends are represented, see Kevin N. Laland and Bennett G. Galef, *The Question of Animal Culture* (Harvard University Press, 2009).

It must be noted that the majority of studies of cultural transmission in non-human primates focus on tool use and foraging techniques, in other words on material culture and relatively few on the origination and dissemination of habits, conventions and communicational signs.[437] Among these, comparative studies on imitative social learning and cultural transmission in human children and great apes have a century-old history, which was until the last few decades dominated by the view that great apes imitate and have cultures, at least in the minimal sense of social transmission of information or semiotic habits. Several later studies challenged this consensus and argued instead that children are true imitators while other primates, if not raised in human environments, are "emulators;" that is, they do not reproduce others' actions but learn about the aspects of the environment and tools (i.e., affordances) through attending to the end results of others' actions—a sophisticated problem solving behavior which is nonetheless not properly social and cultural.[438] Within the same research line, it has been proposed in terms of a "cultural intelligence" hypothesis that humans have a species-specific set of social skills. The cultural intelligence hypothesis states that humans, though they can be equaled by other great apes in terms of their skills in solving physical problems, are unmatched among primates with regards to their cognitive skills in the social domain.[439] Some carry this hypothesis further by suggesting that human cultural intelligence, through bringing about unique possibilities for social learning and teaching, transforms their skills for instrumental reasoning as well, hence the latter is not continuous with the skills of our primate relatives in the physical domain.[440]

On the other hand, some general methodological criticisms have been raised by the other front against comparative empirical studies such as the one that led to the formulation of the cultural intelligence hypothesis. Frans de Waal and colleagues argue that these laboratory studies risk having weak ecological validity because they place non-human participants at a disadvantage in ways that are crucial in the social domain while possibly not so to the same extent in the physical domain.[441] Most importantly, human children are being tested by their conspecifics in a familiar and secure environment, they argue, while other participants lack both. Moreover, although studies "in the wild" do not provide the same degree of control over variables, they at least meet a serious concern:

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[437]For a brief review, see Kristin E. Bonnie et al., "Spread of Arbitrary Conventions among Chimpanzees: A Controlled Experiment," *Proceedings of the Royal Society B: Biological Sciences* 274, no. 1608 (2006): 367–72.

[438]See e.g. Tomasello, "Do Apes Ape," *Social Learning in Animals: The Roots of Culture*, 1996, 319–46; Tomasello and Call, *Primate Cognition*.

[439]Esther Herrmann et al., "Humans Have Evolved Specialized Skills of Social Cognition: The Cultural Intelligence Hypothesis," *Science* 317, no. 5843 (September 7, 2007): 1360-1366.

[440]Henrike Moll, "The Transformative Cultural Intelligence Hypothesis: Evidence from Young Children's Problem-Solving," *Review of Philosophy and Psychology* 9, no. 1 (2018): 161–75.

[441]Frans B. M. de Waal et al., "Comparing Social Skills of Children and Apes," *Science* 319, no. 5863 (February 1, 2008): 569.

Social capacities, skills or habits are embedded in a social milieu with its particular characteristics. It is highly plausible that social cognitive skills in particular would be in resonance with the specific features of the social organization and how it exploits the features of the environment. What this implies in the research context is that the focal as well as contextual stimuli featured in the study should be representative of those pertaining to the original social context, in short they should be *meaningful*. What kind of difference such meaningfulness or meaninglessness might bring about in task performance has already been widely demonstrated in the context of human reasoning by evolutionary psychologists since the 90s.[442]

New research suggests that the proposed dichotomy between imitation and emulation is not a very faithful representation of the manifold of social learning propensities humans and other apes both possess and use relative to specific contexts; accounting for the differences demands at least a much subtler approach to the varieties of social learning.[443] Moreover, in the last decades there has been an accumulation of empirical evidence testifying to the existence of imitation and traditional behavior in numerous species including "unlikely" species such as birds and fish.[444]

The debate on social learning in the context of cultural habits and communicational signs, although narrower in terms of the scope of the extant literature, is carried on along similar lines and is of utmost significance by virtue of being linked to the question of the origins of cultural customs and language.[445] Representative of the side emphasizing differences, Tomasello and colleagues argue that imitative learning (and correspondingly, teaching) plays a very limited role in the origination of non-human primate gestures unlike in that of humans'.[446] Ontogenetic ritualization through gradual abbreviation of intention movements is their proposal of a process that can account for the flexibility and inter-individual variety of communicational signs without implying complex social cognition.

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[442]See e.g. Leda Cosmides and John Tooby, "Cognitive Adaptations for Social Exchange," in *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, ed. Jerome H. Barkow, Leda Cosmides, and John Tooby (Oxford University Press, USA, 1995).

[443]See e.g. Andrew Whiten et al., "Emulation, Imitation, over-Imitation and the Scope of Culture for Child and Chimpanzee," *Philosophical Transactions of the Royal Society B: Biological Sciences* 364 (2009): 2417–28, p. 2417.

[444]See e.g. Thomas R. Zentall, "Action Imitation in Birds," *Animal Learning & Behavior* 32, no. 1 (2004): 15–23; Culum Brown and Kevin N. Laland, "Social Learning in Fishes: A Review," *Fish and Fisheries* 4, no. 3 (September 1, 2003): 280–88.

[445]Among gestures that are potentially culturally transmitted are, for example, "leaf clipping" and "grooming hand clasp" observed in some chimpanzee communities but not in others, which also show variation in form as well as function and context of use. See William C. McGrew and Caroline E. G. Tutin, "Evidence for a Social Custom in Wild Chimpanzees?," *Man*, 1978, 234–51; Toshisada Nishida, "The Leaf-Clipping Display: A Newly-Discovered Expressive Gesture in Wild Chimpanzees," *Journal of Human Evolution* 9, no. 2 (1980): 117–28.

[446]It has to be noted that it is among mother-raised non-human primates that imitative learning has been rarely documented, while it has already been widely observed that those raised in human environments do imitatively learn gestures as well as sign systems.

They maintain that, in difference to ontogenetic ritualization, social learning and teaching makes use of characteristically human capacities for social cognition. Ritualization, like emulative learning, does not require the understanding of others as intentional agents and of their behavior in terms of a differentiation between goals and means. Although great apes learn and use sophisticated gestures intentionally, their communication is considered to be mostly characterized by instrumentality and individual intentionality, whereas human communication is fundamentally cooperative and exploits shared intentionality.[447]

The clearest evidence of social transmission of communicational signs through imitation would be group-specific gestures employed in the natural social context. Although such gestures have been documented in captive environments, they seem to be a rare phenomenon in the natural context. More importantly, there are studies suggesting that the gestural repertoire of great apes show commonality more among age groups then between mothers and infants.[448] If social transmission through imitation played a central role in gestural acquisition, this would be reflected in mother-infant dyads, as it is the case with human infants. These and similar results seem to lend support to Tomasello's thesis that not imitative learning but some other process such as his narrowly defined version of ontogenetic ritualization is responsible for the gestural acquisition of non-human great apes and that imitation might be a path traversed almost exclusively by humans.[449] A major upshot of the ontogenetic ritualization hypothesis is that it attributes the origins of non-human primate gestures to non-communicative behaviors, in line with the evolutionary version. Its implication, then, is that only humans generate and shape communicational signs within the context of *communicative* interaction.

Tomasello's research program is situated within a broader theory of cooperative social interaction as an evolutionary condition of peculiarly human cognitive capabilities.[450] Tendency and capacity towards developing shared intentionality, he argues, is a product of human phylogenetic history, which is characterized by cooperative action. In alluding to Searle's notions of "collective intentionality" and "institutional facts,"[451] he argues for the fundamental role of shared intentionality in humans' peculiar aptitude for referential and representational communication, social learning and teaching, and for

[447]For an empirical study on tendency to cooperate across species, see e.g. Felix Warneken, Frances Chen, and Michael Tomasello, "Cooperative Activities in Young Children and Chimpanzees," *Child Development* 77, no. 3 (2006): 640–63. For Tomasello's theoretical account of the uniquely human capacities for social cognition, see Tomasello, *A Natural History of Human Thinking* (Harvard University Press, 2014).

[448]Christel Schneider, Josep Call, and Katja Liebal, "What Role Do Mothers Play in the Gestural Acquisition of Bonobos (Pan Paniscus) and Chimpanzees (Pan Troglodytes)?," *International Journal of Primatology* 33, no. 1 (February 2012): 246–62.

[449]Tomasello and Call, *Primate Cognition*.

[450]Tomasello, *Why We Cooperate* (MIT press, 2009).

[451]John R. Searle, *The Construction of Social Reality* (Free Press, 1997).

constructing cultural niches with its customs and institutions through symbolic activity. His thesis, unlike that of Searle, on the other hand, has a clear adaptationist framework. The social-cognitive skills he attributes exclusively to humans are considered to be the manifestation of an evolved cooperative motivation: a unique adaptation for culture. Referential and representational communication, the argument goes, is not within the purview of non-human primate cognition, even when they are trained in sign use or reared in human environments, since they lack the fundamental prerequisite capacities for shared intentionality. The pointing gesture, for instance, when used by captive or human raised primates, is supposed to be at most a voluntarily produced instrumental gesture and not truly intersubjective: if primates point to others or respond to pointing, they do so without an understanding of communicative intentions and without sharing mental states in a collaborative framework.[452]

Naturally, this position is not free from contestation, both empirically and theoretically. David Leavens and Timothy Racine maintain on empirical grounds that neither pointing nor joint attention in general is unique to humans and question the legitimacy of introducing fundamental categorical differences between observationally same phenomena.[453] Various components of joint attention have been documented among wild or captive great apes. One of these is the use of manual gestures to manipulate the behavior of others, as exemplified in infant gestures to initiate nursing or play, or request gestures such as begging with open palms.[454] In particular the latter kind of gestures have also been viewed as having a *protoimperative* communicative function, using the term introduced by Elizabeth Bates and colleagues in reference to nonverbal communication of human infants on the basis of Austin's Speech Act Theory.[455]

Further, great apes generally *respond* to joint attention through following others' gaze,[456] and all language-trained or human raised apes follow deictic gestures, including pointing. Although pointing among conspecifics in the wild has so far been observed rather rarely, among captive chimpanzees pointing appears

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[452]Tomasello Michael, "Why Don't Apes Point?," in *Roots of Human Sociality: Culture, Cognition and Interaction. Oxford & New York: Berg*, ed. N. J. Enfield and Stephen C. Levinson, 2006, 506–24.

[453]Timothy P. Racine, "Cognitivism, Adaptationism and Pointing," *Developments in Primate Gesture Research* 6 (2012): 165–80; David Leavens and Timothy P. Racine, "Joint Attention in Apes and Humans: Are Humans Unique?," *Journal of Consciousness Studies* 16, no. 6–7 (2009): 240–67.

[454]See e.g. Kim A. Bard, "Intentional Behavior and Intentional Communication in Young Free-ranging Orangutans," *Child Development* 63, no. 5 (1992): 1186–97; Jane Goodall, *The Chimpanzees of Gombe: Patterns of Behavior* (Cambridge, Mass.: Belknap Press, 1986); Frans X. Plooij, "Some Basic Traits of Language in Wild Chimpanzees?," in *Action, Gesture and Symbol: The Emergence of Language*, ed. Andrew Lock (Academic Press, 1978).

[455]Elizabeth Bates, Luigia Camaioni, and Virginia Volterra, "The Acquisition of Performatives Prior to Speech," *Merrill-Palmer Quarterly* 21, no. 3 (1975): 205–26.

[456]Reviewed in David A. Leavens, William D. Hopkins, and Kim A. Bard, "The Heterochronic Origins of Explicit Reference," in *The Shared Mind: Perspectives on Intersubjectivity*, ed. Jordan Zlatev et al. (Amsterdam: Benjamins, 2008).

also spontaneously, without explicit training, and shows dramatic differences in its production and interpretation depending on the rearing environment.[457]

Great apes also *initiate* joint attention by showing or giving objects. Frans Plooij, beginning with his studies on the development of communication between infant and mother chimpanzees during the 70s in Tanzania, has widely documented examples of what he interpreted as *protodeclarative* communication, such as the behavior of spontaneous leaf-grooming or running with an object to obtain the attention of others.[458] Observation of how such apparently protodeclarative behaviors take shape in early communicative interactions of chimpanzee infants and mothers contributed to the formulation of the social negotiation hypothesis of gesture acquisition, which draws attention to the social interactive context of gestural acquisition and thus brings the focus on the pragmatics of primate communication. It proposes that great ape gestures are learned and shaped within social interaction and show sensitivity towards context, relationship patterns and function. Social behaviors can have not only an *illocutionary* force, such as expressing joy or want, but also an intended *perlocutionary* force: they can be used to cheer up, persuade or intimidate. Thus, not only ritualization, but also social negotiation needs to be acknowledged as a chief source of gesture differentiation and acquisition in non-human primates.[459]

Non-verbal deixis, directing another's attention to a specific location, is another feature of initiating joint attention. Most apes indicate the body parts that they desire to be touched, groomed or examined by touching, directive scratching or other self-directed gestures.[460] As Plooij has widely reported, they often use objects to attract or redirect the attention of their social partners. The most disputed component of joint attention, on the other hand, is protodeclarative pointing, which for some is paradigmatic of a genuine capacity for intersubjective understanding and a precursor to language. Protodeclarative pointing is often

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[457]David A. Leavens, William D. Hopkins, and Kim A. Bard, "Understanding the Point of Chimpanzee Pointing: Epigenesis and Ecological Validity," *Current Directions in Psychological Science* 14, no. 4 (August 2005): 185–89; David A. Leavens and Kim A. Bard, "Environmental Influences on Joint Attention in Great Apes: Implications for Human Cognition," *Journal of Cognitive Education and Psychology* 10, no. 1 (2011): 9–31.

[458]Frans X. Plooij, "Some Basic Traits of Language in Wild Chimpanzees?"; Frans X. Plooij, "How Wild Chimpanzee Babies Trigger the Onset of Mother-Infant Play—and What the Mother Makes of It," in *Before Speech: The Beginning of Interpersonal Communication*, ed. Margaret Bullowa (Cambridge: Cambridge University Press, 1979).

[459]Simone Pika and Marlen Fröhlich, "Gestural Acquisition in Great Apes : The Social Negotiation Hypothesis," *Animal Cognition*, no. 0123456789 (2018). See also Marlen Fröhlich, Roman M Wittig, and Simone Pika, "Should I Stay or Should I Go? Initiation of Joint Travel in Mother--Infant Dyads of Two Chimpanzee Communities in the Wild," *Animal Cognition* 19, no. 3 (May 2016): 483–500. Tomasello maintains, on the other hand, that *negotiation of meaning* is a characteristic of human communication from early infancy on. See Tomasello, "Why Don't Apes Point?", p. 378.

[460]Simone Pika and John Mitani, "Referential Gestural Communication in Wild Chimpanzees (Pan Troglodytes)," *Current Biology* 16, no. 6 (2006): R191–92; Joanne E Tanner, Francine G Patterson, and Richard W Byrne, "The Development of Spontaneous Gestures in Zoo-Living Gorillas and Sign-Taught Gorillas: From Action and Location to Object Representation," *Journal of Developmental Processes* 1 (2006): 69–102.

understood as pointing to share an experience, a state of apprehension, with a communicative partner for its own sake, hence a communicative behavior addressed to a partner in his or her capacity to entertain mental states, not in that of being instrumental in relation to a target in the environment.[461] Pointing for others with no apparent instrumental motivation is relatively rare among wild apes, but not undocumented.[462] On the other hand, there are systematic studies reporting protodeclarative, informative pointing of language-trained apes in response to questions regarding the location of entities or to requests to match pictures with named objects.[463] Human infants in their second year, however, still tend to engage in such pointing much more often. Leavens and his colleagues hypothesize that the main reason behind this discrepancy might be that human infants who develop protodeclarative pointing are immersed in emotionally rich and rewarding social contexts of referential sign use, which is a social contingency that is lacking even in the case of language-trained apes.[464] If this is true, protodeclarative pointing might be viewed at best as the *interaction* of primate, ape or hominoid psychological adaptations with human sociocultural contexts, in particular with hominin-unique features of early infancy.[465]

Most of the commonly identified capacities that belong to the pragmatic dimension of triadic social cognition, initiating regulation of behavior (e.g., protoimperatives), responding to and initiating joint attention (e.g., gaze-following, protodeclaratives) seem to be present to differing degrees across great apes. Some aspects of joint attention, such as requesting through manual gestures, are observed in apes from all kinds of rearing environments, while some aspects, such as deictic manual gestures, seem to be largely restricted to captive populations with restricted mobility and access to the objects in the environment. The declarative mode of deixis, on the other hand, appears to be limited those that have been extensively exposed to human sociocultural contexts.[466] In general, the particular histories of social-semiotic development, such as the rearing

[461]See e.g. Michael Tomasello, Malinda Carpenter, and R Peter Hobson, "The Emergence of Social Cognition in Three Young Chimpanzees," *Monographs of the Society for Research in Child Development* 70, no. 1 (2005): 1–152. It is worth noting, however, that in Bates's original categorization protodeclaratives are not different from but a sub-class of protoimperatives, and the function of (re)directing attention can also be seen as an instrumental one.

[462]See e.g. Joaquim Veà and Jordi Sabater-Pi, "Spontaneous Pointing Behaviour in the Wild Pygmy Chimpanzee (Pan Paniscus)," *Folia Primatologica* 69, no. 5 (1998): 289–90.

[463]H. Lyn Miles, "The Cognitive Foundations for Reference in a Signing Orangutan," in *"Language" and Intelligence in Monkeys and Apes: Comparative Developmental Perspectives*, ed. Sue Taylor Parker and Kathleen Rita Gibson (Cambridge: Cambridge University Press, 1990); E. Sue Savage-Rumbaugh, Talbot J. Taylor, and Stuart Shanker, *Apes, Language, and the Human Mind* (Oxford University Press, 1998).

[464]Leavens et. al, "The Heterochronic Origins of Explicit Reference"; David A Leavens, Timothy P Racine, and William D Hopkins, "The Ontogeny and Phylogeny of Non-Verbal Deixis," in *The Prehistory of Language*, ed. Rudolf Botha and Chris Knight (Oxford University Press, 2009).

[465]Leavens et. al, "The Ontogeny and Phylogeny of Non-Verbal Deixis;" Leavens and Racine, "Joint Attention in Apes and Humans: Are Humans Unique?"

[466]Leavens and Racine, "Joint Attention in Apes and Humans: Are Humans Unique?".

environments, appear to be a crucial determinant of the variation among individual apes and this suggests at least as strong or even stronger influence of ontogenetic factors. Hence, instead of focusing our attention on the search for species-specific adaptations, we should also look at the contingencies of the sociocultural context of development as well as species-specific social learning, communicative interaction and cultural transmission practices.

The adaptationist perspective typically underestimates the potentially crucial role of particular "institutionalized" social interaction patterns, such as ongoing role reversal in human communicative interactions throughout development. The absence or relative weakness of certain social-cognitive skills in other primate species, if it were to be empirically ascertained at all, might as well be due to the absence of such practices that call for the development of these skills. The apparently peculiar semiotic activities of humans vis-à-vis other primates, especially great apes, such as verbal communication or artistic expression might reasonably be a reflection of certain peculiarities of social organization and, in connection, of the employment of semiotic means more than they are of differences in inborn capacities. Much subtler differences than implied by dichotomies such as individual vs shared intentionality or imitative vs emulative learning can yield significant qualitative differences depending on the semiotic demands of the developmental context. Thus, a neat and systematic account of cognitive discontinuity might not at all be attainable. Humans can hardly be said to "possess" social-cognitive skills outside the sociocultural context of development either, which is saturated with apprenticeship practices into using signs in a (firstly) reversible and (subsequently) reflexive way, such as in role reversal, perspective taking or narrative building. Human phylogeny plays at best a very indirect role in the development of higher-order social-cognitive skills in particular, such as representing other minds as having representational states, than assumed by the adaptationist perspective. I get into these aspects of human cognitive-semiotic development in more detail within the context of the following chapters.

As stated previously, a basic continuity of propensity for social interaction and cultural transmission across different primate species is generally acknowledged, while certain characteristics of human social cognition and communication are viewed by some as the outcome of leaps and by others as that of a gradual development. A categorical approach to cognition and communication through clear-cut dichotomies such as individual vs. social intentionality or imitation vs. emulation seems to be off the beaten path. What kind of differences in cultural transmission can be significant then, if we assume that humans are not the uniquely encultured animals? Although imitation, observation, emulation as well as teaching are being documented at an increasing pace among many other species, some subtle differences in social learning and teaching processes are thought to effectuate the undeniable difference between humans and other species in cumulative cultural transmission. Some converging evidence suggests that the

social learning of chimpanzees, for instance, exhibits relative "conservatism" in contrast to the "cumulative" social learning of humans.[467] When chimpanzees sufficiently "master" a skill, strategy or technique, it soon becomes habituated or crystallized and is not modified even when novel, more efficient methods are available for observation and the initial method is made ineffective. Human children, on the other hand, tend to update their methods if they observe a more efficient, albeit more challenging one. This openness towards cumulative social learning, in turn, is widely demanded and dramatically amplified by what we may call our cumulative social teaching. While various capacities for social learning may be more continuous than what most adaptationist views propose, the practice of active and explicit teaching, which goes beyond demonstration and incorporates attention to the other's degree of knowledge, interest and capacity to learn, is clearly a rather unique cultural factor that plays a crucial part in our acquisition of the signs of culture. Although social-cultural transmission is present across primate species, the dominant mode of transmission seems to be infant learning in non-human primates and active teaching in humans. This correlates not only with our more sophisticated metasemiotic capabilities, but also places more demands on them and contributes in turn constitutively to their development by scaffolding the learning process with the cognitive resources of more mature members and the culturally accumulated semiotic resources embodied in the methods as well as contents of teaching.

## V.5 NATURE AND FUNCTION OF METASEMIOTIC MEDIATION

While differences in the proximate processes of semiosis and their genetic histories are largely irrelevant from the perspective of semiotic taxonomy as I have previously argued, these are of central importance with regards to a wide range of semiotic phenomena from creation of novel meaning and recognition of alternative interpretations to negotiation of meaning, persuasion and grounding through giving and taking reasons. A particular class of legisigns, arguments, definitely involve inherently metasemiotic criteria in their very classification, since they have to be *represented as* symbols in their interpretants. Metasemiosis, accordingly, is a process with irreducibly psychological, social and cultural dimensions, which makes use of conscious-attentional, contextual and cultural resources in a constitutive sense.

As I have surveyed in the preceding sections, a great variety of our cognitive-semiotic abilities for social understanding and (non-verbal) communicative

[467]Whiten et al., "Emulation , Imitation , over-Imitation and the Scope of Culture for Child and Chimpanzee"; Christine Hrubesch, Signe Preuschoft, and Carel van Schaik, "Skill Mastery Inhibits Adoption of Observed Alternative Solutions among Chimpanzees (Pan Troglodytes)," *Animal Cognition* 12, no. 209 (September 2008).

interaction are also manifest in our great ape relatives. They do appear to perceive complex social events, participate in social exchanges in sophisticated ways and even can utter signs for manipulation and deceit. They are comparatively limited, however, in a group of higher-order, self-directed processes that are central to building and maintaining *interpersonal* relations and this limitation, I argue, hints at what metasemiotic mediation primarily implies for reflexive subjectivity.

We most characteristically diverge from our closest relatives in our pronounced aptitude to monitor and shape our own actions, to engage in self-cued and voluntary rehearsal of learned skills, to experiment on and model action-schemes, and to retrieve learned patterns of action and interaction in a voluntary and independent manner. Merlin Donald has famously argued that the modern human mind originates precisely in a transition from an environment oriented and reactive lifestyle that is still characteristic of great apes to an equally self-directed, active one involving reflexive and voluntary modelling, retrieval, rehearsal and experimentation.[468] These self-directed practices mark an "inward-turn," so to speak, that must precede the whole manifold of conscious symbolic behavior, including symbolic gestures as well as verbal communication, because engaging in such symbolic communicative interactions requires that one can actively construct communicative acts and retrieve them voluntarily. Donald hypothesizes that these abilities developed in a mimetic, primarily gestural context before they came to sustain symbolic communication. His account bases the abilities for retrieval, modelling, rehearsal and experimentation on bodily modelling through "action-metaphors," which came to sustain a deeply embodied kind of representational communication and thought. Further, by means of mimetic modelling, phylogenetically ritualized expressions and movements can also become signs that are recognized and employed as such, and thereby can be further refined in communicative interaction. Mimetic, bodily modelling is still a fundamental semiotic domain, since human communication extensively makes use of non-verbal channels. We employ a wide range of iconic and indexical as well as symbolic gestures and expressions that support and concretize semantic meaning or serve as embodied action-metaphors. It is ultimately a matter of speculation, however, whether linguistic communication is a continuation of mimetic communication or a different, parallel development. We can at least reasonably argue that using two different and autonomous systems of communication in tandem provides a very rich and efficient means for conveying metacommunicative messages, for instance by contextualizing semantic meaning through facial expressions and manual gestures. In any case, what is central to the transition from environment-oriented semiosis to equally self-oriented semiosis is the practice of using signs to regulate not only others' but also one's *own* actions: as memory cues, models of action or environment and as media of representation.

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[468]Merlin Donald, *Origins of the Modern Mind: Three Stages in the Evolution of Culture and Cognition* (Harvard University Press, 1991).

Such self-directed practices become possible only when we use signs in their capacity as signs, thus not only as implicit mediators facilitating other ends.

In what then does metasemiosis consists and what does it imply in regard to reflexive subjectivity? Metasemiosis is second or higher order, self-reflexive semiosis. As semiosis is, in a sufficiently broad sense, the mediation of the relation between an agent and its environment through signs, it is intrinsic to the interrelation of perception, affectivity, cognition, motor behavior as much as it is to communication. Metasemiosis denotes, accordingly, the semiotic mediation of first-order semiotic processes. In a narrower sense, second-order semiotic processes involve representation of representation. This feature is common to all typically recursive, self-referential cognitive and communicative processes: Metasemiosis is inherent to discursive thought, metacognition, formation of second-order beliefs and desires, metacommunication and under it to relational and metalinguistic processes.

An important common feature of all these second-order, metasemiotically mediated processes is their regulatory function. Discursive thought involves the monitoring, control and modification of thought processes via signs. Metacognition regulates individual cognition and behavior. Second-order beliefs and desires regulate the personal and interpersonal attitudes. Metacommunication regulates interpersonal relationships, shared meanings, common practices and information exchange. Hence, metasemiosis is the condition *not* of meaningful engagement with the environment and others, coordination of actions in a group or information processing, but of cumulative semiotic growth, communicative establishment and modification of semiotic habits, interpersonal creation and negotiation of meaning, indirect cultural transmission through cultural artifacts, and of self-reflection and self-control.

In semiotic terms metasemiosis entails, as touched upon above, a differentiation between the sign, its object and its interpretant. This implies that the object and the interpretant can themselves also become semiotic entities, or simply *signs*. In other terms, the representation of the sign as such enables that that not only the sign, but all three elements of semiosis can be of the category of thirdness. Representation of various aspects of semiosis as semiotic entities has obviously quite important implications. For instance, in first-order semiosis we can hardly speak of a differentiation of the immediate and dynamical objects, such as that of a percept and its external source or the explicit meaning of a message and the utterer's original or implicit intention. In a similar vein, the dynamic interpretant is differentiated from the immediate or the final interpretant only through metasemiotic mediation. By virtue of making such a differentiation, a semiotic agent can compare what is actually understood as the meaning of a sign with what would generally be understood, or can potentially be understood by others or in the future. Thus, although signs can successfully function in principle even in an absolutely transparent manner, awareness of the sign as a sign is crucial

for semiotic development.[469] In order to be reflected on, evaluated or possibly modified, one's singular interpretations or general habits need to be represented as interpretants; i.e., become themselves signs addressed to further interpretants.

The appearance of transformative communication marks the emergence of a metasemiotic dimension through which communicative actions become capable of referring to themselves and other communicative actions as well as to the communicative context. Thereby communication comes to serve another, novel purpose than direct coordination of action: the creation and modification of meaning structures within social interaction and hence the construction and negotiation of shared meaning, influencing others' actions through appealing to their interpretation processes, and ultimately effecting change in own action in the same way as in others' through internalized, intrapersonal communication. The latter assumes a truly symbolic form in discursive thought as inner dialogue, yet its origins can already be recognized in the active use of external, material cues as scaffolds for own action and cognition, for instance in placing a marking in order to recognize a particular location later.

The stronger thesis I propose in this connection is that not only metasemiosis and transformative communication are correlates, but also metasemiosis depends on transformative communication; that is, on the availability of a mode of communication that serves intersubjective ends not directly related to information transfer or direct coordination of action through mostly transparent signs. In terms of its genesis, metasemiosis is primarily an emergent dimension of communication and subsequently (i.e. in a derived manner) an emergent order of mediation pertaining to individual processes. Moreover, it is not an all-or-none phenomenon but comes in degrees, since it is possible to trace the origins of metasemiosis in ritualization, play, pretense, or social negotiation. The appearance of public, material signs and sign systems such as language plays, on the other hand, clearly a pivotal role in facilitating the intersubjective modification of semiotic habits.

From a broader perspective, the differences in the human ways of forming and extending semiotic habits is closely related to the peculiar degree to which we *externalize* individual semiotic processes into public cultural artifacts, for instance through speech and writing, and *internalize* patterns and elements of social interaction into mental processes, for instance through discursive reasoning, self-instruction or perspective-taking. It is reasonable to think that human minds accomplish these overwhelmingly complex feats not solely by virtue of a unique cognitive architecture or exclusive set of skills but through being extended over and scaffolded by a vast palette of cultural artifacts from tools to words, maps and diagrams, and a firmly knit network of social interactions.

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[469]Bergman, *Peirce's Philosophy of Communication: The Rhetorical Underpinnings of the Theory of Signs*, p. 135.

The "extended" and "distributed" cognition hypotheses, which are being developed increasingly in tandem, point in this direction.[470] The central idea uniting various arguments for extended and distributed cognition is that cognitive processes are embedded in their social and cultural (including technical) environments, and cognitive agents characteristically integrate or couple their organismic cognitive operations with those of other individuals and with environmental resources like cultural and technological artifacts. The key to the emergence of higher-order representational processes then can be found in how the developing human mind is scaffolded by the social environment so that it extends to material signs and other minds.

In more concrete terms, higher-order cognitive processes are functionally and ontogenetically embedded in the social need for perspective-taking, giving and taking reasons for actions, negotiation of meaning, cooperative interaction, and most importantly opening one's perception, emotion and thought processes to the guidance, evaluation, understanding, confirmation or critique of the others.[471] Moreover, this interplay of externalization and internalization is embedded within a collective activity of cultural niche construction, from rituals to artifacts and institutions, which is, though seemingly not exclusive to our species, equally peculiar in regard to the degree of its ubiquitousness and centrality in human form of life.[472] Tomasello also emphasizes in resounding terms how the human child is immersed in a world of sociocultural artifacts and practices: "human children grow up in the midst of the accumulated wisdom of their social group, as embodied in its material artifacts, symbolic artifacts, and conventional social practices, and children [...] appropriate this wisdom as embodied in these forms."[473] The human, in its "person" aspect, is a collective enterprise.

How does transformative communication then operate and how does it contribute to the development of individual processes of metasemiotic mediation? This last question of this chapter addresses the nature of meaning structures or semiotic habits, and the processes by which they are externalized and internalized.

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[470]See Andy Clark and David Chalmers, "The Extended Mind," *Analysis* 58, no. 1 (1998): 7–19; Andy Clark, *Being There: Putting Brain, Body, and World Together Again* (MIT Press, 1996); Edwin Hutchins, *Cognition in the Wild,* (MIT Press, 1995).

[471]This idea finds resonance in Petrilli's remark that the characteristic feature of human sign processes is that they are "endowed with a capacity for opening to the other, for creativity and critical interpretation, for continuous verification and revision." She concludes from this that "the propensity for questioning interpretations and habits, for interrogating certainties and beliefs is in the nature of the human sign." Petrilli, *The Self as a Sign, the World, and the Other: Living Semiotics,* p. 4.

[472]See John Odling-Smee and Kevin N. Laland, "Cultural Niche Construction: Evolution's Cradle of Language," in *The Prehistory of Language* (Oxford University Press, 2009), 99–121.

[473]Michael Tomasello, "The Human Adaptation for Culture," *Annual Review of Anthropology* 28, no. 1 (1999): 509–29, p. 512-3.

## V.6 MEANING STRUCTURES AS SEMIOTIC SCAFFOLDS

The scaffolding metaphor originated in developmental and educational psychology. In its traditional context the metaphor is widely employed to describe temporary frameworks of interpersonal assistance that support children's learning processes in a particular area to the point where they can exercise the required skills autonomously. Scaffolding is theoretically based on the notion of potential capabilities, which are not manifest in actual individual performance but can mature with relative ease through structured guidance and collaboration in tasks that slightly exceed the child's current capabilities. Scaffolding thus is conceived as an interpersonal process that bridges the gap between the child's actual cognitive development and potential development, which Vygotsky famously designated as "the zone of proximal development."[474] Jerome Bruner, who coined the term scaffolding in reference to Vygotsky's notion, originally described it in terms of "the steps taken to reduce the degrees of freedom in carrying out some task so that the child can concentrate on the difficult skill she is in the process of acquiring."[475] A crude analogy to scaffolded cognitive development can be found in how infants learn to walk, where parents typically support bipedal posture and constrain motor movement in a way that allows the infant to realize only the required motor coordination without being hindered by environmental factors or balance and alignment problems. In the context of cognitive development scaffolding typically involves intersubjective communicative processes such as guidance through questions, articulation of options, indication of steps and goals, which operate as temporary external supports.

The sociocultural research program in psychology inaugurated by Vygotsky and his colleagues also focused on another central aspect of scaffolding from the perspective of internalization and externalization. These notions foreshadow the future extensions of the scaffolding metaphor to include permanent as well as material structures in the contemporary theories of extended mind and human niche construction I have just touched upon, as well as the sense of entrenched semiotic structures in Hoffmeyer's biosemiotic conception of scaffolding.[476]

In this connection, the gist of the Vygotskian perspective on cognitive development is that higher cognitive functions originate in social interactions with more mature members of a culture and develop through the internalization, that is, internal reconstruction of intersubjectively realized processes as mental

[474]Lev Vygotsky, *Thought and Language.*, ed. Alex Kozulin (MIT Press, 1986).

[475]Jerome S. Bruner, "The Role of Dialogue in Language Learning," in *The Child's Conception of Language*, ed. A. Sinclair, R. J. Jarvella, and W. J. Levelt (Berlin: Springer Verlag, 1978), p. 19.

[476]See also Paul Cobley and Frederik Stjernfelt, "Scaffolding Development and the Human Condition," *Biosemiotics* 8, no. 2 (2015): 291–304.

operations.[477] We can understand internalization more precisely as a reconstruction of an operation that is external to the biological system but internal to the extended cognitive system as one that is internal to the developing biological system. Any higher function, thus,

> appears twice, on two levels. First, on the social, and later on the psychological level; first, between people as an interpsychological category, and then inside the child, as an intrapsychological category.[478]

Metacognition, or cognition about cognition,[479] is a paradigmatic example of what Vygotsky calls higher cognitive functions. Higher-order cognitive functions serve chiefly to monitor, regulate, modify or to exert control on phases and aspects of action, broadly construed. The distinguishing mark of the Vygotskian genetic perspective on higher-order cognition, which is most illuminative for our purposes, is his emphasis on its inherently dialogical character. As I address in more detail in the third part, this internalized communicative structure of higher-order cognition is most clearly manifest in the early phases of its development as children engage often in private speech or self-talk, and becomes less and less ascertainable as self-directed communicative behavior is transformed into a form of verbal thinking.[480]

While Vygotsky focused chiefly on the emergence of higher-order cognition through internalization, subsequent research in the sociocultural tradition emphasized more explicitly how mental processes are externalized into the associated environment in the form of cultural artifacts, and thereby transform it into a cultural world.[481] From this broader perspective that incorporates both movements, the ontogenetic transition of functions from the category of interpsychological to that of intrapsychological appears to be marked by the acquisition of the capacity to use cultural artifacts as semiotic mediators.[482] Throughout development the child's meaning-making activity scaffolded by more mature peers so as to form an intersubjectively extended semiotic system, until the child becomes capable of scaffolding own activity using the semiotic resources of the sociocultural world. [483] From this vantage point, internalization describes a

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[477]Vygotsky, *Mind in Society: The Development of Higher Psychological Processes,* p. 56.

[478]Ibid., p. 128.

[479]John H Flavell, "Metacognition and Cognitive Monitoring: A New Area of Cognitive–Developmental Inquiry.," *American Psychologist* 34, no. 10 (1979): 906–11.

[480]Vygotsky, *Thought and Language.*

[481]See e.g. Bruner, *Acts of Meaning*; Wertsch, *Mind as Action*.

[482]James V. Wertsch and C. Addison Stone, "The Concept of Internalization in Vygotsky's Account of the Genesis of Higher Mental Functions," in *Culture, Communication and Cognition: Vygotskian Perspectives*, ed. James V. Wertsch (Cambridge University Press, 1985); Wertsch, "From Social Interaction to Higher Psychological Processes: A Clarification and Application of Vygotsky's Theory.," *Human Development* 22, no. 1 (1979): 1–22.

[483]See also Derek Holton and David Clarke, "Scaffolding and Metacognition," *International Journal of Mathematical Education in Science and Technology* 37, no. 2 (March 15, 2006): 127–43; Jaan Valsiner, "Scaffolding within the Structure of Dialogical Self: Hierarchical Dynamics of Semiotic Mediation," *New Ideas in Psychology* 23, no. 3 (2005): 197–206.

global developmental process, which culminates in the transformation of the cognitive processes from being externally scaffolded by others to self-scaffolding.[484]

Just as intersubjective processes can scaffold individual cognition, in this way cultural artifacts can also scaffold cognitive and communicative activity. Making complex calculations on paper by using mathematical symbols is a very pertinent example of such scaffolding through cultural artifacts. Through being integrated with an external, material sign system, the mathematical calculation process can be regarded as an extended one, which is not limited to the bounds of the skull. Similarly, language scaffolds communication and discursive thought. Speaking and, to even a greater extent, writing turn processes of cognition and communication into objects of reflection, evaluation and analysis.[485] Thus, the semiotic resources of a culture open up novel possibilities of self-reflexive thought and communication by materializing the recursive representational relations involved**.** They also collectively make up a cognitive-semiotic niche—a specific associated environment which preserves the cumulative semiotic history and thereby to which cognitive processes can be continually offloaded.[486] Material signs are thus a very peculiar kind among cultural artifacts that transform processes of meaning making and thereby transform the world in relation to which these take place within an incessant loop of co-determination.

The notion of scaffolding as it is understood within the sociocultural perspective applies to the timescales of cultural and ontogenetic transformations, thus it does not incorporate the role phylogenetically established regulatory structures play in cognition and communication. Jesper Hoffmeyer's extension of the metaphor to comprise deeply entrenched structures that become part of the system allows us to reflect precisely on these dimensions. His notion of *semiotic scaffolding* serves, in general terms, to explicate how meaning structures feature in organismic activity. Semiotic scaffolding denotes networks of embedded semiotic interactions by which organismic processes, activities of semiotic agents

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[484]Cf. Mark H. Bickhard, "Scaffolding and Self-Scaffolding: Central Aspects of Development," *Children's Development Within Social Context: Volume 2: Research and Methods*, 1992, 33–52. Bickhard argues that the "classical" view of scaffolding self-scaffolding becomes a self-contradictory notion, since it would require that the system provides to itself some skill or knowledge that it does not have The large body of research on self-talk within the classical view of scaffolding, on the other hand, focuses on a central and ubiquitous phenomenon where children regulate their own actions and thought processes through speech. Planning, for instance, follows a developmental trajectory from absence to mastery through self-talk. See e.g. Laura E Berk, "Why Children Talk to Themselves," *Scientific American* 271, no. 5 (1994): 78–83; Adam Winsler, Charles Fernyhough, and Ignacio Montero, eds., *Private Speech, Executive Functioning, and the Development of Verbal Self-Regulation* (Cambridge: Cambridge University Press, 2001).

[485]On how scaffolding through material signs transforms processes of thought, see David R. Olson, *The World on Paper: The Conceptual and Cognitive Implications of Writing and Reading* (Cambridge University Press, 1996).

[486]Andy Clark, "Language, Embodiment, and the Cognitive Niche," *Trends in Cognitive Sciences* 10, no. 8 (2006): 370–74; Karola Stotz, "Human Nature and Cognitive–Developmental Niche Construction," *Phenomenology and the Cognitive Sciences* 9, no. 4 (2010): 483–501.

as well as their interactions with others and with their environment are guided and constrained so that they become tuned to higher-order, system-level ends.[487] Semiotic scaffolds, accordingly, are hierarchically organized entrenched or temporary semiotic supports through which evolutionary, developmental, social-relational as well as cultural histories become efficacious on organismic and agential activity: Mono-cellular organisms regulate their movement in relation to the type and level of chemical concentrations in the surrounding environment, migratory birds make use of stellar configurations in setting their course, sexual releasing stimuli direct reproductive activity, mathematical formulae direct selection of variables and facilitate their calculation, libraries sustain inquiry by embodying accumulated knowledge. In view of this generalized conception, instructional and developmental scaffolding can thus be regarded as special cases of a phenomenon that is coextensive with life, which Hoffmeyer famously characterizes in a Peircean vein as "the key to nature's tendency to take habits."[488]

Kalevi Kull draws attention to how semiotic processes and structures interact by designating semiosis as an "active meaning-seeking-making process" presupposing semiotic freedom and semiotic scaffolding as the resulting establishment of structures that "canalize further behavior" by limiting semiotic freedom.[489] All semiosis implies an interpretive act, an act which is on the one hand framed by the semiotic system's (be it a cell, an organism or a whole social group) own history, and may give rise to novel frames of interpretation on the other. Semiotic scaffolding characterizes the latter aspect. It implies a history of "semiosis with a trace," a most prominent form of which is *learning*.[490] The element of semiotic freedom intrinsic to all semiosis implies that the formation of the interpretant is an underdetermined process, thus involves selection, evaluation and choice, but to no extent indeterminate: All semiosis is scaffolded by manifold internal as well as external semiotic constraints. Various descriptions of semiotic scaffolding accordingly converge on their emphasis on diminishing semiotic freedom or increasing directionality as a central feature.[491] Emmeche defines it in terms of

> enabling processes of sign action unfolding at several levels of organization, focusing energy flow and agency of the system or subsystem upon a constrained

[487]Jesper Hoffmeyer, "Semiotic Scaffolding Of Living Systems," in *Introduction to Biosemiotics* (Dordrecht: Springer Netherlands, 2007), 149–66, p. 154.

[488]Ibid., p. 156.

[489]Kalevi Kull, "Evolution, Choice, and Scaffolding: Semiosis Is Changing Its Own Building," *Biosemiotics* 8, no. 2 (2015): 223–34, p. 228.

[490]Kull, "On the Logic of Animal Umwelten: The Animal Subjective Present and Zoosemiotics of Choice and Learning," p. 138

[491]See e.g. Claus Emmeche, "Semiotic Scaffolding of the Social Self in Reflexivity and Friendship," *Biosemiotics* 8, no. 2 (2015): 275–89; Donald Favareau, "Symbols Are Grounded Not in Things, but in Scaffolded Relations and Their Semiotic Constraints (Or How the Referential Generality of Symbol Scaffolding Grows Minds)," *Biosemiotics* 8, no. 2 (2015): 235–55.

> repertoire of possibilities, thus guiding the system's behavior to follow a more definite sequence of events.[492]

Diachronically regarded, scaffolding is a process whereby higher-order patterns emerge. Semiotic scaffolds are thus networks of sign relations which are both enabling and constraining. On the one hand, they support realization of actions that would otherwise defy the capacities of the organism, allow for the establishment of further sign relations of higher complexity and can generally extend the horizon of action possibilities. By the same token semiotic scaffolds can close up certain action and learning possibilities irreversibly, or introduce biases in species- or culture-specific ways.

Any semiosis requires downward regulative processes operative at the macro-semiotic level, which frame individual interpretive acts as well as set the global boundary conditions on potential sign relations that may be actualized.[493] Phylogenetically established sign relations, features of cultural niches, intersubjective scaffolding as well as metacognitive knowledge or skills are forms these regulative relations on the macro level might take. All kinds of such *regulative* semiotic relations, however different from one another qualitatively, can be subsumed under Peirce's category of habit. In this regard, semiotic scaffolding, as an intergenerational, interindividual or individual process of habit-taking, facilitates the establishment, modification and transmission of legisigns.

On the other hand, not all semiosis results in the establishment, consolidation, modification or transformation of a habit. When it does, semiosis is not only a meaning-making but also a scaffolding process. Accordingly, semiosis can be simultaneously scaffold*ing* as well as scaffold*ed*; i.e. not only grounded in a semiotically effective history but also determining future acts to conform to specific forms. Scaffolded semiosis relies on rules for sign production and interpretation that are already established in higher time scales, as in the case of literal utterance and interpretation of words. In phylogenetic scaffolding such rules are established in still higher time scales and not through semiotic processes, as in the case of entrenched dispositions to react to environmental cues in specific ways. Scaffolding semiosis, on the other hand, denotes sign processes which are responsible for the very establishment of particular habits of sign production and interpretation, from scientific inquiry, critical self-reflection to all intersubjective processes of meaning creation and negotiation.

Semiotic scaffolds are established in many species only in phylogenetic time through non- or proto-semiotic processes, in some also in ontogenetic time, in still fewer, most notably great apes, within social interactions through ritualization or social learning and teaching. The plasticity of the semiotic scaffolds, that is, how amenable they are to change is also correlated with the degrees of freedom

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[492]Emmeche, "Semiotic Scaffolding of the Social Self in Reflexivity and Friendship."

[493]João Queiroz and Charbel Niño El-Hani, "Semiosis as an Emergent Process," *Transactions of the Charles S. Peirce Society* 42, no. 1 (2006): 78–116.

available in semiosis. Still more importantly, the degree of plasticity and semiotic freedom is intrinsically related to the extent to which development relies on environmental conditions. Humans diverge from their closest primate relatives arguably the most with regards to their more pronounced neoteny; that is, to their developmental immaturity and prolonged period of childhood.[494] This relative retardation of development has significant consequences for our cognitive-semiotic plasticity.[495] In order to become what we are, we depend heavily on social interactions situated in a cultural world. In other words, we achieve the characteristically high degree of semiotic complexity and freedom we enjoy not primarily by having certain *additional* faculties or features, but by being less mature, by lacking stable semiotic scaffolds that present us a world already saturated with meaning and guiding us towards already tested responses to this world, thus by remaining longer in a phase of *becoming* or *individuation*. As infants we do not have signs as complete as a song bird's mating call or a bee's waggle dance. Far from it: Our earliest actions are semiotically much less determined in comparison to those of the young of other species and we have to learn, discover as well as participate in the formation of most of our signs. Communicative interaction enters the developmental picture as a constitutive factor, because human development is carried over to and partly accomplished by culturally mediated social interactions. The constitutive communicative processes in question are characteristically instances of scaffolding rather than scaffolded semiosis.

Coordinative and transformative communication differ, in conclusion, in being primarily scaffolded or scaffolding processes of social semiosis. Coordinative communication, as in the case of species-specific calls, relies on unambiguously shared meaning. Human communication too extensively uses the coordinative mode, since organization of collective activity often requires efficient transfer of information, clear commands and compliance with fixed social roles or regulative rules. On the other hand, close interpersonal relationships, interactions between infants and caregivers, or collective epistemic, artistic or political processes depend on ongoing meaning creation and negotiation. In such contexts and particularly in development, communication also needs to create its own scaffolds.

[494]Stephen Jay Gould, *Ontogeny and Phylogeny* (Harvard University Press, 1977); Ashley Montagu, *Growing Young* (Greenwood Publishing Group, 1989).

[495]David F Bjorklund, "The Role of Immaturity in Human Development," *Psychological Bulletin* 122, no. 2 (1997): 153.

# THE THIRD PART: PATTERNS OF REFLEXIVITY

In the subsequent two chapters, VI and VII, I turn my focus to how patterns of reflexivity in cognition, including the understanding of self and others, develop through communicative interactions. Besides contemporary theories of cognitive, social, and semiotic development, my main references are Lev Vygotsky's sociocultural account of cognitive development (primarily in Chapter VI), and George Herbert Mead's pragmatist account of the social development of the self (primarily in Chapter VII). What I find of greatest purport in Vygotsky's sociocultural theory for the present discussion is his genetic method in approaching the study of the mind and his notions of scaffolded development and internalization of social processes as psychological functions. In this context, I connect metasemiotic mediation (discussed in Chapter V) to higher-order psychological process, such as metacognition, and trace the development of various metasemiotic abilities through earliest communicative social interactions. In Mead's theory of the self and broader theory of action, on the other hand, we find how the structure of social interactions is related to the self-concept and how social perspectives are related to social meanings. In this context, I connect metasemiotic mediation to the capacity for taking and coordinating perspectives.

In reference to my broader argument, in Chapter VI I substantiate the thesis that metasemiotic abilities are a foundational requirement for the development of self-reflexive psychological processes, which I take to be characteristic of person-making dispositions, and demonstrate how these are cultivated through transformative communicative processes. In Chapter VII, I substantiate the thesis that perspective-taking and perspective coordination are the key processes whereby self-interpretation is realized, and a self-concept is formed, evaluated and modified.

The eight and last chapter focuses on the relation between habits, habit-change and reflexivity. I have already discussed Peirce's conception of habit in connection with deliberate, purposive conduct in the fourth chapter. This chapter recapitulates the topic of deliberate habit formation and self-control partly in reference to Peirce, but with a focus on habit-change. Its scope is also broader than Peirce's particular account of habit of action. I first briefly look at the history of habit as a category and a topic of practical philosophy, then discuss a potentially elucidative differentiation of habits into habits of feeling, thought and action. Secondly, I propose that self-induced habit-change is realized through the formation of higher-order habits and discuss how the concept of nested orders of habit can throw light on the question of self-control. I conclude the chapter by linking the concept of habit-change to that of volitional identification through addressing the motivational aspect of habit-change and how the establishment of

higher-orders of habit can introduce a temporally extended reflexive structure into volition.

# VI COMMUNICATIVE ORIGINS OF REFLEXIVITY

## VI.1 FROM INTER TO INTRA: SOCIO-CULTURAL MEDIATION IN ONTOGENY

To ground my choice to refer chiefly to Vygotsky and Mead on the developmental question, a brief presentation of their historical context and a description of the interesting convergence of their developmental accounts are in order. These two perspectives represent two historically central intellectual sources of social-relational orientations in theorizing on mind, self, development, and education. Mead's work finds contemporary relevance under the title symbolic interactionism[496] and Vygotsky's work, together with those of his colleagues A. N. Leontiev and A. Luria, lives on within the framework of cultural-historical activity theory.[497] In terms of the philosophical traditions that influenced the respective perspectives, the two followed rather independent theoretical paths; while Vygotsky based his theory of intellectual development broadly on dialectic materialism, Mead was among the earliest proponents of pragmatism. One being in Chicago and the other in Moscow, and having acquired only a posthumous fame in the Western world, any acquaintance was also not the case. Nevertheless, both perspectives were developed in concurrence and with the aim of coming up with a solution to the challenges posed, on the one hand, by the problem of demarcation between natural and social sciences, and on the other by the advent of the behavioristic paradigm to the prospective position of the newly rising discipline of psychology. As social scientists, they had to take a position in the debate as to the methodology of the social sciences vis-á-vis the natural sciences. The view prevalent among the positivists of the time that social sciences were not scientific; at least not so in the sense natural sciences are, since they did not partake in the empirical method; a judgment shared to some extent by the proponents of the humanist tradition.

Both Vygotsky and Mead positioned themselves on the other side of the schism, emphasizing the need for social sciences not to remain within a

[496]The term "symbolic interactionism" is coined by Herbert Blumer, a student of Mead. Often counted among the founders of the tradition are Charles Horton Cooley, contemporary and colleague of Mead, and John Dewey. See Herbert Blumer, *Symbolic Interactionism: Perspective and Method* (Englewood Cliffs, NJ: Prentice-Hall, 1969). Although Mead thought in philosophy, today symbolic interactionism is influential chiefly in sociology and cultural psychology, besides its limited endorsement in social psychology.

[497]Cultural-historical activity theory has found wide reception especially since the 1990s, through the works of Michael Cole, who worked under Luria and coined the term, James V. Wertsch, who studied in Chicago and later became one of the leading experts on Vygotsky and soviet psychology, and Yrjö Engeström, who has popularized the theory in Scandinavia and world-wide. See e.g. Michael Cole, Yrjo Engestrom, and Olga Vasquez, *Mind, Culture, and Activity: Seminal Papers from the Laboratory of Comparative Human Cognition* (Cambridge University Press, 1997).

descriptive, idiomatic framework but to provide scientific explanations of phenomena that fall out of the scope of narrowly demarcated natural sciences. This challenge both concerned the need for a method and the legitimacy of the status of a range of phenomena from mental, intersubjective to social and cultural as valid subject matters for scientific inquiry. The common aspect of their problematic was the nature of the intellectual powers of the psyche and the significance of socialization and enculturation for the development of the individual. The common aspect of their theoretical concern was to place the man in nature without trivially disposing of his "specific difference" and to substantialize scientifically the efficacy of culture and society vis-á-vis the individual. In other words, how the paths of nature and culture intersect in the global history of humankind as well as in that of the human individual and what the nature of the relation between these domains are constituted the main line of inquiry.

Firstly, they both thought that any proper theory of human intellectual powers needs to take into account the outcomes of the emergence of elaborate socio-cultural artifacts distinguishing the lived-world of the human being from his natural habitat, and has to be accompanied by an evolutionary account that integrates phylogeny and ontogeny. The evolutionary perspective was shared by many other schools of psychology at the time from the analytic school of Freud to the behaviorist school of Pavlov and Watson. However, while the former advocated a deterministic perspective on our evolutionary and developmental past and presented the relation between nature and culture in terms of opposition and conflict, the latter tilted the scale excessively in favor of environment. Instead of conceiving the relations between nature and culture and between organism and environment in terms of balance, opposition, or supersession, the pragmatist tradition of the Chicago school, particularly that of Dewey and Mead, and the sociohistorical psychology of Vygotsky and his colleagues envisioned these to be dialectical.[498] For both thinkers, culture enters the scene of nature as the medium through which the ongoing interaction of the human being with the environment is deepened as well as radically altered. The proper environment of the human being should therefore be considered as a social one, because there is hardly any interaction of the human being with the natural environment that is not socially mediated. Sociality for Mead and Vygotsky is *the* fundamental factor in the emergence of the higher powers of the mind in that it re-structures human activity and the world in which it takes place.[499] In this vein, Mead and Vygotsky stand out among other pragmatists and soviet psychologists, respectively, in terms of their

[498]Hegel had a profound effect on the thinking of Dewey and Mead, who eventually wedded Hegelian dialectics, with not insignificant modifications, to evolutionary theory, and to their pragmatic liberal view of society. See also Richard J. Bernstein, *The Pragmatic Turn* (Polity, 2010). Vygotsky was already embedded in the Marxist intellectual environment of the SSCB, but had a marginal position and also troubles in that he tried to employ the methodology of dialectic materialism in novel and inventive ways, without espousing a doctrinal orthodoxy.

[499]See also Jean-François Côté, *George Herbert Mead's Concept of Society: A Critical Reconstruction* (Routledge, 2015).

exclusive prioritization of the social process in in accounting for individual and social development and change. It should be noted, though, that the resulting social constructivist perspective of Vygotsky and Mead was fundamentally different from the later, postmodern forms of social constructivism, since it was also naturalist and evolutionary. Culture does not create anything *ex nihilo*, but only qualitatively modifies the structures and operations that are through and through embodied and shaped by a phylogenetic history.[500]

Secondly, they were both of the opinion that the behavioristic paradigm gaining momentum at the time as providing the sole candidate of a scientific method that is apt for studying complex psychological and social phenomena was to be significantly modified and amended so as to include meaning, historicity and the socio-cultural context. As it stood, behaviorism of their contemporaries left subjectivity out of the picture as both irrelevant and superfluous, which amounted to structurally equating purposeful, active human behavior with automatic or conditioned responses to stimuli. The implications of behaviorism for learning, for which behavioristic paradigm offered well-defined operations, were also impending from an institutional as well as a parenting perspective. Human interaction in education and parenting would take the form of one-way sculpting of a passive and absolutely plastic stimulus-response system, where the child's agentive actions such as observing and reproducing, experimenting, discovering, playing, role and perspective taking would be largely limited in their role in development.

The pragmatist tradition and Vygotsky's sociohistorical psychology were in principle closer to behaviorism than to its various adversaries. They agreed with the behaviorists on their rejection of intuitionism, which dates back to Descartes and was represented in the method of introspective psychology practiced by Wundt.[501] They thought that intuitive immediacy and introspective access are both fabrications and misleading notions concerning the nature of the mind and self, because these are through and through mediated phenomena. Understanding the nature of higher mental functions requires an analysis of the interactional context within which these develop, and their development follows a pattern that goes from intersubjective to intrasubjective, from the outside to the inside, and from practical interactivity to mental activity.[502] Although a mental activity, symbolic thinking also has strong structural affinity with symbolic communication in that

[500] For a discussion of Meadian and Vygotskian social constructivism in comparison to postmodern social constructivism, see Louise Röska-Hardy, "How Social Is the Self? Perspective, Interaction and Dialogue," in *Social Roots of Self-Consciousness. Psychological and Philosophical Contributions* (Berlin, Boston: Akademie Verlag, 2009).

[501] Although the pragmatist school was marked by their move away from introspectionism, William James stands out both as a pioneer and a transition figure whose thinking involved heavily introspectionist elements.

[502] Uygun Tunç, "Symbolically Mediated Interaction and Perspective-Taking: A Social-Relational Perspective on Social Cognitive Development," *Avant* X, no. 3 (2019), p. 8.

speech and thinking become inseparably intertwined activities through the development of sign use.

They also agreed with them on their rejection of the fatalistic determinism regarding the evolutionary and the developmental past. But they firmly rejected the absolute environmental determinism espoused by the contemporary behaviorists[503] and the behavioristic dismissal of the active and efficacious contribution of reflective subjectivity. For behaviorists there was no qualitative difference between human and other animal behavior. For Vygotsky and Mead, on the other hand, the appearance of symbolic representation and communication in human evolutionary history is coupled with a qualitative change in the structure of human behavior. The particular point of divergence, hence, was the nature and structure of semiotic mediation. The sign processes investigated and manipulated by the contemporary behaviorists were relatively simple stimulus-response couplings, which were supposed to be sufficient to explain all complex human behavior, including discursive thinking and symbolic communication. Vygotsky strongly emphasized, on the other hand, that higher forms of human behavior comprise an active modification of the stimulus and its context as an intrinsic feature of producing a response. This irreducibly "mediated" structure rules out an explanation based on the efficacy of the stimulus itself. He maintained, for instance, that although a little child may execute the same behavior in response to same stimulus as the adult, its meaning would be very different, because the thinking of the little child resembles a heap (of experiences) while that of the adult a (conceptual) system. Moreover, the peculiarity of symbolic mediation for both Vygotsky and Mead resides in that it involves not merely a reaction but a reaction to a reaction. The symbol works not in a linear way but bi-directionally, both on the sender and on the receiver, and gives rise to a form of communication that involves thinking and a form of thinking that involves communication.

The roots of all complex human thinking and behavior, thus, should be looked for in the nature and development of sign-mediated social action. The transformation and sophistication of signification and meaning is integral to the evolutionary as well as developmental history of mind and selfhood. This is the most central thread connecting these (historically distinct but interestingly similar) two perspectives. Neither Vygotsky nor Mead has put forward a theory of sign on their own, but their conceptions of the sign process deeply resonate with certain central characteristics of Peirce's semiotics such as the historical and social understanding of meaning, the affinity of thought and communication through their semiotic underpinnings, and the dialogical conception of the sign as the product of a two-way determination.[504] The latter is reflected in Mead's notion of a "significant symbol" and in Vygotsky's notion of "word meaning." A

[503]Primarily Watson's methodological behaviorism in difference to the radical behaviorism of Skinner, who recognized the existence of innate, unlearned behavior patterns.

[504]Uygun Tunç, "Symbolically Mediated Interaction and Perspective-Taking," p. 9.

"significant symbol" unites two perspectives; namely that of the utterer and the interpreter or of the self and the other. Its paradigmatic instance is the spoken word, because in order to speak one has to simultaneously hear and understand (although a similar two-way determination is also the case in most ritualized gestural communication). On the other hand, for Vygotsky a "word meaning" is both the embodiment of a concept and the medium for communicating that thought, thus a union of thought and speech. Moreover, Vygotsky and Mead both share Peirce's adherence to a semiotics of production of meaning in diachronic and recursive relationships between the elements of the sign instead of a synchronic theory of signification, because they espouse that this is precisely what makes a social, cultural and historical account of the development of mind and selfhood conceivable.

This project implies for both Mead and Vygotsky a need to ground signs of culture in yet other semiotic forms, because only thereby we can free the inquiry into the nature of mind from the vicious circle of explaining the origin of certain mental forms in reference to yet other mental forms or having recourse to innatism with respect to intellectual powers. Sign-using activity, which both see as the cradle of the reflective mind, must be grounded in something that is originally something else. Vygotsky writes:

> […] sign-using activity in children is neither simply invented nor passed down by adults; rather it arises from something that is originally not a sign operation and becomes one only after a series of qualitative transformations. Each of these transformations provides the conditions for the next stage and is itself conditioned by the preceding one; thus, transformations are linked like stages of a single process, and are historical in nature […] In the history of behavior these transitional systems lie between the biologically given and the culturally acquired. We refer to this process as the natural history of the sign.[505]

In a similar vein, for Mead it is thinking that presupposes communication and not vice versa. Communication, in turn, as a fundamental social phenomenon does not presuppose reflective minds. If it did, the origin of the reflective powers of the mind as well as that of communicative social interaction would be mysteries. If the inquiry starts instead with some rudimentary forms of sociality (e.g., communication in gestures and expressions) and ventures to explain the origin of reflective minds in terms of communicative social interactions, both of these mysteries—the mind and the interaction among minds—could be dissolved.[506] In other words, if we identify reflective thought and self-consciousness as first-order phenomena in order to explain communication and intersubjectivity on their basis, we would be putting the cart before the horse: These should be conceived, in the order of explanation, as second-order phenomena.[507] Accordingly, the

[505]Vygotsky, *Mind in Society,* p. 46.

[506]George Herbert Mead, *The Philosophy of the Act* (London: University of Chicago Press, 1972), p. 50.

[507]See also Uygun Tunç, "Symbolically Mediated Interaction and Perspective-Taking."

inquiry into the mind and selfhood should take as its axiom that meaning primarily is not individual but shared, or co-created meaning, and the powers for appropriating and comprehending meaning must be understood in terms of how the media for sharing, negotiating, constructing social meaning develop; in short, in the social history of the sign.

I have to add, however, an important caveat in reference to the discussion in the previous chapter. I have maintained there that most organismic activity and all communication is already semiotically mediated, and semiosis does not require metasemiosis, which implies reference to certain psychological processes involved in sign interpretation. I inferred, further, that the traditional natural/conventional distinction is not a strictly semiotic one, but one that concerns the proximate processes realizing semiosis. The brief presentation I have just made might suggest, however, that in Mead's and Vygotsky's discussions of sign-mediated action and interaction the reference is exclusively to conventional signs and all other activity is considered to be semiotically immediate. Firstly, such an assumption would in fact not pose any problem for the subsequent analysis, because the subject of interest is the (contradistinctive) role of metasemiotic mediation in the origin and development of self-reflexive processes, and conventional signs, or more truly those that are cultural artifacts, constitute the overwhelming portion of the mediators of such reflexive forms of semiosis. Secondly, while in the fourth and fifth chapters I focused chiefly on the *logic of semiosis*, here I am concerned with the *psychology of semiosis.* Certain natural communicational signs, as I have argued, also reveal themselves as irreducibly triadic in relation to their objects, i.e. as natural symbols, while this triadicity is a feature of the phylogenetic history of the communicative behavior (a pattern established by nature) and not of the proximate (organismic, psychological) processes realizing their utterance and interpretation. What we colloquially refer to as symbols (including symbolic gestures) on the other hand, owe their triadicity to patterns established communicationally, and their utterance and interpretation are realized through *psychological* processes of semiotic mediation. This consideration applies in a more limited way also to communicational icons (such as a map, or hand gestures signifying qualities like "big" or "fast") and indexes (such as the pointing gesture, a knock on the door, or a "considerate" or "threatening" manner of behavior). Thus, at this point the subject matter is precisely the nature of those proximate processes realizing reflexive semiosis and how certain forms of signification might require their signs to be cultural artifacts. Vygotsky's discussion of signs is concerned with the psychological patterns that reflect in the transformation of action and how the self-reflexive use of the signs of culture bring about this transformation. Mead's discussion focuses, similarly, on significance as understood as the intertwinement of two perspectives, which finds its paradigm in the spoken word. Whenever I refer to mediation or sign-mediated activity in this and the following chapter, I chiefly refer to psychologically realized mediation of action (and interaction) through culturally

established symbols. From a broader vantage point, it is worthwhile to emphasize that the social history of the sign is not antithetical to, but continues and enriches the natural history of the sign as a particular chapter in it.

Last but not least, my principle aim is to examine how metasemiotic mediation is gradually entrenched as a structure of action through a history of social interactions beginning with preverbal forms of intersubjective coordination. To this end, I bring the pertinent aspects of Vygotsky's and Mead's theories in connection with more recent work on infant semiosis in section VI. 4 and link the discussion to the broader argument. The central view I explore is that cognitive development unfolds in communicative interactions with others in a sociocultural context, through which action undergoes series of consecutive transformations, some hierarchical, resulting in a reflexive structure of semiotic mediation that determines a whole range of perceptual, affective, cognitive and motor processes. In origin, this structure is an external and dialogical one, which belongs to developing patterns of social interaction. Thus the genetic structure, functioning, organization, that is the very nature of all higher-order processes is social. Even as purely psychological processes, they remain quasi-social.

## VI.2 MEAD'S SOCIAL ACT AND VYGOTSKY'S MEDIATED ACTIVITY

To posit an internal and inalienable relation between meaning and action is obviously one of the core tenets of pragmatism, as it was famously articulated by Peirce in his various formulations of what came to be called the pragmatist maxim. Understanding of meaning, in this perspective, cannot be divorced from acting on its basis; that is, from human reasons and ends factoring in the interpretive act, which in turn not only deciphers but also appropriates meaning in the form of habits or entrenched patterns of action, on the one hand, and further transforms it, on the other. The meaning in question here has its life in *situations* of action and interaction, which also provide the actual context of novelty and creativity.[508] Mead's understanding of the social act stands out among early formulations of American (or classical) pragmatism in its elaborate analysis of social interaction as the cradle of meaning. In this respect, he might be seen as developing further a central insight of Peirce, who believed that the analysis of action should focus primarily not on personal meaning-making but on the community.[509] For Mead, the key to achieving the common goal of the pragmatist research program, that is,

[508]For an evaluation of the role the notion of creative action plays in pragmatist tradition, See Hans Joas, "Introduction: Steps towards a Pragmatist Theory of Action," in *Pragmatism and Social Theory* (University of Chicago Press, 1993), p. 4-7.

[509]Anne Edwards, "An Interesting Resemblance: Vygotsky, Mead, and American Pragmatism," in *The Cambridge Companion to Vygotsky*, ed. Harry Daniels, Michael Cole, and James V. Wertsch (Cambridge University Press New York, 2007), p. 77–100.

to overcome the dualism of mind and world, was to be sought after in the society, thus neither in the individual construction of knowledge nor in the individual action within an environment.

Pragmatism shares the emphasis on the relation between meaning and action to a considerable extent with the notion of *praxis* found in the dialectic materialist tradition, which constitutes the context for Vygotsky. Praxis is the locomotive and starting point of change in the field of meaning, because meanings are not locked up in the interrelations of ideal entities but embodied in the concrete arrangement of the life world shaped by human activity. The direction of ontogenesis then is from action to meaning, not vice versa, although at any point the two would be found in a closely interwoven relation. Vygotsky states explicitly, also broadly in line with the constructivism of Piaget, that "all functions of consciousness [...] originally arise from action."[510] The central focus of Vygotsky's sociocultural psychology, and of the later cultural-historical activity theory, is artifact-mediated activity. From cultural artifacts such as mathematical notation systems or mnemonic devices to physical tools, the form and flow of human activity is determined by a context of meaning constituted by these cultural and historical mediators, which are in turn modified or transformed in each generation to differing degrees by human creative appropriation. Independently of their broader background, these ideas have proliferated and proved to be elucidating on the perennial question of the relation of thought to language and other artifacts.

### *VI.2.1 Mead's theory of the act*

From Mead's own formulation of the general structure of an act, which comprises reaction to an object in the environment as well as social interaction, to his theory of the social act and eventually to contemporary symbolical interactionism via Blumer's appropriation, the guiding premises of Mead's pragmatist analysis are, firstly, that the subject reacts to and acts towards things and people on the basis of (social) meanings and, secondly, meaning is an implicit feature of action and interaction, and not a relation between words and things or between sounds and concepts. Meaning is understood not exclusively in terms of mental representations, but in terms of how meanings arise and are used in the context of conduct. To put it in another terminology (namely, of Gibson), meaning it is ultimately rooted in action within an environment that offers *affordances* or action-possibilities, social and otherwise.[511]

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[510]Vygotsky, *Mind in Society,* p. 93.

[511]See James J. Gibson, *The Ecological Approach to Visual Perception* (Boston: Houghton Mifflin Harcourt, 1979). Gibson defines an affordance in a way quite reminiscent of Mead (p.127): "The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill [...] I mean by it something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment."

His model of the "act-as-such" is meant to cover any organic activity within an environment. He defines the *act* as the determinant of "the relation between the individual and the environment."[512] Reality, in turn, is a field of situations that are "fundamentally characterized by the relation of an organic individual to his environment or world. The world, things, and the individual are what they are because of this relation [determined through conduct]."[513]

Mead conceptualizes psychological processes such as perception and thinking not in terms of compartmental categories but as *phases* of the act, which develops in four main stages: i) The stage of *impulse* marks the emergence of the "problematic situation"[514] for the individual, ii) the stage of *perception* is characterized by the appraisal of the situation, during which "objects" come out as affording certain action-possibilities in line with the attitudes of the individual, iii) the stage of *manipulation* marks the action taken in accordance with the appraisal of the problematic situation, and iv) the stage of *consummation* is where the problematic situation is resolved. These stages are by no means exclusively linear: the "later" stages are already efficacious upon and in some form involved in the "previous" stages in what as a whole manifests a teleological structure.[515]

Mead's analysis of the act has some similarities to the notion of an originally holophrastic perception-action loop of Hoffmeyer and Stjernfeldt[516] in that the act is a unitary whole; that is, it is not *preceded* by perception, affect or thinking and *starts* where these end. In other words, the act is not reducible to its consummation. Thus we can say, in this connection, that the complexity of the act is to be sought for in the increasing differentiation, selection and pronouncement of phases, aspects or whole stages of the act, not in the addition of various psychological processes before or after it. The structure of the act can be transformed in a way that makes the stage of manipulation disproportionally dominant, as we see for instance in the scientific investigation of properties of objects, or the stage of perception, as it is arguably the case in a reflectively interpretive engagement with the world. In any case, all investigative, evaluative

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[512]George Herbert Mead, *The Philosophy of the Act* (London: University of Chicago Press, 1972), p. 364. Original publication 1938.

[513]Ibid., p. 215.

[514]The terminology clearly refers to Dewey's account of action.

[515]In reaching for a hammer in order to drive in a protruding nail, the hammer is already grasped in accordance with the manipulatory response–the hand is ready for the anticipated weight, size etc.–and if none is in sight, other competing possibilities, e.g. a stone and an iron bar, come out in the perceptive field in their potential to set the activity free. The hammer becomes a hammer, on the other hand, when and if the activity is consummated. Because the aroused future phases integral to the act are hypothetical in character (the past is also integral to the act since one is reaching towards a "familiar" object). The physical thing is thus distinct from the stimulus in being a hypothetical object that needs to be confirmed through the consummation of the act, although familiarity gives a provisional assurance with respect to the environment around the individual. Things as existing by themselves are mediate entities. The hammer that is being perceived and approached is not (yet) a real physical thing but ultimately a symbol, whose meaning is in the whole activity. See Mead, "Stages in the Act: Preliminary Statement" in *Philosophy of the Act*.

[516]See section V.1.

or deliberative processes derive their meaning ultimately from the whole act whose phases they are. Mead maintains further that meanings can be stated in terms of organization of attitudes in reference to objects, both of which can be placed neither inside the individual nor outside it, but do inhere in the relationship of the individual to the environment. The universality in meaning is to be looked for in the relation of the generality of the response to the particularity of the stimulus,[517] thus, in the complexity of the organization of attitudes, which effects a change in the temporal and topological structure of the situation.

What is most significant for our purposes in this account is that the organismic individual is neither passive with respect to an environment that is "out there," nor is it the exclusive locus of what are traditionally deemed to be mental functions. Moreover, there are no separate categories for mental processes and actions. Perception (as well as affect, thinking, and behavior) is a factor of that "relation of action" dynamically constituting the actor, the objects, and the world within a situation.

To further emphasize what, I construe, is implied by this basic and unitary relation, we can say that "the act" is a complex whole that is not reducible to particular "actions." Not only the unitary "act" involves various phases other than particular actions, the latter might even remain potential in the Aristotelian sense of second potentiality, as a "capacity" or "readiness." The actualization of a response, as *ἐνέργειᾰ*, is but a realization of a subsequent phase of the act, to which earlier phases already implicitly refer. Thus, even a mere perceptive relation to the world is already an instance of "the act." In any case, the response comprises the formation of an interpretant in the Peircean sense, in the form of an affective, intellectual, and/or agentive attitude. As a broad outline of the key phases of the unitary whole that is "the act," we have then the *stimulus* situation, in the broader sense of whatever presents itself to the individual and calls for a response, answer or at the least the formation of an attitude, the *response*, the *reaction* or *reciprocation* from the world, and ultimately the *consummation*, all of which (apart from the stimulus situation) may or may not actualize but are potentially present in the unity of the act as an implicit or explicit reference.

The social act, on the other hand, is central for Mead, just as the chain of thought-signs is for Peirce, in the life of meaning—of meaning that is not merely implicit or transparent, but possibly explicit and thus comprehensible and dynamic. To the extent that the act is not a social act, novel structures of action and interaction and by the same token novel forms of meaning do not emerge (but on the phylogenetic order of time). The social act is analogous to the act-as-such: the social organism is to the social environment what the individual organism is to the environment. Yet the social organism is not an individual but a community of

[517]Mead discusses universality in terms of the relation between mind and habit, and in analogy to the relation between substance and attribute. See Mead, *Mind, Self and Society*, p. 125ff.

individual organisms,[518] and the social act is a dynamic and complex field where individual acts acquire their possibility and meaning. As Peirce would have it, no individual act has its ultimate meaning and purpose in itself, but in its participation in an ongoing, collective one. Social acts range from the simplest interaction between two individuals, such as a dance, to collective acts, such as burial rituals, to very complex societal acts in the form of institutions. They involve social objects that have common, collectively constituted meanings. A social organism creates "its own special environment of objects,"[519] a social *Umwelt*. The human social environment is populated by tools, works of art, public spaces, mythical figures, hypothetical entities of science and so *ad infinitum*, which arose as social objects from within the historical matrix of social acts that constituted, modified, transformed, re-defined their meaning.

As meaning in the individual act dwells in the organized attitude (of response) to the environment, social meaning does so in communication. The social act is a process of communication:[520] From the coordinated or complementary interactions of animals in the wild to a heated debate in a courtroom, the organization of the social act is the organization of attitudes expressed in gestures. The meaning of a gesture in the simplest form of social act is the adjustive response it elicits in the other—its implicit interpretation as indicating the resultant of the social act that the first gesture initiates. Thus, social meaning at its simplest arises and is embedded within the threefold relationship between the phases of the social act:

> A gesture by one organism, the resultant of the social act in which the gesture is an early phase, and the response of another organism to the gesture, are the relata in a triple or threefold relationship of gesture to first organism, of gesture to second organism, and of gesture to subsequent phases of the given social act; and this threefold relationship constitutes the matrix within which meaning arises, or which develops into the field of meaning.[521]

A *gesture* is the beginning of a social act which indicates for the addressee the resultant of the social act thereby initiated. We can understand this simply as that an earlier phase or the initiation of an act serves as a guide to its consummation for another who interprets it as such. The gesture thus is a sign, in Mead's terminology the *symbol*, of the (future) resultant of the social act. The subsequent phases of the social act are often indicated by the expression of an attitude. A chain of interpretation, in Peirce's terms, or conversation of gestures ensues as each response becomes a gesture addressed at a further response. Mead gives the example of a hostile encounter of two dogs as a case of conversation of gestures:

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[518]Ibid., p. 130.

[519]Ibid., n. 34.

[520]Mead is accompanied by Dewey on this point. See Dewey, *Democracy and Education*.

[521]Mead, *Mind, Self and Society*, p. 76

> The act of each dog becomes the stimulus to the other dog for his response. There is then a relationship between these two; and as the act is responded to by the other dog, it, in turn, undergoes change. The very fact that the dog is ready to attack another becomes a stimulus to the other dog to change his own position or his own attitude. He has no sooner done this than the change of attitude in the second dog in turn causes the first dog to change his attitude. We have here a conversation of gestures. *They are not, however, gestures in the sense that they are significant*. We do not assume that the dog says to himself, "If the animal comes from this direction he is going to spring at my throat and I will turn in such a way." What does take place is an actual change in his own position due to the direction of the approach of the other dog.[522]

The triadic relation between the gesture, the response and the subsequent phases of the social act need not be consciously represented as such by the actors, because a gesture can initiate a social act without being a *significant* symbol.[523] On the other hand, any significant symbol is already a gesture embedded in a social act. A gesture is significant, according to Mead, if it influences the actor/its utterer in the same way it influences the observer/its interpreter:

> When [...] that gesture means this idea behind it and it arouses that idea in the other individual, then we have a significant symbol. In the case of the dog-fight we have a gesture which calls out appropriate response; in the present case we have a symbol which answers to a meaning in the experience of the first individual and which also calls out that meaning in the second individual. Where the gesture reaches that situation it has become what we call "language." It is now a significant symbol and it signifies a certain meaning.[524]

By "significant" Mead means that the gesture is meaningful to the utterer in the same way it is meaningful to the interpreter. The snarling of the dog in the previous example is not significant because while it effects a change in the attitude of the second dog, it does not effect the same change in the snarling dog itself. In

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[522]Ibid., p. 42-3.

[523]For Mead a *symbolic* gesture is an earlier phase of an act that signifies its later phases, especially its consummation. An outstretched arm means grasping the reached for object to an observer, in a way similar to the hammer that means to its user the ultimate act of driving in a nail. These are, moreover, not subjective or private meanings but objective in the sense of being (semiotic) features of situations. Mead's use of the term symbol here to refer to gestures is obviously at odds with a wide range of orientations that are preoccupied with the signs of culture (see also our discussion of symbols in section V.2). It resonates in certain ways with the processes of ritualization we discussed in the previous chapter. Nonetheless, in the light of Peircean criteria the term symbol is used by Mead rather loosely. In a more fine-grained analysis we could say that the gesture can be identified as an index insofar as it indicates an attitude or the whole act of which it is a temporal part (including a degenerate index signifying a future event or phase as a result of inference), and as a symbol if its significance depends primarily or entirely on its being interpreted in a particular way. A wide variety of natural as well as artificial gestures, on this analysis, are not symbols. However, Mead does not offer a sign taxonomy: He is chiefly interested in the distinction between what he calls significant symbols and others. His understanding of significance, however, is related to the psychology of semiosis rather than its logic, as we have previously noted. In reference to Peirce's later differentiation of interpretants (see section IV.4) we could also say that a non-significant symbol such as the dog's hostile gesture is interpreted in an energetic interpretant (i.e. in the other dog's behavioral response).

[524]Ibid., p. 46-7.

other words, the gesture is a stimulus to the second dog for its response, for instance by virtue of arousing a tendency to fight back or to flee away, but not to its utterer. We can describe this feature also in Vygotsky's terms: The snarling gesture does not have the property of *reverse action*; i.e. the property of being both a stimulus and a response. A gesture with the property of reverse action can become a stimulus with the same meaning both for the other and for the self, and brings about the possibility of not only effecting change in the attitude of the other but also in one's own. For instance, a hunting party arranges stones in a pile at a particular location particularly suitable for hunting, a response, and the pile becomes a stimulus for a second party to look for game in that same area or to the same party when they visit the area again for hunting. If the gesture communicates the same meaning to the individual uttering it as it does to the other, the utterer is in fact entertaining two perspectives simultaneously: Besides his or her own attitude, the utterer is conscious of the resulting (or possible) attitude of the addressee, which already factors in the production of the gesture.

Consciousness thus is not a requirement for the presence of meaning in the social process. Characteristically human social acts owe their possibility, on the other hand, to the communication of significant symbols, which bring about an organization of social acts that are deliberate and involve *comprehension* of meaning. By virtue of significant symbols, especially of the vocal gesture (i.e., speaking), the human animal is able to pick out and indicate to the others and to itself those characteristics of the situation that answer to its responses—social objects; so that it can open these responses to influence by the others and by oneself.[525]

Mentality, for Mead, is characterized by this efficacy or control over meaning,[526] and it can arise, in phylogenetic as well as ontogenetic terms, exclusively in the social process of (reflexively) significant communication. Consciousness depends upon reflexivity, to the turning back of experience upon itself. It consists at bottom in taking the attitude of the others towards one's own gesture and thereby changing it, which in turn effects a change in the attitude of the other. The reflexivity of the experience depends in turn on the reflexivity of the social act, which is grounded in the very quality of the significant symbol, to arouse in self the same response it does in the other, that is, to have a meaning comprehended by all participants. By virtue of reflexively used symbols, whose meaning belong to the level of the social organism, the individual adapts himself *consciously* to the whole social process:

> [The] appearance of mind or intelligence takes place when the whole social process of experience and behavior is brought within the experience of any one of the separate individuals implicated therein, and when the individual's adjustment to

[525]Mead, *Mind, Self and Society*, p. 132.
[526]Ibid., p. 133.

> the process is modified and refined by the awareness or consciousness which he thus has of it.[527]

### *VI.2.2 Vygotsky's mediated activity*

For Vygotsky sign use is in certain ways analogous to tool use.[528] Tools in general are the mediators of human-environment interaction and enable the human beings to effect a change in nature as well as in themselves through their transformative activity. The tool, in general, is a middle term that is inserted between the activity and the object towards which the activity is directed. Signs can be regarded as being analogous to tools by virtue of this mediating character. The spoken sign, for instance, is certainly a mediator of social interactions just as the physical tool is the mediator of the human-environment interaction. He maintains, however, that signs should be seen as mediators that have an essential difference with respect to tools. Signs do not act on the external object but on the human psyche, and sign use transforms first and foremost human consciousness and behavior, of oneself or of another, which in turn fundamentally modifies human-environment interaction. Vygotsky writes:

> A most essential difference between sign and tool, and the basis for the real divergence of the two lines, is the different ways that they orient human behavior. The tool's function is to serve as the conductor of human influence on the object of activity; it is externally oriented; it must lead to changes in objects [...] The sign, on the other hand, changes nothing in the object of a psychological operation. It is a means of internal activity aimed at mastering oneself; the sign is internally oriented.[529]

Accordingly, the tool and the sign belong to two different lines of mediated activity, one practical and one psychological. While both the tool and the sign are species of artificial mediators, mediated activity can be conceptually differentiated into two distinct developments that become inseparably entangled in phylogeny and ontogeny. The latter, psychological kind comprises a whole range of cultural artifacts and their complex systems: "language, different forms of numeration and counting, mnemotechnic techniques, algebraic symbols, works of art, writing schemes, diagrams, maps and blueprints, all sorts of conventional signs, etc."[530] The effect of the utilization of such cultural artifacts as psychological tools is the alteration of the whole structure of mental operations, in analogy to the mediation

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[527]Ibid., p.134.

[528]Signs are tools to the extent that both are subsumed under the concept of "mediation." But Vygotsky, as it will be clearer in the following, stresses their difference more than their commonality and in that respect criticizes Dewey, for instance, for regarding the tongue as "the tool of tools" in reference to Aristotle's definition of the hand. See Vygotsky, *Mind in Society*, p.53.

[529]Vygotsky, *Mind in Society*, p.55.

[530]Vygotsky, "The Instrumental Method in Psychology," in *The Collected Works of L. S. Vygotsky. Cognition and Language (A Series in Psycholinguistics)*, ed. Rieber R.W. and Wollock J. (Boston, MA: Springer, 1997), 85–89.

introduced by the use of physical—or, technical—tools, which affect the processes of natural adaptation through altering the form of labor processes.[531]

These two mediations are intertwined in the development of artificial or instrumental acts (i.e., culturally mediated forms of practical activity), where the activity is also directed towards oneself, or towards another person, and not directly towards the environment. Such sign-mediated, cultural forms are peculiarly human and have their own historicity. Mental functions that underlie these forms have, he argues, phylogenetically a different origin (namely, in social processes) than those that underlie natural (i.e., non-modified) acts, as well as an independent historical course. Thus, there are no purely natural human acts, because mental processes undergo profound structural changes in development through socialization and enculturation. Vygotsky writes:

> The mastery of a psychological tool and, through it, of one's own natural mental function, always lifts the given function to a higher level, enhances and broadens its activity, recreates its structure and mechanism. Furthermore, the natural mental processes are not eliminated. They join the instrumental act.[532]

Sign activity has accordingly "a specific organizing function" that penetrates tool use and gives rise to hitherto unavailable forms of behavior.[533] Intellectual development takes a divergent course as sign use, most importantly speech, and practical activity, which otherwise have independent lines of development, converge: purely human forms of practical as well as abstract intelligence are products of this convergent development.[534]

When Vygotsky employs the term "mediation" to describe the peculiar structural characteristic of all higher human practical, social, and intellectual activity, a hasty comparison of his account to the picture that classical learning theory paints of animal activity could suggest itself; especially since he also schematizes mediated processes on several occasions in terms of a third element intervening between a stimulus and a response.[535] However, such a reading would be quite mistaken. Vygotsky employs the same terminology as the behaviorist theory of learning when he addresses an audience of natural scientists and when he is arguing precisely against the direct continuity thesis as espoused by early behaviorists, which conceives the complexity of human behavior to be the outcome of a mere quantitative enrichment in the structure of stimulus-response relations and not of a qualitative leap. Vygotsky considers the stimulus-response schema to be adequate only in modelling the elementary forms of behavior but not higher psychological operations. What he aims to convey with the term mediation, on the other hand, is that higher psychological operations involve

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[531]Vygotsky, "The instrumental method in psychology."

[532]Ibid.

[533]Vygotsky, *Mind in Society*, p. 24.

[534]Ibid.

[535]See especially the section "Structure of Sign Operations" in *Mind in Society*, p. 39-40.

active restructuration and manipulation of the stimulus situation in a way which, once in place, rules out the direct elicitation of response by stimuli. Sign is neither a simple relay between stimulus and response nor is built on a pre-existing relation between them. Sign operations allow for the transformation of the psychological process behind the response by breaking the direct link between it and the stimulus. The characteristic property of the sign is that of "reverse action:" the sign does not act on the environment but on the individual. In its most basic and primitive form it enables the individual to inhibit the urge to respond to the stimulus as well as to control his behavior from the outside.[536] This operation is at the basis of all, much more complex intellectual operations. Gradually sign activity reorganizes the structure of interrelations between psychological functions (such as perception or memory) and thereby eventually also the nature of these.[537] For instance, a memory based on passive recall gives way to a logical memory that reconstructs experiences to retrieve them. He writes: "The use of signs leads humans to a specific structure of behavior that breaks away from biological development and creates new forms of a culturally-based psychological process."[538] It is the fundamental operation through which enculturation takes place, since "the internalization of cultural forms of behavior involves the reconstruction of psychological activity on the basis of sign operations."[539]

I diverge from Vygotsky's analysis to the extent that he assumes a stimulus-response scheme can be applied to what he calls natural behavior. Stimuli, to any organism, are signs to be interpreted rather than elicitors. Learning is the establishment of semiotic habits, which are not atomistic *associations* between stimuli and responses that produce actions automatically, but a framework of *expectations*, or semiotic guides, constraints and boundary conditions that scaffold (not produce) action in its totality. The operation of signs that are cultural artifacts enables not a leap from a meaningless (or non-intentional) form of action to one that is characterized by meaning, but a restructuration of action so that semiotic habits can be formed and modified socially and self-reflexively. Vygotsky's analysis insightfully captures this latter, transformative operation of signs (and through them, of culture), and he is right in characterizing cultural forms of behavior in terms of a novel structural organization in psychological activity, although I do not

[536]Ibid., p.40.

[537]Vygotsky's general theoretical perspective on psychological investigation takes off from a criticism of the dominant practice of studying psychological functions atomistically. This approach, according to Vygotsky, presupposes that interfunctional relations (e.g. between perception and attention, or thought and memory) are constant, thus they can be factored out. Psychic development is accordingly approached as the autonomous development of single functions. Vygotsky maintains, in contrast, that the essence of psychic development consists in "the change of the interfunctional structure" and psychology must take as its main problem these relations and their development. The project he undertakes in *Thought and Language* (literally thinking and speech) is the realization of this approach. See Vygotsky, *Thought and Language,* p. 2.

[538]Ibid.

[539]Ibid., p. 57.

agree that the qualitative leap he assumes demarcates an absolutely novel category of sign-mediated action. What is relatively novel with respect to the signs of culture, instead, seems to be intersubjectively extended and self-reflexive psychological processes they typically mediate.

In what concerns the construction and development of meaning, it is possible to see a clear convergence with the Meadian position. The cultural system of symbolic meanings, with its artifacts, customs, values, presents a level of organization of its own, to which the individual can participate in but cannot completely reproduce in mental terms. The way of entry into this system is appropriation, which can give way to negotiation only subsequently. The appropriation of the signs of culture and culturally mediated forms of interpretation works from outside towards inside: First it takes place within social interaction, and displays the characteristic asymmetry between more competent members of the culture and the newcomers, and becomes subsequently an individual act. The child needs to adopt how signs are used initially without comprehending meanings—an ontogenetic process that cannot work in the other direction. The child must master the *forms* of action before mastering their social *meanings*; that is, development follows a path that goes from *performance* to *competence*. Only then, the child can become an autonomous subject of creative interpretive acts, the particular extent and quality would nonetheless be co-determined by the sociohistorical context and its symbolic mediators. Genuine autonomy is thus a social project and there is no autonomous individual without history, society, and culture.[540]

[540]David Bakhurst, "Vygotsky's Demons," in *The Cambridge Companion to Vygotsky*, ed. Harry Daniels, Michael Cole, and James V. Wertsch (Cambridge: Cambridge University Press, 2007), p. 74.

## VI.3 VYGOTSKY ON INTERNALIZATION AND SCAFFOLDING OF DEVELOPMENT

*A word is a microcosm of human consciousness.*

Vygotsky, *Thought and Language*

I have previously[541] briefly touched upon the notions of internalization and externalization in reference to Vygotsky and contemporary accounts of extended and scaffolded cognition. Here I focus in more detail on Vygotsky's own discussion of internalization of cultural forms of action and its role in the development of higher-order cognitive-semiotic capacities, in particular those for verbal communication and discursive thought.

Vygotsky's account of the development of higher-order mental functions pivots on a central notion; namely, of a "mind extending beyond the skin" as characteristic of the proximately intersubjective (and ultimately cultural) context of cognitive development.[542] This extended mind, whose features become in the course of development those of an individual mind, is characteristically a dialogical one, and the dialogical movement of higher-order cognitive processes are scaffolded by signs. Thus semiotic mediation, as Wertsch observes, is central to Vygotsky's psychological theory.[543]

The internalization of cultural forms of action is the primary route for the development of higher-order mental functions. It is not a simple transmission of social meanings, but comprises a structural transformation of the child's psychological activity on the basis of sign processes.[544] Internalization essentially consists in the reconstruction of processes of intersubjectively realized semiotic mediation as internal, or intrasubjective ones. This reconstruction is accomplished through a series of developmental events, during which the process that is being transformed changes (for the bigger part) as an *external* activity, realized through the mediation of material signs, until it eventually acquires an internal form. For many internalized cognitive operations, mediation by external, material signs remains their final form and does not give way to a completely intrasubjective function. However, most others go eventually inward and become inner functions. We can think about, for instance, how we formulate and solve complex mathematical problems. We use mathematical notations to represent elements of the problem to ourselves on paper, or on a computer screen, and manipulate the signs following a logical structure. Even gifted minds which do not need to rely

[541]See section V.6.

[542]James V. Wertsch, "A Sociocultural Approach to Socially Shared Cognition," *Perspectives on Socially Shared Cognition.* (Washington, DC, US: American Psychological Association, 1991).

[543]Wertsch, "The Semiotic Mediation of Mental Life: L. S. Vygotsky and M. M. Bakhtin," in *Semiotic Mediation* (Elsevier, 1985), 49–71.

[544]Vygotsky, *Mind in Society,* p. 57.

on pen and paper or other devices need to imagine the mathematical signs and operations in a manner that is structurally very similar to the materially realized process. On the other hand, we do not need to imagine, let alone write down, actual sentences in order to make an ordinary inference like "there must be someone in the house, since the stove is on," because such inferencing is a truly inner function which by itself (e.g., as integral part of perception) is not necessarily a linguistically represented process, although it may be so represented for other purposes, such as examining its validity.

A classic example by Vygotsky of how an activity is transformed through the internalization of a social process is the development of the pointing gesture:

> Initially, this gesture is nothing more than an unsuccessful attempt to grasp something. [...] The child attempts to grasp an object placed beyond his reach; his hands, stretched toward that object, remain poised in the air. [...] At this initial stage pointing is represented by the child's movement, which seems to be pointing to an object-that and nothing more. When the mother comes to the child's aid and realizes his movement indicates something, the situation changes fundamentally. Pointing becomes a gesture for others. The child's unsuccessful attempt engenders a reaction not from the object he seeks but from another person. Consequently, the primary meaning of that unsuccessful grasping movement is established by others. Only later, when the child can link his unsuccessful grasping movement to the objective situation as a whole, does he begin to understand this movement as pointing.[545]

We might also take into consideration the role of active teaching and demonstration in the acquisition of a highly idiosyncratic form such as pointing, but Vygotsky's point remains valid: The transition from the initial, non-social movement to a gesture for others goes through the internal reconstruction of the whole social situation in which the movement acquires meaning. The child begins to utter the gesture in the full sense of the term only when the interpretation of the gesture, its meaning for others, becomes an integral part of the production of the gesture.

What is most central to the development of higher-order psychological processes is the transformation of the sign using activity itself; in other words, the transformation of the very structure of the psychological processes realizing semiosis. Vygotsky illustrates the history of this transformation through the development of functions such as practical intelligence, voluntary attention, concept formation and logical memory, among others. A crucial and representative case discussed by Vygotsky is the transformation of communicative speech via egocentric speech (as the phenomenon was called by Piaget) to inner speech or verbal thinking.

Egocentric speech, or self-talk as it is more broadly called, is a developmentally transitory phenomenon (which disappears roughly around the time children reach school age) where practical activities of small children are

[545]Ibid., p. 56.

accompanied by audible verbal articulations that are not produced in an interactive context or with any perceivable communicative intention. Piaget interpreted the phenomenon as an ephemeral and inconsequential one. He thought that, on the one hand, egocentric speech simply accompanies for a period the young child's activity without having any significant bearing on it. He maintained that egocentric speech does not serve any function on the grounds that it does not bring about any improvement in the child's problem solving ability, nor is it in any other way efficacious in shaping the child's experience. On the other, he thought that it was an indication of a certain immaturity. Namely, egocentric speech is a non-functional exercise in vocal expression on the young child's part, whose mind has yet not developed into a social mind; thus, it is characterized chiefly by its lacking the social, communicative function of speech. The child's activity of speaking to oneself is rooted in the original egocentricism of the developing mind.[546] Thus, he concluded, the fate of egocentric speech is atrophy; i.e., to simply disappear as the child progresses in his or her social-cognitive development.

Piaget's interpretation of egocentric speech manifests, according to Vygotsky, certain features of his conception of thinking. Piaget attributed the peculiar structural features of egocentric speech to its being an expression of the undeveloped capacity of thinking. The young child's thought is a-social and a-logical until the point it becomes verbal thought as a result of cognitive-linguistic development, because the logical form is imposed on it from the outside along with the compulsion to adapt to the social reality. Real sociality in turn begins only with communicative linguistic speech. The non-functional speech of the young child is thus merely an expression of the illusory, self-serving, dreamy nature of infantile thought (of its "autistic" character), which for Piaget does not serve to adaptation to social reality but rather to satisfaction through phantasy. The young child utters words in an autistic manner, because they do not yet represent anything. His interpretation obviously reminds one of the Freudian conception of infantile phantasy. Piaget's notion of egocentricism of the infantile mind, of which egocentric speech is an expression, actually reflects his embracement of the priority of the *Lustprinzip* over *Realitätsprinzip*, and the rejection of this demarcation is one of the starting points in Vygotsky's critique.

According to Vygotsky, it is a mistake to divorce pleasure and satisfaction of needs from adaptation to reality, which leads to a misleading conception of needs, desires, interests on the one hand, and of thinking on the other. The logical implication of this meta-model for Piaget is that he has to represent realistic thinking as a pure form of thought; that is, as a phenomenon that is severed from practical needs, interests and desires of the organism. Logical thinking comes about thereby through the understanding of verbal thought, which itself is

[546]Piaget indeed thought that children do not enter in any real social interaction until they reach the age of seven or eight. This was partly due, according to him, to the fact that children's language until this time features gestures, expressions, mimicry as much as (or more than) it does words. See Jean Piaget, *The Language and the Thought of the Child* (London: Routledge, 1959), p. 40-2.

independent from practical activity.[547] However, such a pure thought that strives solely for truth independently of the satisfaction of needs and desires, he maintains, does not exist in nature and neither can it be the case for the child.[548] Sociality in turn becomes a communication of souls and not of embodied people engaged in practical activity, thereby something originally alien to the child's mind.

We can also view this criticism in the context of Vygotsky's broader perspective on the relationship between thinking and affect and his criticism of the traditional psychological approaches to the intellect that tend to isolate the intellectual from the volitional and affective dimensions of consciousness.[549] When one isolates these functions, thinking becomes an autonomous stream of "thoughts thinking themselves," which flows independently of the motivations of the embodied thinker.[550] The epistemic implication of this is that one effectively precludes any causal explanation of thinking and any explanation of how thinking influences affective and volitional processes. The intellectual and affective processes should instead be regarded as belonging to a systemic whole and this systemic whole constitutes, for Vygotsky, a unit of psychological analysis that is not further reducible to any self-contained, meaningful elements. We are to conclude, then, that "[e]very idea contains a transmuted affective attitude toward [that] bit of reality to which it refers."[551] Approached from the other direction, giving the analytical priority to this systemic whole enables us to see how thinking can be concretely embedded in the dynamics of the social and practical activity of the person. Vygotsky's central claim, accordingly, is that the child's mind is both social and adaptive to reality from the start, because logical thinking and communicative sociality are not processes divorced from embodied practical activity. The true direction of the development of thinking thus is not from the individual to the social but from the social to the individual.

It was thus Piaget's metapsychology, according to Vygotsky, that which in fact prevented him from seeing a substantial connection between egocentric speech and practical activity on the one hand, and between egocentric speech and the development of thinking on the other. Although we can say that Piaget's constructivist psychology was a pioneering research program by virtue of its investigation of the origins of representational thought through studying the developing features of child's activity and experience, Vygotsky seems right in maintaining that Piaget, despite these virtues of his research program, could not see the constitutive relation between the very activity of speech and thinking.

Vygotsky's empirical investigation of egocentric speech, on the other hand, is integral to this broader theory on the relation between thinking and speech,

[547]Vygotsky, *Thought and Language*, p. 53.
[548]Ibid., p. 38.
[549]Ibid., p. 10.
[550]Ibid.
[551]Ibid.

which culminates in a genetic account of the nature of verbal thinking. According to Vygotsky, egocentric speech is partly similar to communicative speech in its external expression, yet completely different from it in its function. Functionally, it constitutes the initial basis for inner speech.[552] Thus, far from being ontogenetically inconsequential, it is a necessary intermediary form between external, communicative speech and inner, or internalized speech that gives rise to verbal thought. The major problematic of intellectual development for Vygotsky, contra Piaget, is not socialization of an initially a-social mind, but the internalization of social operations as the basis for higher mental functions. In the context of the transformation of speech activity, the transition from egocentric to inner speech constitutes the internalization of an originally communicative function as a psychological one, namely as verbal thinking or individualized reasoning, through a series of structural and functional transformations.

Egocentric speech or self-talk is an intermediary form both in a structural and functional sense. Firstly, while this self-centered, non-communicative speech is still expressed in material (i.e., sounded) linguistic signs and utilizes the dialogical form of communicative speech, it differs from it in various structural aspects: It does not follow the common grammatical sequence and rules of a language in that it does not feature full sentences, and it is heavily abbreviated and full of omissions—most frequently of the grammatical subject together with a foregrounding of predication. These structural features are accompanied by certain semantic, or broader semiotic features. Its content becomes unintelligible to others when divorced from its concrete situational context, for instance if recorded or transcribed into writing. Egocentric speech, in Vygotsky's analysis, is characterized by a dominance of contextual, fluid and dynamic "word-sense," which is the complex whole of all individual experiential content aroused through the word, over "word-meaning," which is the generalized, relatively more stable and communicable content conveyed through the word. The word-meaning, however, is not something reducible to a definition in a dictionary. It is what Vygotsky proposes as the basic unit of verbal thought, thus it is a unity of thinking and speech as well as a unity of generalization and social interaction.[553] This unit evolves and changes in its nature through the course of development, and is open to ongoing modification in communicative social interactions through its ongoing dialectical relationship with the word-sense.[554]

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[552]Vygotsky, *Mind in Society*, p. 28.

[553]Both word-sense and word-meaning are captured best by Peirce's category of the interpretant, and it is possible to compare this distinction between word-sense and word-meaning to Peirce's differentiation of the immediate from the dynamic interpretant. Word-meaning, accordingly, is akin to a concept but it is much more closely tied to the material sign.

What Vygotsky aims at with "word-meaning" is arguably a reconstruction of the concept of a concept as something both broader and more intimately related with the sign, in accordance with his proposed metapsychology. See Chapter 1 in *Thought and Language*.

[554]The word-meaning, unlike the word-sense, is not meaning as it is in the individual mind but the (social) meaning we *participate* in. For Vygotsky, the word-meaning grows and changes though the interplay of infinitely many word senses. In this regard, it is akin to Peirce's conception of the

These grammatical and semantic features are shared to a significant extent by the developmentally posterior inner speech. The latter is not an internal, soundless talk (as behaviorists claimed at the time) but by itself a distinct psychological function. It differs from external speech and resembles self-centered speech with respect to its abbreviated and predication-centered syntax, and the predominance of context and sense over generalized, communicable meaning. Functionally, inner speech is a dynamic arena where external communication is ongoingly transformed into internal dialogue and private, nebulous thoughts become communicable. Inner speech operates at the junction of thinking and speech where verbal thinking emerges as a unique form. Rational communication on the basis of generalized concepts and logical operations is a parallel development that requires and further contributes to the sophistication of verbal thinking.

Secondly, egocentric speech serves, as does inner speech later, an individual psychological function rather than a social, communicative one. It facilitates, by the child's own agency, the organization of the child's experience and guides his or her practical activity from the outside. It is an activity of self-scaffolding that reconstructs the intersubjective scaffolding situation:

> Instead of appealing to the adult, children appeal to themselves; language thus takes on an intrapersonal function in addition to its interpersonal use. When children develop a method of behavior for guiding themselves that had previously been used in relation to another person, when they organize their own activities according to a social form of behavior, they succeed in applying a social attitude to themselves. The history of the process of the internalization of social speech is also the history of the socialization of children's practical intellect.[555]

It is a telling observation, coming out of Vygotsky's experimental studies, that the extent to which children engage in self-centered speech activity is directly correlated with the difficulty of the task they are presented with.[556] As the natural flow of their activity is disrupted, children try to understand the various problems and impediments they are presented with and to solve or circumvent them by

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symbol as something that lives, grows, changes and possibly dies. For Peirce, symbols have a life of their own, to which persons temporarily participate:

> The man-sign acquires information, and comes to mean more than he did before. But so do words [...] Man makes the word, and the word means nothing which the man does not make it mean, and that only to some men. But since men can think only by means of words or other external symbols, these might turn round and say: "You mean nothing which we have not taught you, and then only so far as you address some word as the interpretant of your thoughts." In fact, therefore, men and words reciprocally educate each other; each increase of a man's information involves and is involved by, a corresponding increase of a word's information [CP 5.313].

[555]Vygotsky, *Mind in Society*, p. 27.
[556]Ibid.

talking to themselves.[557] What this indicates, in the light of the considerations above, is arguably that children try to recreate the original interactional situation of practical activity, which involves the guidance of a parent or instructor, as an individual activity that is guided by their self-directed speech. Just as in the interactive situation a more competent peer guides the puzzled child's attention by, for instance, naming and pointing to objects, the child points to and calls out names of objects in order to direct his or her own attention and orientation in space. The child begins to voice self-addressed questions in the face of confusion or failure that are similar to those posed previously in interactive settings by a more competent peer in order to articulate alternative options or to emphasize the goals, but the child does so without formulating them in a clearly understandable grammatical structure and without expecting any answer. In later stages, the child also begins to articulate though speech possible courses of action, in a fashion that is similar to the suggestions given by another in the interactive situation, thus realizing a premature planning function.[558]

Children engage in self-talk to support and guide their own attention and behavior, which enables them, firstly, to manipulate more efficiently the features of the environment (or of the problem situation) by virtue of freeing their activity from the constraints of their immediate visual field: "*children solve practical tasks with the help of their speech, as well as with their eyes and hands*."[559] For Vygotsky, at the core of peculiarly human forms of behavior lies "[t]his unity of perception, speech, and action, which ultimately produces internalization of the visual field."[560] Secondly, self-talk gradually changes the temporal structure of the child's experience as he or she begins to use language for planning actions beforehand. In its earlier manifestations, speech is temporally posterior to and is dominated by the activity. It is used mostly to describe or emphasize aspects of the situation. With time, the child begins to speak to himself or herself at earlier phases of the activity. Eventually speech moves to the starting phase, which for Vygotsky marks the emergence of a new relation between speech and action: "Now speech guides, determines, and dominates the course of action; the planning function of speech comes into being."[561] When this novel relation is established, the dimension of future becomes an integral part of the child's movement in the surrounding environment. A reference to future now guides the child's approach to and manipulation of the features of the situation. The child thereby no longer acts under the strict constraints of what is directly given in the visual field and becomes able to establish indirect links between the action and the goal. The child's activity

[557]Vygotsky, Thought and Language, p. 30. Vygotsky maintains that this relation between disturbance and speech activity indicates also that speech indicates a process of becoming aware.

[558]See also Uygun Tunç, "Symbolically Mediated Interaction and Perspective-Taking."

[559]Vygotsky, *Mind in Society*, p. 26. Italics as in the original.

[560]Ibid. The sense of "internalization" here is akin to an internal modelling of the world.

[561]Ibid., p. 28.

detaches itself from direct perception and comes instead under the control of sign processes.

This series of transformations are joined by yet others as self-directed speech gradually gives rise to inner speech. The egocentric speech of younger children and the inner speech of more mature children (as well as of adults) have in common the feature of being speech-for-oneself, which has a *reflective* function. As inner speech becomes stabilized as a psychic function, egocentric speech disappears, because it is replaced by the former.

Further, Vygotsky maintains that egocentric speech neither indicates the egocentricism of the young child's thought nor its deficiency with respect to contact with reality. Vygotsky's theoretical conjecture is that speech does not become socialized as the child's thought adapts to the social and practical reality, but it is purely social in its initial function. With time, it is differentiated into self-directed and other-directed speech (i.e., speech-for-oneself and speech-for-other). Egocentric or self-directed speech is not (hetero-) communicative in its function; i.e., it is not a speech-for-other, but it is nonetheless social both in its origin and its form. We could also say that it is auto-communicative. Vygotsky maintains that both egocentric and (hetero-) communicative speech are social; they only have different functions. Further, egocentric speech is fused with not an illusory and irrational thinking but with one that is already rational and realistic.

Inner speech emerges as a novel form out of self-directed speech. It is not merely silent speech. Rather, inner speech is an autonomous psychological function in its own right, and constitutes a "*distinct plane of verbal thought*."[562] By the same token, vocal (hetero-communicative) speech is not realized by a direct vocalization of inner speech. In inner speech a word can stand for a multitude of feelings, memories and thoughts, and it can at times substitute whole propositions or even a discourse. For a given single word, the inner word-sense can even be incommensurable with the word-meaning. Inner speech is characterized, in partial similarity to self-centered speech, by a dominance of the word-sense over word-meaning and a pronouncedly predicative and idiomatic structure, among other features. Vygotsky offers along these lines a quasi-definition:

> Inner speech is not the interior aspect of external speech--it is a function in itself. It still remains speech, i.e., thought connected with words. But while in external speech thought is embodied in words, in inner speech words die as they bring forth thought. Inner speech is to a large extent thinking in pure meanings. It is a dynamic, shifting, unstable thing, fluttering between word and thought, the two more or less stable, more or less firmly delineated components of verbal thought.[563]

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[562]Vygotsky, *Thought and Language,* p. 248. Italics as in the original.

[563]Ibid., p. 249. Vygotsky adds that the next, still more inward plane of verbal thought is the thought itself. Thought itself does not necessarily unfold in parallel to speech, and it is impossible to analyze thought into units that match those of speech. This becomes especially apparent, according to Vygotsky, when thoughts remain ineffable how hard one tries to put them into words. This reflects the fact that sometimes thoughts also do not easily enter word-meanings or lend themselves to organization through

In concluding this section, let us return to the broader genetic perspective. In the light of Vygotsky's account of the development of verbal thought, it so appears that thought and speech initially follow two separate developmental lines, as a rudimentary form of thinking independent from communication and a form of communication dependent on expression and lacking generalized meanings—as prelinguistic thought and preintellectual thinking. Gradually these two lines converge to give rise to a new form of activity, whereupon speech serves intellect and thoughts begin to be communicated. Thus, thought becomes verbal and speech rational.[564]

## VI.4 TRANSFORMATIONS OF THE STRUCTURE OF SEMIOSIS

In this last section of the chapter, I engage with the notions presented so far in relation to the more concrete dynamics of cognitive-semiotic development, with a view to trace the operation of what I have termed transformative communication from the earliest phases of this development on.[565] I thus take a step back and concentrate firstly on the pre-verbal communicative interactions. More particularly, I trace the operation of transformative communication through the gradual establishment of patterns required for reflexive semiosis. This operation, I maintain, consists in a hierarchical series of transformations in the structure of semiosis and each such transformation correlates with a shift in the characteristic focus of intersubjective semiotic scaffolding. As I have previously argued in connection to the notion of levels of meaning in communication and cognition, this series of transformations bring about a differentiation of meaning into inter-referential levels, and this differentiation takes place firstly in the context of social interaction—corresponding to the emergence of levels of meaning in communication—and secondly in the domain of cognition. The guiding idea behind this claim is that certain dynamics of communicative interaction can give rise to higher order patterns that modulate, govern or constrain processes of intersubjective semiosis, and these novel patterns in turn shape and support the formation of higher-order patterns in intrasubjective semiosis on the part of the infant. In a resounding manner, Paul Thibault maintains that "in the process of

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concepts either. Verbal thought is the mediator between thought and speech; it is a two-sided function that transforms thought into speech and speech into thought. But this transformation of thought into speech through verbal thought does not exhaust the process of thought itself; that is, the end form cannot represent all that can be represented in the source. If that was possible, there would not be any intractable problem of ineffability. All in all, thought and speech become what they are through the development of verbal thought and rational speech. The relation between thought and speech is an ongoing, dynamic and dialectical process. Thus in a certain sense "thought is born through words," and "a word devoid of thought is a dead thing." See Ibid., p. 255.

[564]Vygotsky, *Thought and Language*, p. 82-3.

[565]Some of the ideas explicated and discussed in this section figure in a more limited fashion in Uygun Tunç, "Transformative Communication as Semiotic Scaffolding of Cognitive Development."

adapting to each other, there emerge higher order patterns that regulate the possible ways in which the two members of the [mother-infant] dyad can interact with each other. The resulting dialogic closure of the mother-infant dyad consists of emergent order and organization."[566]

In his work on infant semiosis, Colwyn Trevarthen identifies three stages in the development of communicative and cognitive capabilities and links these to three levels of intersubjectivity; namely, primary, secondary and tertiary intersubjectivity.[567] He thereby conveys a history of cognitive-semiotic development as a history of the emergence of levels of intersubjectivity, which I think resonates with Vygotsky's crucial insight that "the levels of generalization in a child correspond strictly to the levels in the development of social interaction."[568] I maintain that the emergence of novel levels of meaning in communication and cognition accords with a genetic interpretation of the Peircean icon-index-symbol trichotomy. The hypothesis is that earliest communicative interactions gradually give rise to iconic, indexical and symbolic legisigns. That is not to say that at the stage where one begins to think and communicate in symbolic legisigns one ceases to do so in iconic or indexical ones. It is rather to say that symbolic legisigns require and imply the use of iconic and indexical ones, and indexical legisigns require and imply the use of iconic ones—more often than not in combination or in the form of complex signs. I regard this gradual development in terms of growing habits of sign production and interpretation and think that it correlates with the emergence of novel dimensions of communication. I approach, thus, the three major transformations in the structure of semiosis I have mentioned above in terms of Trevarthen's three levels of intersubjectivity on the one hand, and in terms of levels of meaning on the other. I take as focus of analysis three paradigmatic activities that I think characterize Trevarthen's three levels of intersubjectivity: i) mimetic imitation, ii) coordinated interactivity, and iii) symbolic play. I correlate these activities with the unfolding levels and changing nature of intersubjective coordination, so that primary intersubjectivity concerns a dyadic coordination through sensimotor and affective coupling or resonance, secondary intersubjectivity concerns a triadic coordination through shared reference and tertiary intersubjectivity concerns a properly social coordination through shared, social meanings. Transformative communication, accordingly, realizes the transitions to novel levels of meaning and intersubjective coordination.

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[566] Paul J. Thibault, "The Dialogical Integration of the Brain in Social Semiosis: Edelman and the Case for Downward Causation," *Mind, Culture, and Activity* 7, no. 4 (2000): 291–311, p. 303.

[567]See Colwyn Trevarthen, "The Concepts and Foundations of Intersubjectivity.," in *Intersubjective Communication and Emotion in Early Ontogeny*, ed. Stein Bråten (Cambridge: Cambridge University Press, 1998).

[568]Vygotsky*, Izbrannie psikhologicheskie issledovaniya* (Moscow: Akademii Pedagogicheskikh Nauk, 1956), as cited in Michael Cole, "The Zone of Proximal Development: Where Culture and Cognition Create Each Other," *Culture, Communication and Cognition: Vygotskian Perspectives,* ed. James V. Wertsch (Cambridge University Press, 1985), 146–61, p. 148.

The differentiation of levels of meaning is intimately related, as I have previously argued, to the development of key metasemiotic abilities. As intersubjective coordination goes from dyadic to triadic and from triadic to social, and as indexical and symbolic dimensions of communication unfold beyond the iconic, the child gradually achieves a basic understanding of the signification relation through sign-object differentiation, recognizes the possibility of difference in interpretation and thereby beings to differentiate the interpretant as part of signification, and eventually becomes able to coordinate various ways in which a sign can be interpreted (interpretant coordination).

### *VI.4.1 Mimetic imitation*

In divergence from earlier views on pre-linguistic infants, which mostly denied them any communicational effort or capacity (such as Piaget's), an important body of research in the last few decades on pre-linguistic parent-infant communication or early infant semiosis[569] presents a picture of semiotically quite rich interactions. A crucial point often made in reference to infant semiosis is that the infant's earliest meaning-making activity is fundamentally dialogical, and the development of the child's semiotic abilities is a social process from the start, which implies, among other things, that we need a much broader perspective on communication than linguistic exchange and a more thoroughly social perspective on cognitive-semiotic development.

The earliest communicative interactions have arguably almost a purely metacommunicative character. This might come across as a strange claim, because if metacommunicative messages are somehow about ordinary messages that have denotative content, they seem to presuppose the denotative level of communication, which is yet completely absent. However, they have a predominantly metacommunicative character in the sense that the "content" or "topic" of communication is the very forms and patterns of communicative interactions, including most importantly the qualities of the relationship between the communicators. The emergence of the denotative level of communication, on the other hand, requires at the minimum that the parties can refer to things to which they can collectively attend. In other terms, the most basic form of referencing requires the coordination of three elements: It is an utterance that addresses an interpreter's attention to an object. Achieving such a triangulation requires sign-object differentiation, and the earliest communicative interactions

[569]See e.g. Mary Catherine Bateson, "Mother-infant Exchanges: The Epigenesis of Conversational Interaction," *Annals of the New York Academy of Sciences* 263, no. 1 (1975): 101–13; Trevarthen, "Communication and Cooperation in Early Infancy: A Description of Primary Intersubjectivity," in *Before Speech: The Beginning of Interpersonal Communication,* ed. Margaret Bullowa (Cambridge: Cambridge University Press, 1979); Trevarthen, "Infant Semiosis," in *Origins of Semiosis: Sign Evolution in Nature and Culture*, ed. Winfried Nöth (de Gruyter Mouton, 1994); *Michael A.K. Halliday, Learning How to Mean: Explorations in the Development of Language* (London: Edward Arnold, 1975).

are the cradle of this basic metasemiotic differentiation. Pre-linguistic metacommunicative interactions have a crucial role to play in the realization of this and other metasemiotic differentiations, and it is the peculiarity of the earliest infant-parent communication that metacommunicative functions of signs begin to be explored even before the onset of referential communication. This is due to a significant extent to the enormous communicative potential of the human infant and the correlated intensive communicative effort involved in human caregiving practices.

As Bateson distinguishes between the report and command aspects of a message in explicating the functions and kinds of metacommunicative messages (i.e., metalinguistic messages that have to do with the report aspect and pragmatic messages that have to do with the relationship between the communicators), Trevarthen similarly distinguishes between the referential and relational dimension of signs.[570] In the earliest and simplest form of mimetic imitation that is often called neonatal imitation, the "reference" of a gesture produced by the infant in direct imitation of the other party's gesture is none other than to its very form. This reference gradually extends over to objects and other persons in the environment as the infant begins to link the communication partner's gaze and expressions to his or her own in attending to an object or another person. Imitation of form should not be seen as a non-semiotic behavior, because even the most direct reproduction of a gesture, expression, voice or movement is not an automatic response, but a communicative engagement that is oriented towards an "other" and it is always accompanied by intersubjective contact such as thought gaze, touch and bodily orientation.[571] Neonatal imitation has, thus, some interesting similarities to the metalinguistic function of metacommunication. Since as yet[572] there is no differentiated content, neonatal imitation cannot be counted as a metasemiotically mediated activity. But when we consider the whole developmental sequence from neonatal imitation to older infants' purposeful imitation involving an understanding of meaning, the neonate's pure attention to form and its reproduction prior to an apprehension of meaning arguably plays a crucial role in eventually differentiating the form as a distinct aspect of the behavior or gesture from its purpose (the sign and its meaning). The ongoing imitation of the mere forms of gestures, expressions and movements serves to stabilize these as reproducible proto-utterances, which can later also be produced by the infant in a delayed manner and eventually in the absence of the prior production of the same form by the other. After twelve months, when the child

[570]See Trevarthen, "Infant semiosis."

[571]See Andrew N Meltzoff and M Keith Moore, "Imitation of Facial and Manual Gestures by Human Neonates," *Science* 198, no. 4312 (1977): 75–78; Emese Nagy, "From Imitation to Conversation: The First Dialogues with Human Neonates," *Infant and Child Development* 15, no. 3 (May 1, 2006): 223–32; Trevarthen, "The Concepts and Foundations of Intersubjectivity."

[572]That is, roughly before 12 months of age. See also Malinda Carpenter et al., "Social Cognition, Joint Attention, and Communicative Competence from 9 to 15 Months of Age," *Monographs of the Society for Research in Child Development* 63, no. 4 (1998): 1–143.

can both reproduce the form and apprehend the meaning of a behavior or gesture, it becomes also possible to negotiate the form (e.g., in slightly changing them in playful interactions). This marks the emergence of metacommunication in its function of framing other or lower-level messages.

What has an even more significant role in the earliest communicative interactions is the relational aspect of communication that has to do with the relationship between the communicators. Since at this stage shared attention and collective manipulation of objects is lacking, we can hardly speak of a denotative level of communication but a nascent relational metacommunicative level where interpersonal orientations, the relationships are negotiated and transformed is already there. Relational meaning is typically conveyed through intonations, prosody, interactional sequences and bodily expressions of emotion, which collectively make up the bourgeoning *pragmatics* of proto-linguistic communication. A pertinent object of focus in exploring the pragmatics of infant semiosis is the proto-linguistic sources of what Michael Halliday conceives as the interpersonal grammar. For Halliday, language simultaneously fulfills a number of meta-functions in the adult system of meaning-making, which comprise *construing experience* (involving conceptual categories and reference) and *enacting interpersonal relationships,* besides what he calls the textual meta-function related to the textual discourse formation. He often refers to the former as the ideational and the latter as the interpersonal meta-function. In proto-conversations these are yet mostly distinct; that is, not yet organized as interwoven or overlapping functions.[573] The interpersonal-pragmatic component of grammar is one of "language as action," or its *doing* aspect, which provides a semiotic resource for enacting interpersonal relationships and patterns of broader social processes involving roles, identities, statuses and so on. In the context of semiotic development, novel meaning is brought about first as interpersonal activity before it is re-construed in the ideational context; i.e., in construing experience. As the ideational function of signs comes to be established in subsequent phases of development, the interpersonal-pragmatic and the ideational functions are merged, so as to be realized simultaneously by complex forms.[574]

This significantly Vygotskian idea also finds resonance in Trevarten's research on primary intersubjectivity. The earliest communicative engagements in the infant-parent dyad feature dynamic mutual attunement to each other's emotion expressions, vocalizations, gaze and bodily orientations, which gradually gives rise to intersubjectively settled and anticipated interaction patterns. They take turns in producing such utterances and anticipate complementary responses, maintain as well as adjust the rhythms, timing, sequencing and affective tone of the communicative interactions. The imitation of forms is thus coupled with the

[573]Michael A. K. Halliday, "Towards a Language-Based Theory of Learning," *Linguistics and Education* 5, no. 2 (1993): 93–116.

[574]See also Thibault, "The Dialogical Integration of the Brain in Social Semiosis," p. 305.

imitation of roles and the enaction of most basic dialogical patterns such as turn taking. Beyond jointly establishing the most basic patterns of intersubjective contact, communicative interactions of primary intersubjectivity involve the earliest manifestations of "acts of meaning," which evolve into a *protolanguage* around nine months. [575] "Proto-moods" are a central element of these earliest communicative acts, which are in turn enabled by the gradual establishment of schemes of sign combinations, such as coupling utterances with eye contact, intonation or bodily postures.

The roots of the mood system of adult communication, involving categories such as declarative, interrogative and imperative, can already be found in the dynamics of infant-parent communication. A vast body of observations attest to young infants' interest and motivation in establishing and maintaining communicative relations, to their anticipation of complementary communicative interests from others, and to their attempts at rectifying contact when affective misunderstandings occur or synchronization fails. The infant-parent dyad is from early on engaged in uttering invitations, suggestions and questions. Already in the first year, also imperatives and directives begin to shape the interaction as the utterances of the infant-parent dyad change in "illocutionary force."[576] According to Thibault, the mood system is the fundamental semiotic resource for organizing the dialogical dynamics of communication to the effect that both information about the shared world and the interpersonal (e.g., agentive, affective etc.) orientations of the communicators to this information and to each other can be transformed.[577] Proto-moods, on the other hands, in particular those moods such as the interrogative which have a crucial role in relational terms, seem to be the first level of this multilevel and multimodal complexity of adult communication. Trevarthen too contends the interrogative "voice," as he idiosyncratically puts it, to be the primary relational aspect. He argues further that this mood (or "voice") characterizes what he in allusion to Buber calls the *I-Thou* mode of relationship. This relational mode is later complemented with the other, *I-it* mode, as the child becomes able to *refer* to objects thorough signs. According to Trevarthen, within the context of primary intersubjectivity such relational "voices" and an *emotional* syntax of communication gradually emerge as the infant moves towards negotiation of expressions with increasing initiative from three months on.[578]

As I have outlined in the beginning, at this earliest stage parent-infant communication is predominantly characterized by of iconicity. What this means

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[575]Colwyn Trevarthen, "Signs Before Speech," in *The Semiotic Web*, ed. Thomas A Sebeok and Jean Umiker-Sebeok (Berlin: Mouton de Gruyter, 1990); Halliday, *Learning How to Mean: Explorations in the Development of Language*.

[576]See Colwyn Trevarthen and Helen Marwick, "Signs of Motivation for Speech in Infants, and the Nature of a Mother's Support for Development of Language," in *Precursors of Early Speech* (London: Palgrave Macmillan UK, 1986), 279–308. The term "illocutionary force" is a reference to Austin's speech act theory.

[577]Thibault, "The Dialogical Integration of the Brain in Social Semiosis."

[578]Trevarthen, "Infant Semiosis."

in this context is that the gestures, expressions and vocalizations are, as Thibault says of iconic signs, topological-continuous or analogical in character and have a more or less direct or necessary relationship to their objects.[579] For Thibault, *intonation* is a prime example for early iconicity, because it presents the affective states of the utterer through a rather direct relationship of "likeness," or in their "embodied immediacy."[580] Intonation is analogical, thus has a one-to-one relationship to the affective state it signifies. Such iconic signs that the parent-infant dyad relies on in the earliest proto-conversations are not part of or accompany indices or symbols, at least on the part of the infant, and as such do not have any separately identifiable lower level message to "frame," as intonation or prosody frames verbal utterances in mature communication. However, they fulfill the interpersonal-pragmatic function of signs in being *about* the relationship between the communicators. This function is realized in part thanks to the interpretive input of the parent, which is enormous compared to common communicational practice.[581] Moreover, by imitating the parent's iconic signs in these early exchanges, the infant is also apprenticed into the iconic means of verbal communication, such as the communicational use of varying melodies, rhythms, and paces of a language.

As the relation between the iconic sign and its object, such as that between the intonation or the facial expression and the affective state, is as yet rather necessary and immediate, the sign is not differentiated by the infant from its object. It is a central parental practice to gradually introduce a distance between these two, and there is a plethora of examples of how this is attained in early communicative interactions. A representatively significant case of transformative communication is what developmental psychologists call "affect attunement"[582] or "affect marking."[583] Broadly, this is a form of affective rapport. But in difference to emotion contagion, which functions as a most basic form of empathy, the parent often attunes to the affective states of the infant by responding to his or her emotional expressions with a sufficiently similar but markedly different expression. By hitting a delicate balance of similarity and difference, the parent communicates to the infant both that his or her emotion is being *recognized*—since the parent's expression is similar enough to be iconic of the infant's expression—and that the emotion (i.e., the dynamic object) belongs to the infant and not to the parent, or at least not to the same intensity. The message thereby

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[579]Thibault, "The Dialogical Integration of the Brain in Social Semiosis," p. 300; Thibault, *Agency and Consciousness in Discourse: Self-Other Dynamics as a Complex System* (Continuum, 2004), p. 22-3. Halliday too contends that the first signs are iconic in character in that meaning and expression have a natural relationship. See Halliday, "Towards a Language-Based Theory of Learning," p. 95.

[580]Thibault, "The Dialogical Integration of the Brain in Social Semiosis," p. 299.

[581] Jerome S. Bruner, "The Ontogenesis of Speech Acts," *Journal of Child Language* 2, no. 1 (1975): 1–19.

[582]Daniel N. Stern, *The Interpersonal World of the Infant*, *New York Basic*, 1985.

[583]Peter Fonagy et al., *Affect Regulation, Mentalization and the Development of the Self* (New York: Other Press, 2002).

communicated by the parent on the implicit metacommunicative level is equivalent to "I feel you but I am *not* you." Affect marking or attunement plays a quite significant role not only in the infant's affective development, but also in his or her cognitive-semiotic development. On the one hand, the affective rapport provides a dependable and stable environment for the infant, against the background of which earliest signs can become salient and gradually acquire a habitual form. On the other, the distance introduced between the sign and the object—between the expressions and the emotions—is crucial for the infant to eventually attain mental state awareness and constitutes a basic resource for affective self-regulation.[584]

This basic differentiation enables the infant to gradually achieve the capacity for the interpretation and use of indexical communicational signs, which relate to their objects not in a direct, analogous manner but rely on associations and inferences that connect context-dependent but repeatable signs with familiar objects (i.e., experiences, situations, things). This transition requires, on the basis of a minimal sign-object differentiation, that the parent-infant dyad develops *habitual* forms of display, as Trevarthen puts it,[585] so that the infant can associate the occurrence of a familiar expression, vocalization, gesture, or behavior with the occurrence of a familiar event. In Peircean terminology these can be called iconic legisigns. Subsequently such habitualized or ritualized forms can be interpreted as indicating intentions, requests, or as directing attention to objects or third parties. For instance, a vocalization can turn into an exclamation (e.g. "Yuck!" or "Help!") by acquiring a habitualized form and function as an indexical legisign that conveys a quasi-proposition or command. The idiosyncratic pointing gesture also relies on such habitualized forms in functioning as a communicational index. Various activities that characterize the emergence of a metacommunicative level in primary intersubjectivity, such as dramatization, exaggeration, ritualization of dialogical sequences, repeated performance of "tricks" or jokes, similarly contribute to the stabilization of the differentiation between the sign and the object, and pave the way for the gradual establishment of communicational indexes.[586]

### *VI.4.2 Coordinated interactivity*

It has been widely documented that beginning around nine months of age profound changes occur in the structure of social interaction, which are accompanied by the appearance of indexical communicational signs. According to Trevarthen, these collectively indicate a novel level of communicative potential,

[584]Maria Legerstee, Gabriela Markova, and Tamara Fisher, "The Role of Maternal Affect Attunement in Dyadic and Triadic Communication," *Infant Behavior and Development* 30, no. 2 (May 2007): 296–306.

[585]Trevarthen, "Infant Semiosis."

[586]Trevarthen, "Signs Before Speech"; Trevarthen, "Infant Semiosis."

which he calls secondary intersubjectivity. While younger infants are primarily interested in intersubjective contact, those who approach their second year begin to show an improved interest in inanimate objects. Shared attention is the landmark semiotic achievement that marks this profound change: it implies that the parent-infant dyad can now share a space of interest and point of view.[587] As the parent-infant dyad begins to share a point of view on some common object of reference, the dyad in fact becomes a triad. The infant's increasing motor control over his or her body allows the dyad to coordinate their bodily approaches to and manipulation of objects. The infant now can attain a basic understanding of others' intentions in relation to objects. In broad semiotic terms, this phase marks the differentiation of the interpretant as a distinct element of semiosis on the foundation of a gradually stabilized sign-object differentiation.

Building on the already established, basic relational foundation, which implies that the parent-infant dyad manifests an intersubjective understanding of and attunement to each other's affective attitudes, this triangular coordination through joint attention to objects in the environment enables an understanding of and attunement to each other's intentional attitudes as well. The infant can follow the other's gaze and bodily orientation, respond to indexical gestures such as pointing, and also direct the other's attention to an object of reference. Typically, these latter acts of meaning express want, surprise, joy, astonishment or fright in relation to an element or feature of the shared environment. Thus, this novel level of intersubjective understanding allows for utterances in an "imperative" and a "declarative" proto-mood.[588] For Halliday, these correspond to the proto-semantic distinction between the "I want" mode and the "I think" mode, which later evolve into the grammatical moods "imperative" and "indicative" (or "declarative"). The "I want" mode is developmentally prior to the "I think" mode, as the interpersonal-pragmatic use of signs is prior to their ideational use.

In parallel to these developments, the way in which the infant perceives and manipulates objects undergoes a significant transformation. Previously the infant could explore the affordances in the environment only on the sensory-motor level: things lent themselves to be rolled, squeezed or thrown and gave rise to characteristic sensory experiences. Now objects also have affordances in social interaction, and begin to acquire social meanings: they can be shown, offered, accepted, shared, rendered interesting to others and by others. Thibault explicates the emergence of signs with social meanings out of early iconic signs or motor actions in terms of an integration of topological-continuous (analogical) features into typological-categorial (digital) schemes of social meaning:

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[587]George Butterworth and Lesley Grover, "The Origins of Referential Communication in Human Infancy," in *Thought without Language.*, A Fyssen Foundation Symposium. (New York, NY, US: Clarendon Press/Oxford University Press, 1988), 5–24.

[588]Halliday, "How Do You Mean?" in *Advances in Systemic Linguistics: Recent Theory and Practice*, ed. L. Ravelli and M. Davies (London: Pinter Publishers, 1992), 162–78.

> when, for example, the topological features of a given sensory-motor act are reconstrued at a still higher level as an instance of the grammatical category "imperative"—a typological category […]—this shows how the individual motor act is re-interpreted and hence integrated into a higher scalar level where social meanings are stored as systems of typological-categorial possibilities.[589]

In Vygotsky's framework, this emerging semiotic capacity for using signs (e.g. vocalizations, gaze, pointing) in modifying another person's orientation, attitude and behavior towards a common object of reference is a capacity for *instrumental* meaning. Proto-conversational variants of the imperative mood in infant vocalizations are a good example of emerging instrumental meaning.[590] According to Donna West, between nine and eighteen months the infant's gestures gradually move from combinations of indexes (e.g., gaze and hand gestures) to single performative indexes, used and understood imperatively or declaratively, which have a genuinely social, reciprocal meaning in affecting another to conform to the utterer's intentions.[591] It is worthwhile to add, also in allusion to Halliday, that the instrumental or interpersonal-pragmatic use of signs comes before their ideational or conceptual use and is a necessary step towards it.

A central, characteristic feature of this phase of semiotic development is that the child begins to explore the social affordances of combining vocalizations with gestures. This elementary multimodality yields a basic two-channel system, in line with Bateson's analysis, that can convey different aspects of meaning.[592] The child can now understand, comply with, comment on, or negotiate the instructions of the communication partner, and becomes responsive not only to invitations or encouragements (as it was the case in primary intersubjectivity), but also to imperatives and directives.[593]

In parallel, person-person games[594] characteristic of primary intersubjectivity gradually give way to person-person-object games like throw and catch, where the parties can have different and complementary roles. As I address in more detail in the next chapter in reference to Mead, such games are the earliest experiments in taking and coordinating different perspectives,[595] and triadic interactivity can be said to furnish an embodied basis for social cognition.[596] Moreover, triadic games and other triadic activities constitute a basis for the

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[589]Thibault, "The Dialogical Integration of the Brain in Social Semiosis," p. 308.

[590]Ibid., p. 305.

[591]Donna E. West, *Deictic Imaginings: Semiosis at Work and at Play* (Berlin, Heidelberg: Springer, 2014), p. 36-37. She maintains that the latter also mark the development of truly deictic gestures.

[592]Trevarthen, "Signs Before Speech," p. 728.

[593]Trevarthen and Marwick, "Signs of Motivation for Speech in Infants, and the Nature of a Mother's Support for Development of Language."

[594]Trevarthen, "Signs Before Speech."

[595]Jack Martin, Bryan W. Sokol, and Theo Elfers, "Taking and Coordinating Perspectives : From Prereflective Interactivity, through Reflective Intersubjectivity, to Metareflective Sociality" 6 (2008): 294–317; also Mead, *Mind, Self and Society*.

[596]Thomas Fuchs, "The Phenomenology and Development of Social Perspectives," *Phenomenology and the Cognitive Sciences* 12, no. 4 (2013): 655–83.

formation of triadic action schemes such as "giving" and "taking" (something to/from somebody), or "hiding" and "finding," "telling" and "listening," or "requesting" and "complying."[597] Accordingly, the later, symbolic achievement of understanding speech roles expressed through the use of personal pronouns, and of understanding and using various transitive verbs which take a direct and indirect object have an experiential and enactive basis in triadic interactivity, because they exploit triadic action schemes.

The subsequent transformation in the structure of semiosis is correlated with a transition from an instrumental or interpersonal-pragmatic use of signs to their representational or ideational use. The advent of the representational use of signs, which happens in the second year, is typically indicated by the beginning of various forms of *pretense* behavior. The precursors include self-pretend and role or object substitution in early pretend games, which develop into symbolic games that rely on mental re-construal of meaning.[598] In self-pretend (e.g., pretending to drink from a cup) and role/object substitution (e.g., feeding a doll, playing banana-phone), object affordances already made salient with the development of the capacity for instrumental meaning are reconstrued in the interactive context of pretense through the unrealistic use of real objects.

### *VI.4.3 Symbolic play*

The development of play is often used in psychological literature as a model for tracing cognitive development and the development of symbolic play is traditionally the main focus in describing the trajectory of the transition to representational cognition and semiosis. Although there is no final agreement on how to demarcate symbolic play, according to Lorraine McCune the defining attribute of symbolic play is the *transformation* of children's "activities from their real objectives and objects from their real counterparts."[599] She accordingly identifies five levels of play in tracing children's cognitive development; namely those of pre-symbolic schemes, auto-symbolic schemes, decentered symbolic games, combinatorial symbolic games, and finally internally directed symbolic games. The transition from the fourth level to the fifth constitutes a markedly bigger leap in cognitive-semiotic capabilities in comparison to previous ones, and corresponds to what I have described as a transition from the differentiation of the interpretant (as an element of semiosis) to the coordination of alternative

[597]In reference to a number of empirical studies Donna West maintains that before nine months, activities such as giving and taking do not involve reciprocal role taking and the children remain as receivers or givers only. Later, such activities become inherently reciprocal. See West, *Deictic Imaginings*, p. 37.

[598]Lorraine McCune and Jordan Zlatev, "Dynamic Systems in Semiotic Development: The Transition to Reference," *Cognitive Development* 36, (October–December 2015): 161-170; Lorraine McCune-Nicolich, "Toward Symbolic Functioning: Structure of Early Pretend Games and Potential Parallels with Language," *Child Development* 52, no. 3 (September 1981): 785; Lorraine McCune, *How Children Learn to Learn Language.* (Oxford University Press, 2008).

[599]McCune-Nicolich, "Toward Symbolic Functioning."

interpretants. For this reason, I dwell in the following particularly on internally directed symbolic games and their communicative and semiotic underpinnings.

Internally directed symbolic games are characterized by their hierarchical structure, and the introduction of a mental plan that guides the unfolding of play behaviors. At the previous level of combinatorial symbolic games, it is either the case that a single action scheme (e.g., feeding) is combined with several actors (e.g., feeding the mother, feeding the doll), or that several action schemes are combined in linear sequences (e.g., feeding and bathing the doll). Sensimotor gestures are used to represent real actions: a hand gesture signifies drinking or moving the spoon to the mouth signifies feeding. While in the literature these are often called symbolic, in their relation to the signified action such behaviors are actually iconic; i.e., they are likenesses of the actions they signify—though they are often abbreviated and ritualized in the form of play schemes.[600] In internally directed symbolic games, on the other hand, we find the hierarchical combination of at least two different representations, and a mental transformation directs the related pretend behavior. When, for instance, we have an object or role substitution (e.g., a stick for a horse or an object as agent), an internal representation subordinates the actual affordances of the physical object to itself; it is the internal meaning that guides the distinct but related pretend behavior. When the child substitutes a doll for the mother, the internal redefinition of the doll as the mother guides all subsequent pretense behavior, such as telling a story to the mother. Further, there is planning prior to the execution of a pretend behavior, which also manifests this hierarchical structure. A certain intention precedes and guides the pretend action.[601]

Bateson's analysis of play in terms of incongruent metacommunicative frames can be highly elucidative in thinking about the structure of internally directed symbolic games. Since such symbolic games take place in a social context and are often initiated by a more mature peer, it worthwhile to focus on the underlying communicational dynamics. Symbolic play becomes possible only when communication is hierarchically organized so as to have a metacommunicative level, on which one can convey that the actions performed do not denote what they would normally denote or that the objects are used differently than they would normally be used. The higher-order message "this is play" has to be exchanged in some form in order that the parties can grasp the intended sense of treating a banana like a telephone or behaving like mothers or doctors. Symbolic games, thus, have object and/or action incongruent metacommunicative frames.

Early symbolic games are still anchored in physical affordances to a significant extent. That is to say, the actual qualities of objects and physical settings

[600]The majority of such forms acquired through imitation, and play schemes such as banana-phone are often designed and initiated by more mature peers.

[601]McCune-Nicolich, "Toward Symbolic Functioning," p. 787.

guide as well as constrain possible pretense acts. Children can pretend to talk to a banana as if to a phone but hardly to a toy car, or can treat a stick like a horse but hardly a pillow. Alternatively, they can use objects that can stand in a part-whole relationship to what they signify: shoes can indicate the positions of people or a doll might wear the mother's hat as assumes her role. In semiotic terms, the iconic and indexical aspects of such early signs constrain as well as support, i.e. scaffold, their emerging symbolic use.

From the perspective of the underlying structure and dynamics of communication, on the other hand, the most significant feature of such proto-symbols is that they are the products of the child's experimentations in articulating, manipulating and coordinating alternative interpretants, which is at the foundation of the capacity for taking and coordinating different perspectives and understanding symbolic social meaning. The seat of such experimentation is not primarily the head, but the social interaction: Alternative interpretants are articulated, manipulated and coordinated through the production and interpretation of object and/or action incongruent messages. The iconic and indexical aspects of signs arguably facilitate the conveyal of the positive pretense message (e.g., "This (banana) is a phone"), which is undermined through the action's incongruence with the actual affordances of the object (e.g., being edible) or the object's incongruence with the pretended action (e.g., not transmitting voice). The metacommunicative message "this is play," expressed through either verbal articulations or various gestures, intonations, emotion expressions, accordingly draws on and emphasizes such incongruences. Once the child sufficiently internalizes the social process of communicating two incongruent messages at two levels, he or she can then use signs in a way that relies primarily on symbolic operations, as it is the case when one uses a pebbles to represent houses on a hand-drawn street plan.

This interpretation resonates in part also with Vygotsky's description of (symbolic) play as a social process where the child practices to take his or her actions under voluntary control in a way that liberates them from the physical affordances of the immediate situation:

> [I]n play, things lose their determining force. The child sees one thing but acts differently in relation to what he sees. Thus, a condition is reached in which the child begins to act independently of what he sees.[602]

A central function of play is to sever the rather direct link between the perception-action loop and meaning. Socialization to social meanings and acquiring competence therein are dependent in significant part on transforming psychological operations from a state where meaning is dominated by action and perception to a state where action and perception are dominated by meaning. According to Vygotsky, the development of symbolic play from pretend-play schemes to rule-based games manifests a similar transformation:

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[602]Vygotsky, *Mind in Society,* p. 96-7.

> The simplest game with rules [is also] an imaginary situation in the sense that as soon as the game is regulated by certain rules, a number of possibilities for action are ruled out […] The development from games with an overt imaginary situation and covert rules to games with overt rules and a covert imaginary situation outlines the evolution of children's play.[603]

In pretense, the rules typically remain implicit and children simply enact them without paying particular attention. In games based on rule-following (from hide-and-seek to chess), on the other hand, the imaginary situation becomes implicit while children's attention is directed at the goals and their plan for reaching them. Attending rules and goals instead of the imaginary situation further requires from the child to postpone the consummation of actions in favor of planning, evaluating and revising.

As I bring into focus in the following chapter, the transition from pre-symbolic to symbolic games correlates with the transition from mere role-taking (e.g., in throw and catch) to perspective-taking, and the transition from symbolic games relying on pretend-play to rule-based games correlates with the transition from perspective-taking to coordination of social perspectives. The former transformation involves the articulation, manipulation and hierarchical organization of different interpretants, while the latter transformation further involves the coordination of possible interpretants in accordance with general rules and higher-order categories of social meaning.

In closing this chapter, I would like to emphasize once more the expediency of approaching the development of representational cognition from a social and genetic perspective, instead of regarding it as the emergence of a capacity for mental manipulation of symbols. As Trevarthen contends, treating symbolic operations merely as manipulation of internal representations misses the motivational, emotional, social and pragmatic basis of symbol use.[604] The most foundational function of the symbol is anchored in communicative interactions; that is, in the social need for taking and coordinating social perspectives, negotiating the meaning of actions and interpersonal relational attitudes in ongoing social relationships, and opening one's perceptive, affective and intellectual processes to the guidance, evaluation, understanding, confirmation or critique of the others. Children's play, accordingly, facilitates the development of the cognitive-semiotic means for realizing such fundamental social functions. Utterance and interpretation of the culturally established symbol, in being essentially metasemiotic, basically allows for the top-down modification of iconic and indexical habits, whether they are acquired or inherited expectations, interpersonal relational attitudes, dialogical interaction patterns or entrenched behavioral dispositions. In ontogenetic order, symbolic signification is realized ontogenetically first in communication, and secondly in thought, and in its function it remains always ultimately social. As Trevarthen underlines:

[603]Ibid., p. 95.

[604]Trevarthen, "Signs Before Speech."

> We think and remember symbolically because we communicate symbolically. *Intra*subjective processes of reflective thought—solving problems, remembering causal relationships, and planning strategies of action—appear to grow out of *inter*subjective exchange, in which motives for consciousness and action in different individuals are linked up and mutually adjusted.[605]

[605]Ibid., p. 738.

# VII PERSPECTIVES AND THE SOCIAL WORLD

This chapter builds on the previous investigation of metasemiotic capabilities and their development through communicative interactions, and focuses on the development of the capacity for perspective-taking in its relation to intersubjective understanding and the development of the self. It begins with brief historical as well as thematic outline of several major views on the development of intersubjective understanding. I explicate in particular how these views construe the role of perspective-taking in understanding others as well as in self-understanding. The second section presents a semiotic-pragmatic notion of perspective(s) largely along the lines of Mead's theory of the act. Lastly, the third section goes into Mead's account of the development of the self through symbolic interactions, discusses certain aspects of this account in relation to modes of communication, and finally outlines some of the key qualitative transformations in the development of a personal perspective in reference to Robert Selman's neo-Meadian theory of levels of perspective-taking.

## VII.1 PERSPECTIVE-TAKING IN SOCIAL COGNITION: A BACKGROUND

Contemporary research on intersubjectivity is conducted for the overwhelming part under the name of social cognition.[606] The latter is understood in general as a cognitive capacity for understanding others as social agents or subjects of experience. For the bigger part of the last century and most notably in the work of Piaget, the main focus of this research was the development of the capacity for perspective-taking, and this term was arguably the most frequently used one in the literature. In the last decades, perspective-taking handed over its prevalence to terms such as theory-of-mind, mindreading, mentalizing, or folk psychology. This change of terminology[607] is correlated with a change of theoretical perspective, where intersubjective understanding increasingly began to be seen as a matter of mental-state attribution. As a result, we see significant differences in theoretical orientation across the century concerning what perspective-taking

[606]For a more extensive review then undertaken here, see Uygun Tunç, "Symbolically Mediated Interaction and Perspective-Taking."

[607]Contemporary researchers nonetheless occasionally use these terms interchangeably with perspective-taking or feature perspective-taking in their theoretical explanations of mental-state attribution. They also commonly specify it with adjectives such as visual/perceptual, conceptual, epistemic or affective/emotional. See e.g. John H. Flavell, *Perspectives on Perspective Taking* (Erlbaum Hillsdale, NJ, 1992); Carolyn Uhlinger Shantz, "Social Cognition," *Handbook of Child Psychology* 3 (1983): 495–555; Eve V. Clark, "Conceptual Perspective and Lexical Choice in Acquisition," *Cognition* 64, no. 1 (1997): 1–37; Josef Perner et al., "Theory of Mind Finds Its Piagetian Perspective: Why Alternative Naming Comes with Understanding Belief," *Cognitive Development* 17, no. 3–4 (2002): 1451–72; Amrisha Vaish, Malinda Carpenter, and Michael Tomasello, "Sympathy through Affective Perspective Taking and Its Relation to Prosocial Behavior in Toddlers," *Developmental Psychology* 45, no. 2 (2009): 534.

consists in and how it develops.[608] Namely, in considerable difference to earlier developmental theories such as those of Baldwin, Mead, Piaget and Vygotsky, contemporary literature on social cognition is characterized by a disregard for actual social interaction. The dominant perspective in these earlier research lines was that the foundations of intersubjective understanding are laid down in interactive contexts and gradually various elements of these social processes are reconstrued in mental representation of others' beliefs, desires, goals and the like. The contemporary mainstream opinion, on the other hand, is that mental state representation (or "meta-representation" of mental states as representations) is the condition of intersubjective understanding, hence it is developmentally primary. As a result, perspective-taking is essentially conceived as an individual, cognitive modelling processes aimed at explaining and predicting the behaviors of others by attributing them beliefs, intentions and feelings—in short, by attributing them a mind. Inferencing about others' mental states is a special application of a general epistemic procedure and thereby social interaction is not a fundamental category in conceiving how we assume, change, and coordinate perspectives. Let us first have a brief look at the (largely Piagetian) perspective-taking tradition and subsequently to the main lines of contemporary theorizing on social cognition.

As in many other areas of cognitive development, empirical research on children's intersubjective capabilities largely begun with Piaget.[609] Within the Piagetian framework, the social dimension of cognitive development comprises the child's discovery of perceptual, affective and conceptual perspectives in the context of social interaction, and growing competence in taking alternative perspectives.[610] As I have briefly touched upon in the preceding chapter, the underlying theme of this development is the transformation of the child's originally *egocentric* relation to the world in the direction of increasing decentration: The child comes to understand that his or her individual relation to the world is but a perspective among those of others. To put this in terms of cognitive development, the child gradually acquires the ability to represent multiple, possibly non-exclusive perspectives on an object or situation, and eventually reaches an understanding of perspectivity as such. Accordingly, social-cognitive development culminates in the acquisition of the ability to entertain second-order thoughts; namely, to take a higher-order perspective on one's individual perspective. Since this development implies a foundational

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[608]See also Charlie Lewis and Jeremy Carpendale, "Social Cognition," in *The Wiley-Blackwell Handbook of Childhood Social Development,* ed. P. K. Smith & C. H. Hart (Malden: Blackwell Publishing, 2002), 376-383.

[609]John H. Flavell, "Development of Children's Knowledge about the Mental World," *International Journal of Behavioral Development* 24, no. 1 (2000): 15–23.

[610]See Piaget, *Judgment and Reasoning of the Child* (New York: Harcourt Brace Jovanovich, 1928); Piaget, *The Grasp of Consciousness: Action and Concept in the Young Child* (London: Routledge & Kagan Paul, 1977); Piaget and Bärbel Inhelder, *The Child's Conception of Space* (London: Routledge & Kegan Paul, 1956); also Shantz, "Social Cognition."

transformation of the child's relation to the world, it is intimately linked with the child's moral and intellectual development.[611]

Beginning with the 80s, research on children's developing abilities for intersubjective understanding focuses mainly on what is commonly called a "theory-of-mind." The term was originally coined in the context of research on primate cognition,[612] but it quickly entered the terminology of developmental psychologists. The introduction to the first book in developmental literature to feature the term theory-of-mind defines it as "a set of meta-representations;" that is, a set of interconnected concepts for representing mental states as representations.[613] In other words, having a theory-of-mind means having a representational model or theory of how minds work, including one's own, to the effect that one attributes to others and to oneself representational states, which might differ from person to person and from reality. This latter aspect related to representations of reality has been widely studied through now classical false-belief attribution and appearance-reality paradigms.[614]

There are several points of continuity as well as discontinuity between the perspective-taking tradition and the theory-of-mind approach. In both of these orientations, cognitive development culminates in an ability to entertain higher-order representations of others' as well as own representations of the world, as representations. Thus, on a general level we find considerable theoretical overlaps. However, while the former conceives this end in terms of gaining an external perspective on one's relation to the world and of acquiring the ability to continuously situate oneself among and with respect to other persons' perspectives, for the latter the end is the unfolding or acquisition of a certain representational model of minds that allows one to form beliefs about others' and own representations of the world, to the effect that one can explain and predict other people's actions and conceptualize own perceptive, affective or intellectual processes.

Another important aspect of divergence between these orientations is arguably related to their respective accounts of how higher-order mental processes originate in the course of social-cognitive development. The guiding heuristic of Piaget's account of origins is that higher-order cognitive functions develop out of lower regulatory functions as the child continuously tries to adapt his or her actions to the challenges posed by the environment—in particular, by the social environment. Accordingly, development is a transformation of

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[611]For a review, see Flavell, *Perspectives on Perspective Taking*.

[612]See David Premack and Guy Woodruff, "Does the Chimpanzee Have a Theory of Mind?," *Behavioral and Brain Sciences* 1, no. 4 (1978): 515–26.

[613]Janet W Astington, Paul L Harris, and David R Olson, eds., "Developing Theories of Mind" (Cambridge University Press, 1988).

[614]See, respectively, Heinz Wimmer and Josef Perner, "Beliefs about Beliefs: Representation and Constraining Function of Wrong Beliefs in Young Children's Understanding of Deception," *Cognition* 13, no. 1 (1983): 103–28; John H Flavell, Eleanor R Flavell, and Frances L Green, "Development of the Appearance-Reality Distinction," *Cognitive Psychology* 15, no. 1 (1983): 95–120.

regulatory functions in a direction that goes from action to thought: Higher-order functions originate in the coordinative structures of actions.[615] We find this general theoretical orientation also in Vygotsky's and Mead's accounts of the origins of higher-order mental processes, although their emphasis is on social *interaction* rather than individual *action* and they place their primary focus on the sociocultural properties of the environment. In Piaget's theory, the role of social interaction in social-cognitive development is ultimately a negative one; namely, to introduce cognitive conflict and thereby force children to individually endeavor to reconcile different points of view and achieve an equilibrium.[616]

In the theory-of-mind framework we find broadly two kinds of accounts; namely, "innatist" ones that argue for a theory-of-mind "module"[617] in the brain that develops as part of biological growth and those that assign experience a foundational, formative role. The former are conceptually and historically related to the Chomsky's widely influential rationalist thesis that the human mind is to an overwhelming extent innately constrained; that is, all its basic representations and rules are in-built features which are not acquired of inferred.[618] The latter, commonly called the theory-theory, argue that the theory-of-mind is literally an implicit theory and children acquire it through observation, experimentation and learning from others.[619] Innatist accounts are the furthest away from the general perspective I have endeavored to formulate in this work, as I have variedly pointed out in different contexts. For this reason, in the following presentation of contemporary accounts of social cognition, I begin with the theory-theory.

So far a well-established view in the literature, the theory-theory presents a general account of how children acquire knowledge of the world by developing, testing, modifying or abandoning theories, in roughly the same ways adults do in science. According to the theory-theory, our understanding of others and ourselves draws on our general knowledge of minds, which consists in a foundational "folk psychological" theory formulated, modified and sophisticated throughout development. This theory features conceptions of the most basic elements of the psychological world, such as percepts, desires and beliefs, and of

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[615]Pierre Mounoud, "Perspective Taking and Belief Attribution: From Piaget's Theory to Children's Theory of Mind," *Swiss Journal of Psychology* 55, no. 2/3 (1996): 93–103.

[616]Barbara Rogoff, "Cognitive Development through Social Interaction: Vygotsky and Piaget," *Learners, Learning and Assessment*, 1999, 69–82, p. 72.

[617]See e.g. Simon Baron-Cohen and Howard Ring, "A Model of the Mindreading System: Neuropsychological and Neurobiological Perspectives," *Origins of an Understanding of Mind*, 1994, 183–207.

[618]See also Alison Gopnik, "The Theory Theory as an Alternative to the Innateness Hypothesis," *Chomsky and His Critics*, 2003, 238–54. As Gopnik acknowledges, this position on the origins of knowledge is a revolutionary depart from the earlier largely empiricist paradigm in psychology and other related fields to the old Platonic position defended in *Meno*.

[619]See e.g. Alison Gopnik, Andrew N. Meltzoff, and Peter Bryant, *Words, Thoughts, and Theories* (Mit Press Cambridge, MA, 1997); Alison Gopnik, "Conceptual and Semantic Development as Theory Change: The Case of Object Permanence," *Mind & Language* 3, no. 3 (1988): 197–216; Josef Perner, *Understanding the Representational Mind* (The MIT Press, 1991).

how these elements are related to one another in producing actions.[620] It is on the basis of this theory that we become able to form psychological beliefs, conceive others as well as ourselves as minded agents and infer the causes and ends of actions. Accordingly, in this framework perspective-taking can be construed as combining our general knowledge of minds with observed particulars about other persons to build a theoretical model of their points of view. The process of representing own mental states is essentially the same; namely, third-person inference. We come to know others as well as ourselves as we come to know any other aspect or element of the world, but with a special theoretical toolset adapted to beings with mental states. We formulate and further sophisticate this theory in the course of cognitive development via methods akin to scientific inquiry; namely, we are individual "child scientists" who propose, test and revise their theories in the light of accumulating evidence.[621]

It is reasonable to think that the ability to take and coordinate perspectives has a knowledge aspect; that is, some theoretical element is involved in intersubjective understanding and self-knowledge. Most importantly, we can speak of a general knowledge of the perspectivity of perceptions, beliefs, attitudes or desires, which is largely missing in young children and gradually becomes a central element of their understanding of the psychological world. This perspective overlooks, however, how formative culturally mediated social interaction patterns, social norms and institutions, child-rearing practices and cultural artifacts can be in the acquisition of this knowledge. On the one hand, even the scientific inquiry itself consists of a complex set of practices that are realized most often through collaboration and division of cognitive labor rather than individual processes of inquiry and, further, we cannot divorce these practices from sociocultural factors such as norms and institutions.[622] The operations of individual minds often interpenetrate with one another and interact with the sociocultural context of scientific practice to such an extent that a picture of scientific inquiry featuring only the postulation, testing and revision of theories is a quite simplistic and misleading one. On the other, we have ample reason to think that this picture of scientific inquiry cannot capture the social-cognitive operations of children either, since a host of (arguably still more formative) social and cultural factors are at work on this plane too. Besides, it is close to impossible to observe or theoretically construct what the individual, solitary efforts of the

[620]Flavell, "Development of Children's Knowledge about the Mental World."

[621]Brian J Scholl and Alan M Leslie, "Modularity, Development and 'Theory of Mind,'" *Mind & Language* 14, no. 1 (1999): 131–53.

[622]For a defense of the parallel between the child and the scientist, see Alison Gopnik, "The Scientist as Child," *Philosophy of Science* 63, no. 4 (1996): 485–514. For a critique of the parallel, see Luc Faucher et al., "The Baby in the Lab-Coat: Why Child Development Is Not an Adequate Model for Understanding the Development of Science," *The Cognitive Basis of Science*, 2002, 335–62. For a general argument for the social nature of scientific inquiry, see e.g. Helen Longino, *Science as Social Knowledge: Value and Objectivity in Scientific Inquiry* (Princeton: Princeton University Press, 1990).

child in theory-building would yield in separation from all the social and cultural influences.

There are other criticisms to the theory-theory in the social cognition literature, among which I now outline one major rival in the theory-of-mind framework, the simulation theory, and a young but rapidly augmenting alternative research line, the interaction theory. The simulation theory criticizes theory-theory for defending an over-intellectualized account of social cognition.[623] It argues, instead, we can have direct knowledge of our own experiences and on their basis we simulate other minds. According to the simulation account of intersubjective understanding, we run a mental simulation of the perspective of another person inside our own experiencer's or first-person perspective, instead of deriving theoretical inferences from an observer's or third-person perspective. The mental simulation is realized by imagining a pretend state, running this through a suitable cognitive mechanism, and finally attributing the outcome of the process to the person we seek to understand.[624] As does the theory-theory, the simulation theory also provides an account of self-understanding in analogous terms; namely, thorough self-projection into the past and future through episodic memory and prospection, or "mental time-travel" as these processes are sometimes termed.[625] However, the only mechanism for "mindreading" is not this cognitively very demanding simulation. The proponents of the simulation theory also integrate various sub-personal, embodied (neural) mirroring mechanisms to this high-road to social cognition.

The account presented by the simulation theory also draws heavily on individual cognitive processes, only substituting first-person inference for third-person inference. On a general note, closely associating the first-person and the experiencer's perspectives on the one hand, and the third-person and the observer's perspectives on the other while positing these two kinds in exclusive terms complicates our understanding of social cognition. Because such a categorization limits the sphere of subjectivity to the "inside" of a person and regards all that is "outside" as bereft of subjectivity. This separation of worlds leads easily to a two-faced aporia: How do I recognize the other as another subject whose experience is as real as my own, and how do I go beyond my own limited experience and actually take the perspective of the other? Moreover, the activity of putting oneself in the other's shoes does not exhaust the function of perspective-taking, because the latter also implies distancing oneself to some extent from one's

[623]The simulation theory has a more limited scope than the theory-theory, since it is mainly a theory of intersubjectivity and not of the human mind and its development. Accordingly, it is often presented as a theory of "mind-reading." See e.g. Vittorio Gallese and Alvin Goldman, "Mirror Neurons and the Simulation Theory of Mind-Reading.," *Trends in Cognitive Sciences* 2, no. 12 (December 1, 1998): 493–501; Robert M. Gordon, "Folk Psychology as Simulation," *Mind & Language* 1, no. 2 (June 1, 1986): 158–71; Alvin I. Goldman, *Simulating Minds: The Philosophy, Psychology, and Neuroscience of Mindreading* (Oxford University Press, 2006).

[624]Karen Shanton and Alvin I Goldman, "Simulation Theory," *Wiley Interdisciplinary Reviews: Cognitive Science* 1, no. 4 (2010): 527–38.

[625]Ibid.

direct relation to the world and adopting a more reflective position where others' actual and possible viewpoints can also be taken into consideration—the central idea Piaget endeavored to expressed with the process of decentration. A simulation-based understanding of intersubjectivity arguably reduces it to forms of sympathy and overlooks more complex forms of empathy where we understand the other's point of view as featuring different dispositions, norms and values. A simulation inside our own perspective would keep these factors constant and change only situational variables.

Positioned at a certain distance from both of these views, the interaction theory is an extension of the embodied-enactive approach to cognition. It has been proposed in response to what its proponents see as the over-mentalistic and individualist orientation of these major social cognition theories. This latest addition to the theoretical explanations of social cognition aims instead to focus the study of social cognition on the second-person perspective, which it regards as the perspective of interaction. In line with the broader emergentist framework of enactivism, the interaction theory of social cognition is based on the hypothesis that the phenomenon of interaction introduces new conditions of its own that are not analyzable into the subjective experiences and objective observations of the individual interactants.[626] It rejects the mental-state attribution picture of intersubjectivity common to both theory-theory and simulation theory in favor of a picture based on joint or shared meaning-making. Interactionists criticize both of these established accounts on the grounds that social cognition is essentially not a representation-heavy, individual cognitive process but an immediate, enactive and embodied understanding of self and other in social interaction through non-reflective processes: directly visible gestures, expressions and the mutual coordination of movements constitute the backbone of embodied and enactive intersubjective understanding. They argue, moreover, that this embodied, enactive engagement with others is the default mode of intersubjectivity and the other representation-heavy, reflective processes come into play, if at all, when this fundamental mode is somehow disrupted.[627]

Concerning its conceptual ingredients, the interaction theory presents an eclectic synthesis of elements from phenomenology, dynamic systems theory and rhetoric, which is brought about on the basis of a common anti-representationalist

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[626]See e.g. Hanne De Jaegher, Ezequiel Di Paolo, and Shaun Gallagher, "Can Social Interaction Constitute Social Cognition?," *Trends in Cognitive Sciences* 14, no. 10 (2010): 441–47; Shaun Gallagher, "The Practice of Mind: Theory, Simulation or Primary Interaction?," *Journal of Consciousness Studies* 8, no. 5–7 (2001); De Jaegher and Di Paolo, "Participatory Sense- Making: An Enactive Approach to Social Cognition," *Phenomenology and the Cognitive Sciences* 6, no. 4 (2007): 485–507; Vasudevi Reddy and Paul Morris, "Participants Don't Need Theories: Knowing Minds in Engagement," *Theory & Psychology* 14, no. 5 (October 1, 2004): 647–65.

It is worth noting that the interaction theory is in fact a group of theories, going back to Gallagher's work in the early 2000s.

[627]See Gallagher, "The Practice of Mind: Theory, Simulation or Primary Interaction?"; De Jaegher, Di Paolo, and Gallagher, "Can Social Interaction Constitute Social Cognition?"

ground.[628] This anti-representationalism translates into a downplaying of higher-order cognitive processes, of symbolic thinking in particular, in favor of pre-reflective experience and embodied intersubjectivity. The central ideas that make up the synthesis are those of *direct perception*,[629] *attunement* or *mutual incorporation*,[630] *participatory sense-making*,[631] and *narrative practices*.[632] The notion of direct perception has an origin in the ecological psychology of Gibson, that of mutual incorporation (a process in which the lived body or *Leib* extends to form a common inter-corporality) is embedded in a phenomenology of embodied interaction, and that of participatory sense-making has been developed directly from a dynamic systems point of view.

What these notions have in common is that they describe experience and interaction only synchronically, which as a result leaves out the historicity of meaning as well as its social and cultural aspects and thereby any more sophisticated, reflective meaning-making activity. The evolutionary, social and historical genesis of meaning is either taken for granted as a background factor (in the direct perception account) or replaced with strongly emergent forms (in the dynamic systems account). The notion of narration or narrative practices has been introduced to the interactionist palette in order precisely to address this insufficiency; namely, to complement synchronic, embodied, interactive meaning-making with a semiotic resource that has a cultural dimension and can guide and structure our implicit understanding of our past actions and experiences as well as the actions of others. This element ties to the others arguably rather eclectically, because if narrative practices are considered to involve implicit theoretical elements, they are hardly compatible with the basic enactivist framework. If, on the other hand, they are formulated so as practices of an (inter)active, enacted nature, then they would fall short of accounting for the symbolically mediated and reflective forms of intersubjectivity.[633]

This third path in fact makes a very important point regarding an apparently dualistic impasse inherent in the social cognition literature: How successfully can we understand intersubjectivity when our options are to dissolve it into either

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[628]For a more detailed presentation, see Uygun Tunç, "Symbolically Mediated Interaction and Perspective-Taking."

[629]Shaun Gallagher, "Direct Perception in the Intersubjective Context," *Consciousness and Cognition* 17, no. 2 (2008): 535–43.

[630]Thomas Fuchs and Hanne de Jaegher, "Enactive Intersubjectivity: Participatory Sense-Making and Mutual Incorporation," *Phenomenology and the Cognitive Sciences* 8, no. 4 (2009): 465–86; De Jaegher, Di Paolo, and Gallagher, "Can Social Interaction Constitute Social Cognition?"

[631]De Jaegher and Di Paolo, "Participatory Sense- Making: An Enactive Approach to Social Cognition."

[632]Shaun Gallagher and Daniel Hutto, "Understanding Others through Primary Interaction and Narrative Practice," *The Shared Mind: Perspectives on Intersubjectivity* 12 (2008): 17–38.

[633]De Bruin and de Haan similarly argue that the notion of narrative practice is an eclectic and inadequate addition to the theoretical palette, on the grounds that its formulations either fail to cover theory-driven aspects of social cognition or involve implicit folk psychological elements incompatible with enactivism. See Leon de Bruin and Sanneke de Haan, "Enactivism & Social Cognition : In Search of the Whole Story," *Journal of Cognitive Semiotics* 4, no. 1 (2009): 225–50.

purely objective or purely subjective processes, both of which exclude the prefix "inter" from the discussion? Thus, the starting point of interaction theory is very legitimate, as it addresses a significant lacuna in the social cognition research. Moreover, in common with the perspectives of Piaget, Baldwin, Vygotsky and Mead, enactivism gives developmental priority to interaction and shared practices of meaning-making. On the other hand, its rejection of "mentalistic" categories such as representation in the explanation of social cognition in favor of more rudimentary forms of embodied coordination places a significant and central dimension of social cognition outside of its scope and framework. Namely, in the course of social-cognitive development, we see a gradual transition from forms of intersubjective understanding that are highly dependent on immediate bodily experience in *hic-et-nunc* and on concretely present affordances of the social environment towards more context-independent, metasemiotically mediated, reflective forms. Thus, without an adequate and coherent account of higher-order processes and how these develop out of embodied social interactions, the interaction theory would only explain away a significant portion of social cognition.

Interaction theory equates perspective-taking with meta-representational modelling, just as the theory-theory and simulation theory do, and denies it for this very reason a central, constitutive role in social cognition. As a result, however, we end up with a theoretical gap between embodied, immediate and mediated, reflective forms of intersubjectivity. [634] However, as much as intersubjectivity has to do with attunement, coordination, synchronization or harmony emerging in interactions, it has to do with understanding social situations reflectively; that is, in reference to alternative personal interpretations and to social, cultural, and historical meanings that constrain and shape our encounters. If we do away with social representations altogether for the sake of bringing mind into the open, lived world of social interaction, we take historicity, generalizability, hence symbolic content out of intersubjectivity.

I maintain that this apparent tension between representation and interaction, between higher-order cognitive processes and sub-symbolical processes or "unmediated" processes need not yield a dilemma. The problem would not be solved by downplaying the role of representational perspective-taking, but by shifting our analytical priority from individual cognitive processes to our fundamental meaning-making relation to the world, to others and to ourselves, and explaining how this fundamental relation gradually acquires more complex and sophisticated forms. More particularly, this implies changing the order of

[634]Interactionists in fact acknowledge the significance of this problem and refer to it as the "cognitive gap." De Jaegher and Froese state that the biggest challenge for the interaction theory is to account for the "upper floors" of social cognition while remaining within the enactivist framework. See Hanne de Jaegher and Tom Froese, "On the Role of Social Interaction in Individual Agency," *Adaptive Behavior* 17, no. 5 (2009): 444–60, p. 439.

explanation endorsed in meta-representational theories so as to posit social interaction as *explanans* and higher-order cognitive processes as *explanandum*.

The key elements required for a complete account are already found in the social-relational perspective I examine through the works of Vygotsky and Mead as well as those of its more recent representatives. I think that this perspective coherently integrates several important insights of both contemporary higher-order representationalist and interactionist accounts. My key developmental argument, accordingly, is that perspective-taking is at the core of social cognition and has a developmental trajectory that goes from interactive coordination of perspectives to their intersubjective and intrasubjective coordination. This implies that perspective-taking is primarily a social-relational process and secondarily an individual and cognitive one. More precisely, perspectives are first differentiated, assumed, and coordinated within social interaction and through pragmatic involvement in a social environment, and later this social operation of perspective-taking is internalized and transformed into the cognitive ability of perspective-taking.

The chief purport of such a view of social-cognitive development for my core argument lies in the intimate link thereby conjectured between intersubjectivity and the understanding of the self and other as persons: The nature and degree of sophistication of the child's intersubjective understanding is a function of his or her conception of *persons*, rather than "minds," and the development of both is at bottom the development of the child's perspective-taking capacity. Intersubjective understanding is not primarily a matter of accessing or modelling the "contents" of mental states, but of understanding how one's holistic (perceptive, affective, intellectual, agentive) relation to the world interrelates with those of others. This holistic relation develops from an embodied perspective to a personal one as embodied interaction gradually develops into interpersonal interaction.

## VII.2 A SEMIOTIC-PRAGMATIC NOTION OF PERSPECTIVE

As my brief exposition of the main competing accounts of social cognition demonstrates, depending on the adopted perspective certain other aspects or dimensions of intersubjectivity remain systematically unaccounted for. Accordingly, perspective-taking is considered either as an individual cognitive activity divorced from its social, interactional context or as being altogether inessential for intersubjective understanding. I argue from a comprehensive social-relational perspective that intersubjective understanding as well as self-knowledge fundamentally involves perspective-taking. Perspective-taking in turn is embedded in a sociocultural world, where social agents constantly orient themselves towards one another in interactive situations, and symbolically articulate, negotiate and modify their orientations.

In grounding this position, we first need a reformulation of the notion of perspective that does not dichotomize experience and reflection, subjectivity and objectivity, or situated interaction and general social meanings. Mead's account of perspectivity offers a very rich basis to this aim, which I examine with a particular emphasis on its semiotic aspects.

Mead's conception of perspectives does not entail a tension between subjectivity and objectivity, although his account comprises both personal perspectives and general social perspectives. More precisely, he neither equates personal perspectives with subjective takes on the world nor objectivity with an impersonal perspective or lack of perspectivity. First of all, for Mead perspectives are necessarily relational. This implies, on the one hand, that the world is always given from a perspective. Only a world conceived independently of any organism would be without perspectives; but this would be a world where there cannot be any objects, since all objects are constituted at least in part through abstractions from real relations of organisms to the world.[635] On the other hand, the mind cannot be separated from the world. Mead contends that the idealist separation of consciousness from the world made it a most difficult task for the posterity to place the mind in a world that is rendered alien to it. To be able to reintegrate what already belongs together, we need to recognize perspectivity as an ontological principle and conceive the object, in the broadest sense, in terms of the real relation between the organism and the environment. He maintains accordingly that "the perspective is the world in its relationship to the individual and the individual in his relationship to the world."[636]

The whole field of objects is grounded in the dynamic, diachronic perspective of (relational) action, and this perspective yields a particular relational environment that cuts across an exclusive conception of subjectivity and objectivity. All action, from the most basic organismic activity to the most complex reflective act, takes place necessarily within a relationally constituted environment—an *Umwelt*, or a *lifeworld*. The term perspective of action implies in turn, for Mead, that a perspective (whether organismic, personal, or social) is not a subjective background of action but is the unitary orientation of the agent. For social agents, this is irreducibly a *social* orientation.[637] In a similar vein, Martin, Sokol and Elfers articulate Mead's concept of a perspective in terms of "holistic (perceptual, conceptual, emotional, esthetic, and physical) orientations to situations with a view to acting within them."[638]

Objects are thus neither independent from perspectives of action nor are contents of a subjective consciousness. Since the whole field of objects is embedded in the perspective of action, the reality of any object is in part a function

[635]Mead, *The Philosophy of the Act*, p. 165.
[636]Ibid., p. 115.
[637]Ibid., 189.
[638]Jack Martin, Bryan W. Sokol and Theo Elfers, "Taking and Coordinating Perspectives : From Prereflective Interactivity, through Reflective Intersubjectivity, to Metareflective Sociality," *Human Development* 51, no. 5-6 (2008): 294–317, p. 299.

of the particular nature of action and the particular relational environment in which it is realized. For instance, a chair is not an object in the relational environment of an insect who walks on it, since the insect's conduct does not involve a foregrounding of the chair in its unity among other aspects of the environment, nor is a "person" an object in the relational environments of cats or dogs. Various "others" in a human lifeworld come to the fore as friends and foes, colleagues, voters, organisms, or even solid bodies in corresponding interactions that are shaped by corresponding attitudes.

To be an object in the social-cultural lifeworld implies that one participates in social situations that are embedded in the common world of social meanings. Moreover, one can become an object for oneself when one's conduct involves self-reference as an integral part. This self-referential structure implies that one's conduct already features a reference to the other, and the self comes to occupy an analogical role. In Mead's terms, self-reference in conduct consists in taking the attitude of the other on oneself. The other is a social object, which may denote a "specific other" (e.g., a friend or a partner), a social role or identity (e.g., the speaker/listener, an elder or a teacher), or a "general other" embodying social values, norms, rules and common opinions. The self can accordingly be only as complex and multi-layered as the social-cultural lifeworld and the "other" are. The lifeworld of an infant does not comprise rules of etiquette, institutions, laws, or scientific objects. Accordingly, in such a lifeworld there is no "other" who is kind, guilty, or rational. However, in difference to the lifeworlds of most other animals, this one can feature jokes, false beliefs, roles or pretense, all of which require adopting and coordinating alternative perspectives on social objects.

If perspectivity is a necessary feature of the meaning-making relation a being enters with the world, any being who has a relational environment can be attributed an associated perspective. The nature and semiotic complexity of this meaning-making relation correlates with the aspects of the environment that are rendered meaningful and the kind of responses given to those meanings. On the agentive side of this relation, an internal system of values (however complex) mediates the processes of interpretation and responding. Inanimate beings do not have perspectives because they do not have any internal values and thus no associated worlds. Jacob von Uexküll conceived this mediation through an internal system of values as the mark of the living, and argued on this basis for organismic perspectives independently of a criterion of consciousness. For Uexküll, even the most "automatic" responses of organisms in an environment manifest a form of meaning and they are produced from within a perspective. We can explicate this by saying that a meaning-making relation to the world involves at least a filtering of environmental stimuli in terms of relevance, measurement, and a rendering or transduction of environmental cues into organismic signals. The perspectivity of human meaning-making, on the other hand, characteristically involves assuming,

changing, coordinating various perspectives within the unity of the act.[639] The qualitative differences between various forms of perspectivity can be sought in the differences pertaining to the structure of semiotic mediation and thus to the kind of semiotic differentiations characteristically realized. For our purposes, we can roughly outline three levels of perspectivity in relation to the semiotic differentiations involved.

***Ground level perspectivity (interrelated sign-response couplings)*:** The perspectives of semiotically simplest organisms feature only what we can call a network of sign-response couplings. Uexküll's famous description of the *Umwelt* of a tick can provide a representative example. The tick typically climbs to the tip of a branch in accordance with the sun light and hangs from there until a specific odor emanates from the sweat of a mammal passing beneath. Once the odor is there, it drops on top of the mammal and starts searching for a hairless spot. Upon finding such a spot it feeds on the mammal's blood. The *Umwelt* of the tick, according to Uexküll, features particular shades of light, specific odors, a particular range of temperatures and various tactile qualities. It does not feature, on the other hand, the sun, trees, mammals, heat or blood. There is a rather invariable connection between the cues and the corresponding actions, which does not involve a differentiation between the sign and its object. That is to say, the odor does not indicate the presence of a mammal: the mammal is virtually the odor emanating from its sweat. As a result, meanings are only implicit in the tick's behavior and the animal is completely immersed in its perspective.

***Differentiated embodied perspectivity (sign-object relations)*:** We can talk about much more complex and differentiated perspectives when signs can be identified as relatively distinct from their objects within the perspective of action. This differentiation may or may not be re-presented as such (i.e., metasemiotically), but in any case implies that processes of meaning-making can exploit similarity, difference, patterns and regularities. There is a world of unified, selectively foregrounded objects that call for various responses, which in turn can be mediated by unified attitudes towards these objects. Elements or aspects of the environment (the stimuli in the broad sense) can refer the organism to other elements or aspects, or to past and present states of the environment. Thus, the organism's relation to the world can be scaffolded by the kind of meaning structures which I referred to as quasi-propositions. In regard to organismic activities and functions, this level of perspectivity involves affectivity and memory, hence attitudes can feature expectations, surprise, desires or frustration. The "future" is (even if rudimentarily) integrated into the system of internal values and consequently we can speak of choices that refer to possible

[639]As I have touched upon in the section VI.2, in Mead's construal of "the act" as a unity we find a complex whole involving not only a particular action, but the stimulus situation (whatever becomes present vis-à-vis the individual), a response to the stimulus situation (involving the interpretation of the stimulus situation in an affective attitude, an action or a thought), and a corresponding response from the world (or from the "other" embedded in it), which might be potential as well as actual phases of the act.

future states of affairs. Mead's analysis of the social act, which I go into in more detail in the following section, begins in fact at only this level, where it is possible to talk about a communication of gestures. This latter requires that expressions, behaviors or parts thereof can become signs for others by virtue of being interpreted as indicating the future phases of an interactive situation.

***Personal and social perspectives (sign-sign relations)*:** The network of sign relations realizing and sustaining personal and social perspectives is organized at multiple inter-referential levels, since such perspectives are conditional on metasemiotic mediation. More precisely, they essentially feature higher-order meaning-making where sign relations themselves are further interpreted as signs, which in turn enables that a certain aspect or dimension of the agent's relation to the world can become an object *for* the agent in the way it is to others. The internal system of values has reflexivity; that is, a reference to its elements as such. This reflexivity is realized predominantly through articulating embodied, implicit relational meaning in symbols (as higher-order signs and cultural artifacts). As a result, perspectives can be thematized, hence can be explicitly addressed, negotiated, modified and coordinated. Mead as well as Vygotsky emphasize a particular property of symbols as an enabling factor for perspective-taking, which they respectively call *significance* or *reverse action*; namely, they can simultaneously elicit the same response in oneself as they do in the other or can function both as stimulus and response. Symbols thereby allow us to communicate something to ourselves in the way we do so to others, and to others in the way we do so to ourselves. In other words, they are perspectival in constitution.

Symbols that can fulfill this function are products of a history of social interaction. They are not *implicit* features of *organismic* acts, as it is for instance the case with natural propositions, but *explicit* features of *social* acts; that is, they are embedded in a system of socio-cultural meanings. Sign-sign relations not only make collectively intelligible, shared meaning possible as Mead contends, but they also liberate meaning-making from situational constraints. In Vygotskian terms, they allow one to disentangle meaning from concrete objects and actions from direct responses to affordances. Thereby, the individual acts not under the domination of what the immediate situation calls for, but does so in reference to social meanings.

Being inherently perspectival, culturally established symbols allow their users to view the world in a certain regard rather than another. By the same token, they also allow one to get the other to view the world from another vantage point. Further, some such regards and vantage points are closed off before one acquires certain symbols, because they embody particular conceptual perspectives on the world. Learning the symbols of a culture, in particular the linguistic ones, implies that the child internalizes the human perspective embodied in them.[640] Language plays a crucial role in the development of the capacities for perspective-taking and

[640]Tomasello, "The Human Adaptation for Culture," p. 516.

perspective-coordination in particular regard to its function of supporting complementary, antithetical or hierarchical organization of conceptual perspectives. To take a simple example, *female*, *child* and *human* can individuate the same thing from different but non-exclusive conceptual perspectives, all of which can simultaneously yield true descriptions of it.[641] The same situation can be *funny*, *surprising* and *playful* or the same object can both be *given* and *taken*, *bought* and *sold*. Similarly, the availability of various synonyms prompts the young language user to coordinate different, non-exclusive perspectives on a common object of reference. As we clearly see in the case of synonyms, the ability for connecting different *senses* with the same *reference*, to use Frege's famous distinction, is at bottom an ability for coordinating conceptual perspectives.

In regard to broader personal and social perspectives, symbolically mediated communication is characterized by reference to a common, multi-dimensional field of social meanings. Social meanings at the general, societal level constitute the perspective of group or society, which Mead terms the "generalized other." Describing an act as permissible or responsible, or a situation as fair involves taking the perspective of this generalized other. There is clearly a plurality of such social and cultural perspectives in any sociocultural context, depending on how different social groups, roles, identities or intellectual orientations feature in the interpretation of events and situations. Thus, we can speak more accurately of generalized other*s*. These meanings in turn can be articulated in potentially infinite particular re-presentations in the form of personal perspectives, or in Mead's terms the perspectives of "specific others" and "me."

We can further add that the social world is necessarily perspectival and the symbols populating it are necessarily unsaturated. This is because the universal and general meanings making up the perspective of the society always have to appear in the communicative situation in the particularized form of personal perspectives, which always involve as a counter-dynamic the singularity of the event and the spontaneity inherent to some degree to any act.

## VII.3 DEVELOPMENT OF THE SELF AND SOCIAL PERSPECTIVE-TAKING

### *VII.3.1 The self and other vis-à-vis social meanings*

The distinctive feature of Mead's account of the development of the mind and self is that it gives a constitutive role to the institutional structures comprising reversible social roles which characterize human societies.[642] Mastering social

[641]See Perner et al., "Theory of Mind Finds Its Piagetian Perspective: Why Alternative Naming Comes with Understanding Belief."

[642]See also Alex Gillespie, "G.H. Mead: Theorist of the Social Act," *Journal for the Theory of Social Behaviour* 35, no. 1 (March 2005): 19–39.

meanings takes place through participation in social practices that call for taking and coordinating perspectives. The most fundamental form of perspective-taking involved in the social act is taking on the attitude of others towards one's own qualities, actions and attitudes. At a minimum, this process requires that one coordinates actor and observer perspectives in the production of a response. The significant symbol facilitates this coordination by virtue of affecting the utterer and the interpreter in the same way. A greeting gesture, for instance, is simultaneously enacted and observed as such. A number is simultaneously written and read. Most importantly, the spoken word—the paradigmatic case of a significant symbol for Mead—can be simultaneously articulated and heard.

In order for the significant symbol to enable taking and coordinating different perspectives, one has to internalize or reconstrue the whole interactional pattern. Internalizing the significant symbol is not a spontaneous development. Just as in the Piagetian visual perspective-taking paradigm the child has to experience an object from different visual perspectives before he or she can reconstruct these mentally, the child can acquire the ability to take and coordinate different social perspectives only through actually occupying the various roles featured in a given social process. The peculiar institutional structure of social processes in human social groupings constitutes a necessary ecological condition for this, because they feature not only differentiation of roles (such as fighters, resource gatherers, or shelter builders), but also collective coordinated activity where roles and positions frequently change. In human societies, the overwhelming majority of social acts involve complementary and reversible roles or positions, such as giving-taking, talking-listening, requesting-complying, helping-receiving help, leading-following, buying-selling, teaching-learning, or mourning-consoling. From birth on children participate in such social acts. As babies they engage in coordination of attention, bodily movements, expressions and vocalizations; as toddlers they play games such as throw and catch or hide and seek; later they experiment with complementary social roles in pretend play, where they become doctors and patients, cowboys and Indians, parents and children or hosts and guests; and still later they adjust themselves to the normative structures of rule-based games. As children enact different roles and positions in social acts, they experience how various perspectives interrelate. Gradually they become able to represent the complex perspectival structure of social acts. Representation of perspectives as such is grounded thus in the socially enacted experience of perspective-taking and coordination.

The chief developmental purport of processes of perspective-taking and coordination lies in their constitutive role in the origination and sophistication of the self. For Mead, the self originates in the process of adopting the other's perspective on an element or aspect of one's individual perspective. This is to say, broadly, that the individual organism becomes a self only through the other. For Mead, taking the other's perspective on own orientation towards and actions in the world is not the case in a conversation of gestures, since the latter "does not

carry with it the reference of the individual, the animal, the organism, to itself."[643] Only significant symbols can facilitate such self-reference, and for this reason, only through a history of significant communication can selves arise. Thus the self, for Mead, is not presupposed in any logical, experiential, or biological sense by sociality or symbolically mediated communication, but vice versa. He writes:

> When a self does appear it always involves an experience of another; there could not be an experience of a self simply by itself. The plant or the lower animal reacts to its environment, but there is no experience of a self [...] When the response of the other becomes an essential part in the experience or conduct of the individual; when taking the attitude of the other becomes an essential part in his behavior — then the individual appears in his own experience as a self; and until this happens he does not appear as a self.[644]

Lawrence Kohlberg, a prominent neo-Meadian, resoundingly maintains that while some fundamental forms of embodied intersubjectivity are manifest in our earliest social interactions, reflective forms are distinctively social outcomes, which arise through the growing understanding of self and other. By "social" he means something narrower than what we did throughout the present work; namely, a culturally mediated and institutionalized organization of social acts:

> [T]he primary meaning of the word 'social' is the distinctively human structuring of action and thought by social perspective-taking (role-taking), by the tendency to react to the other as someone like the self and by the tendency to react to the self's behaviour in the role of the other."[645]

This conceptualization of sociality we find in Kohlberg as well as Mead is intimately linked to a conception of the self as a social process. The primal objectification of a self, so construed, is realized through the process of taking the attitude of the other. Originally the other is an individual significant other, and for this reason the self is constituted in a way that is relative to intersubjective relations and not yet in reference to social meanings at a societal level. Social-cognitive development features a transition from taking the attitude of the significant other to taking the organized and generalized attitude of a generalized other. This generalized other is a symbolic unity that comprises the normative organization social acts, where various social roles appear as elements of institutional structures. Mead traces this development through children's transition from *play* (e.g., pretend-play) to rule-based *games*, where the normative organization of social interactions instead of the interrelations of particular social roles comes to the fore. By gradually internalizing the attitude of a generalized other, the self acquires a more temporally enduring, yet dynamic identity across social situations. Thereby not only individual attitudes, but the whole social organization comes to

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[643]Mead, *Mind, Self and Society,* p. 145.

[644]Ibid., p. 195.

[645]Lawrence Kohlberg, "Stage and Sequence; The Cognitive-Developmental Approach to Socialization," in *Handbook of Socialization Theory and Research*, ed. D. Goslin (New York: Rand-McNally, 1969), p. 398.

be present in some form in consciousness. Vygotsky describes the origins of the self in a similar manner, but in a more explicitly dialectical wording: the child "becomes for himself what he is in himself through what he manifests for others."[646] We arrive, thus, at a conception of the development of a reflective mind and of the constitution of an enduring and unified self as a process of socialization and enculturation that starts with mimetic participation in social situations, goes through the internalization of the patterns of symbolically mediated social interactions, and culminates in the self-conscious competence of a person to participate in generalized social meanings, as well as to negotiate them.

Through internalizing social meanings, individual processes of meaning-making acquire patterns and structures that have a social and cultural history. We can thus speak of a social scaffolding that builds upon the organismic and intersubjective scaffolds of semiosis. Interpersonal as well as intrapersonal communication is scaffolded by an infinity of symbol-relations, which precede any particular case of social interaction or self-reflection. These place social, cultural, intellectual as well as historical constraints that override the singularity of the here-and-now and render communicative processes in certain aspects general and thus in principle repeatable, even though no such process would ever be repeated in exact sameness. However, since the interrelations of symbols bring about an inexhaustibly vast horizon of meaning and the process of interpretation continuously particularizes as much as it abstracts, persons are particulars as much as they partake of general categories and meaning is almost always local, historical and context-dependent as much as it is universal and general. By necessity, singularity as such cannot be symbolically represented and grasped, in other words it always eludes the process of interpretation. But it has a veritable role in the pragmatic domain, and through it also on the semantic one. This role concerns the singularity of events and the spontaneity involved in any act.

Mead acknowledges this spontaneity in regard to the person in terms of the notion of an "I," which he construes as the spontaneous and only retrospectively discernable response to a "me." The "me" is the essentially socialized dimension of a person, which is constituted by the internalized attitudes of significant and general others. Broadly, it involves the whole field of social meanings one grows to participate in, in particular, what the person is for himself or herself, or simply the person's view of oneself. It is thus the intelligible, temporally extended and conceptually unified self, which is revealed as such from the internalized perspectives of significant and general others. The "I" is the uniquely experiencing and agentive aspect of a person, which is not intelligible as such but is discerned through its creative (or simply reactive) response to the "me" and to the context of social meanings it is embedded in.

It is worthwhile to add at this point a caveat to an arguably rather limited rendition of social interaction and the self in Mead's and similar accounts. As I have

[646]Vygotsky, *Mind in Society,* p. 105.

argued in section VI.4 on pre-verbal intersubjectivity and infant semiosis, this perspective that is characteristic of theories in the earlier part of the previous century (such as Mead's and Vygotsky's) largely overlooks primary, embodied forms of intersubjectivity. Later theorization in the social-relational tradition, as we see in Trevarthen, Bråten, Stern, Gillespie and others, has focused in particular to amend this lacuna.[647] While I agree that the socio-culturally robust sense of self and other pertains to social acts that call for the coordination of various social perspectives, I maintain on the one hand that the simplest process of perspective-taking already presupposes various metasemiotic differentiations that are similarly intersubjectively realized and gradually internalized, and on the other that the self-other relation predates in certain embodied forms the conceptual construal of its relata. In other words, the earliest interactions are already social. They are characterized by attunement, reciprocity and coordination, which gradually give rise to richer and more sophisticated intersubjective relations as communicative patterns change and develop hand in hand with patterns of intrasubjective semiosis. What we have at hand is thus a much more continuous development of the self and other. The category of the social in the narrow institutional sense captures only later, typically culturally mediated forms of intersubjective relations, which may more properly be termed inter*personal* relations. In line with the exposition of various early semiotic developments in the previous chapter, it can be said that intersubjective relations acquire a more interpersonal character as children go from coordinating particular alternative interpretants to coordinating whole social perspectives, which comprise various symbolically mediated social meanings in reference to which children come to interpret others and themselves as persons with distinct attitudes, opinions, social roles and identities. Trevarten emphasizes this continuous intersubjective, communicative link to others in maintaining that

> We do not now seem to be 'made into' persons by learning how to behave and being given named roles in society. We each acquire a 'me', names for ourselves and for what we 'are', and social responsibilities, and make 'attributions' about the personalities, roles, and responsibilities of others, because we are born to be the kind of personalities who will always need to communicate with each other's thoughts and feelings.[648]

Stein Bråten similarly directs attention to the vast evidence of semiotically rich infant communication and concludes that the original psychological state of the infant must already have a dual form; that is, there must be a differentiated embodied self and virtual other in some form from the first time the infant engages in communication.[649] Similarly, Stern has extensively argued for the dyadic, intersubjective structure of the earliest psychological processes, and against the

[647]See also Martin, Sokol, and Elfers, "Taking and Coordinating Perspectives."
[648]Trevarthen, "Signs Before Speech," p. 692.
[649]Stein Bråten, "Dialogic Mind: The Infant and the Adult in Protoconversation," in *Nature, Cognition and System I* (Springer, 1988), 187–205.

idea of an originally undifferentiated psyche.[650] This point can be expressed differently by saying that the human mind is intersubjectively or dialogically organized even in its earliest forms. Trevarthen emphasizes this fundamental dual structure in allusion to Buber in maintaining that primary intersubjectivity is characterized by an "I-You" mode. It can be further maintained in reference to Mead's account that there is a fundamental form of intersubjective relatedness, which we find in the affective attunement of the infant-parent dyad and in their reciprocal embodied coordination of gazes, touches, vocalizations and movements, and that this relatedness gradually evolves into an interpersonal relationship between a "me" and an "other." However, interpersonal relationships also involve the recognition of the spontaneous aspect of the other; that is, not only an acknowledgment of the other as another "me" with own opinions, convictions, attitudes, roles and identities, but also possibly as another "I" with own irreducibly real, experiential orientation towards the shared social world. The self-other relation is thus not confined to an axis of conformation and conflict;[651] our relation to the other as another self would arguably be significantly delimited if this other self were to exclude this dimension of being another "I," to whom we can simply relate to and attune with.

In allusion to the structure of volition discussed in reference to Aristotle, Peirce and Frankfurt in the first chapter, it is possible to regard Mead's "I" as the organismic and spontaneous subject of first-order desires, and the "me" is the represented self-concept that features in normative evaluations of past actions or futural resolutions. Formation of second-order desires always involves a reference to a "me" so understood, since it involves an evaluation of one's attitudes, opinions, actions in reference to one's view of oneself, either in terms of what one is or what one might or should become.

The person as self or other always harbors a dynamic interrelation of these. In this vein, it can be said that certain aspects of interpersonal communication rely on the acknowledgment, for both parties, of the possibility of engaging in an intrapersonal communication of this sort. The other person is a represented other as much as an encountered other. As we interact with others in accordance with their represented qualities as teachers, waiters, children, officers, rich or poor, desirable or disagreeable, both parties recognize at least implicitly that these representations and the relational attitudes they are accompanied by can be suspended or negotiated. These representations involve, especially in closer interpersonal relationships, also the self-definitions of the parties, as these are communicated explicitly or implicitly to the other as well as to oneself. Paralelly, as we act in accordance with internalized societal roles, expectations of and responsibilities towards the others, we engage in or keep at bay the possibility of re-interpreting, rejecting or modifiying these.

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[650]Stern, *The Interpersonal World of the Infant*.

[651]Clearly Mead's perspective on the relation between an "I" and a "me" bears on some level a significant affinity to Freud's ego psychology. This aspect is not our chief focus and concern here.

The transformative mode of communication is geared on the societal level towards creating novel social meaning and modifying extant representational categories or entrenched habits of interpretation. Its fundamental role with respect to interpersonal relationships lies precisely in being a mode in which the contents of the representations of the self and other can be thematized, augmented or challenged. The coordinative mode of communication, on the other hand, is geared towards the maintenance of representations of persons as revealed from the perspective of the generalized other—this aspect resonates strongly with the traditional notion of *personae*. It also serves the interpersonal function of confirming the self-definition of the other. Whenever we communicate something about a situation to another, we also communicate implicitly how we see ourselves as well as the other in relation to that situation. Besides general social meanings, we thereby maintain, strengthen and affirm interpersonal relationships, and our construal of ourselves and others.[652] Thus, we have to engage in interpersonal communication in the coordinative mode not only to organize elements of social acts, but also to find confirmation of ourselves as what we are. The transformative mode of communication relies on this basis in partially disconfirming or rejecting the other's self-definition. This is most often a limited disconfirmation, because one thereby does not necessarily reject the *reality* of the other's self-definition. Moreover, such disconfirmation or rejection is accompanied, as long as we can relate to one another as persons, by a confirmation of what the other might, can or should become. Buber describes the fundamentality of confirmation at some level in this way:

> The basis of man's life with man is twofold and yet one: The wish of every man to be confirmed as what he is, even as what he can become, by men; and the innate capacity in man to confirm his fellow men in this way [...] Actual humanity exists only where this capacity unfolds. On the other hand, of course, an empty claim for confirmation, without devotion for being and becoming, again and again mars the truth of the life between man and man.
>
> ...When two men inform one another of their basically different views about an object, each aiming to convince the other of the rightness of his own way of looking at the matter, everything depends, as far as human life is concerned, on whether each thinks of the other as the one he is, whether

[652]In the section on "Definition of Self and Other" of their *Pragmatics of Human Communication*, Watzlawick and colleagues express in quite strong terms how this confirmation of the other's view of oneself is a fundamental aspect of human communication, and thereby of interpersonal relationships:

> This confirmation of *P*'s view of himself by *0* is probably the greatest single factor ensuring mental development and stability [...] Surprising as it may seem, without this self-confirming effect human communication would hardly have evolved beyond the very limited boundaries of the interchanges indispensable for protection and survival; there would be no reason for communication for the mere sake of communication. Yet everyday experience leaves no doubt that a large portion of our communications are devoted precisely to this purpose. The vast gamut of emotions that individuals feel for each other-from love to hate-would probably hardly exist, and we would live in a world devoid of anything except the most utilitarian endeavors, a world devoid of beauty, poetry, play, and humor (p. 84).

> each, that is, with all his desire to influence the other, nevertheless unreservedly accepts and confirms him in his being this man.[653]

These two modes are evidently both fundamental and always dialectically interrelated, except possibly for extreme hypothetical forms of social interactions where either social or personal perspectives are insulated against interpretive engagement or there are no shared meanings or no level of confirmation at all. One's view of oneself, and one's "self" as revealed from this view, hence, is both formed and change in communication with and through the other. A capacity for perspective-taking implies, in this regard, a capacity to differentiate, coordinate, change and enrich ways of orienting oneself in the world in relation to others, who similarly participate in and respond to social meanings in their own way.

### *VII.3.2 Development of social perspective-taking*

Shifting our focus to the particulars of the development of social perspectives, Robert Selman's work on levels of perspective-taking offers a quite elucidative, systematic account of various phases and transformations in the development of children's capacities for social perspective-taking.[654] His account builds to a significant extent on Mead's, and more importantly, it is rather distinctive among various contemporary theories of social cognition in that he regards the development of perspective-taking abilities as one side of a unitary development, the other side of which is the understanding of personhood:

> Levels of perspective-taking are not directly focused on the content of another's view, i.e., the accuracy of person perception, the correctness of an empathic judgment, or the insight into another's thoughts, feelings, or motivation. Rather, they are focused on the more general structure of the child's understanding of the nature of persons and relations between persons' perspectives."[655]

He offers, thus, not an account of "mind-reading" or "theory-of-mind" but one that identifies the qualitative transformations pertaining to the child's increasingly sophisticated relation to the social world. The ground level of social perspective-taking, according to Selman, characterizes the intersubjective understanding of children approximately three to six years of age and entails the ability to differentiate the attitudes of self and other. For instance, the child can conceive that another person can be hungry when he or she is full, or may have a dislike for something he or she likes. Moreover, there is a growing interest in exploring the subjective nature of self and other, manifest in the child's endeavor to attribute attitudes to oneself or to others in contradistinctive terms. Selman observes,

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[653]Asher D. Biemann, ed., "Distance and Relation (1950)," in *The Martin Buber Reader: Essential Writings* (New York: Palgrave Macmillan, 2002), 206-213, p. 210-1.

[654]These levels are meant as only as idealizations, as he underlines, with a view to capture some crucial qualitative changes that take place in social-cognitive development.

[655]Robert L Selman, "Level of Social Perspective Taking and the Development of Empathy in Children: Speculations from a Social-Cognitive Viewpoint," *Journal of Moral Education* 5, no. 1 (October 1, 1975): 35–43, p. 41.

however, that the child has a naïve assumption that the others will feel or act as he or she would in similar situations.[656]

At the level he terms *subjective social perspective-taking*, the child increasingly comes to recognize that his or her viewpoint is a unique one; that is, others might interpret the same social situation differently or perform the same actions for different reasons. The child's focus accordingly shifts from the overt behaviors of others to their feelings, thoughts and intentions. For instance, the child can understand that what people say or do is underlined by what they mean or intend. However, the child as yet cannot simultaneously entertain his or her own perspective and those of others in judging their behavior, and cannot judge his or her own behavior from the other's perspective. For Selman, the limit of this level of perspective-taking is that the child regards persons as having only one subjective attitude towards another person, object or situation and cannot conceive a conflict of subjective attitudes. For instance, if the child knows that somebody does not like a particular object but receives it as a gift, he or she cannot entertain the possibility that this person might still appreciate having received a gift. In broader terms, we can say that the limits of perspective-taking at this level is that of simultaneously entertaining alternative but non-exclusive perspectives.

He concludes that children at this level understand the subjectivity of persons but not that persons consider one another as subjects.[657] We can paraphrase this as a lack of understanding that persons stand in interpersonal relations, which affect their perspectives.

Selman terms the next level *self-reflective perspective-taking*, where the child can interrelate perspectives. The child comes to grasp, after approximately eight years of age, that perspectives reciprocally influence one another, rather than being independent evaluations or representations of situations. The child now recognizes that his or her attitudes and actions are susceptible to the evaluations of others and vice versa. This recognition implies a nascent capacity for self-reflection. Together with it comes the recognition that persons can simultaneously entertain different or even conflicting attitudes about the same object or situation. For Selman the implication of this development on the child's view of self and other is that the child's "view of others is influenced by the realization that others (or the self as other) can view the self as a subject just as the self can view other as a subject."[658] However, the child can recognize these two directions of influence only sequentially and not in their reciprocity. This implies that the child does cannot have an external point of view on the dyadic interaction, thus cannot recognize it as such.

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[656]Selman, " Level of Social Perspective Taking and the Development of Empathy in Children," p. 38.
[657]Ibid., p. 39.
[658]Ibid.

The subsequent development is the acquisition of a third-person standpoint. Selman calls this level *third person perspective-taking* and maintains that it characterizes the social-cognitive capacities of children around ten to twelve years of age. The child can now represent interpersonal relations as reciprocal and temporally extended, rather than as a series of context-sensitive interactions. The concept of persons at this level includes that they can be mutually aware of each other's feelings, thoughts and intentions. It can be said, in communication terms, that now the child can represent relational attitudes as enduring patterns and conceive their reciprocal influence. According to Selman, the limitations of this level lie in that representations of other persons' perspectives is restricted to simplistic or stereotypical characteristics.[659]

The next level of *qualitative systems level of social perspective-taking* entails the representation of persons (including the self) as complex psychological systems of attitudes, beliefs and values, together with the recognition that understanding the other's perspective admits of qualitative differentiation—persons can "know" one another superficially, as colleagues, friends or as partners. Selman attributes this level of perspective-taking to adolescents.

Finally, at the level of *symbolic-interactional perspective-taking*, one integrates the conception of persons and of interpersonal relationships in that one can reflectively engage in perspective-taking in analyzing relationships and the differential meanings of utterances and acts in communicative interactions. We can explicate that this implies a reflective engagement with possible misunderstandings, conflicting values and interests, or covert metacommunicative messages. One comes to recognize that actions have different meanings at different levels, and can take a step back to reflect on the interrelation of these different levels of meaning. It can be said, in Mead's terms, that one comes to grasp how interpersonal attitudes and actions interrelate with symbolic social meanings. One comes to understand the primary symbolic meaning of giving a gift, for instance, as conveying that one cares for the other and for the relationship, or of making a promise as bindingly committing to bring some imagined states of affairs into reality. To add, while *social negotiation* of meaning and relationships is characteristic of any social interaction that features perspective-taking at any of these levels, the process of *mutual persuasion*, which I have suggested as being quintessentially characteristic of transformative communication in mature interpersonal interactions, requires this kind of perspective-taking from both parties.

[659] Ibid., p. 40.

# VIII HABIT, CHANGE AND REFLEXIVITY

In this last chapter, I tie the discussions of the metasemiotic mediation of meaning-making and the development of self-interpretation though perspective-taking to self-control and self-persuasion, where my account of the communicative origins of person-making dispositions culminates. I first go in more detail into the concept of habit in reference to Aristotle and Peirce. Secondly, I explicate Peirce's notion of habit of habit-change in terms of higher-order habits, and discuss how the latter sheds light on self-induced habit-change, and thereby on self-persuasion.

## VIII.1 THE CONCEPT OF HABIT REVISITED

Habits are general *ways* of acting and responding which are malleable to different degrees. They are commonly associated more with active doings than with merely passive receptivities. Winfried Nöth rightly remarks that the colloquial notion of habit presupposes that of agency, since we would attribute habits to various animals but hardly ever to inanimate objects.[660] We also speak of habits in a stronger, constitutive sense, as determinations. A habit is a determination in the sense of an ability, tendency, disposition, readiness or simply put in that of *potentiality*. It is this stronger sense that is the focus of the following discussion. The commonplace distinction between tendencies and dispositions concerning whether the habit is acquired or inborn relates to the general discussion of habits only in terms of their degrees of plasticity and controllability and not in those of ontological categorization.

The English term habit translates the Greek *hexis* (ἕξις) and the Latin *habitus*, both derived from the verb "to have" (*ἔχειν* and *habere*, respectively). Habit is among the nine Aristotelian categories of accidents and has continued to be treated categorically throughout the medieval period, although the term arguably found its most influential and established usage in the context of practical action. In *Nicomachean Ethics* a habit (ἕξις) is said to be defined by the acts (*ἐνεργεία*) in which it is manifested and by the objects (*καὶ ὧν ἐστίν*) to which it is directed.[661] A particular habit then should be identified both with respect to the kind of action it brings forth and to the kind of objects those actions relate to, i.e. to the kind of situation. Previously Aristotle identifies ethical virtue as habit, and defines is as a habit of having appropriate feelings.[662] Habit covers the opposite of ethical virtue as well; that is, the tendency of having inappropriate feelings. In the context of ethics, hence, the notion comprises the senses of what we can call habits of action

[660]Winfied Nöth, "Habits, Habit Change, and the Habit of Habit Change According to Peirce," in *Consensus on Peirce's Concept of Habit*, ed. Donna E. West and Myrdene Anderson (Cham: Springer International Publishing, 2016).

[661]Aristotle, *Nicomachean Ethics*, IV, 4, 1122b1, the Revised Oxford Translation.

[662]Ibid., II, 5, 1105b25.

and habits of feeling, which constitute the motivational dimension of action. The notion of habit, in both senses, is central to ethics in terms of linking virtuous acts to good character. Aristotle's emphasis on character is commonly regarded as a response to Plato's identification of virtue with knowledge, in that Aristotle brings attention to the indispensable motivational dimension of virtuous action. Moreover, good character is not an all-or-non phenomenon as it is the case with having knowledge but can be cultivated to varying degrees of goodness. In this respect it is akin to another kind of habit, namely that pertaining to craft or technical skill (*τέχνη*) in that both aim at some good and can be cultivated, although they differ sharply from one another as making something and acting (*ποιητὸν καὶ πρακτόν*) do.[663]

In *Metaphysics* we have a much broader and abstract definition of habit, because there it is conceived as a category. The term habit (*ἕξις*) as the name of one of the ten categories is commonly translated as "having" or "state." A habit is a kind of having we can be said to *have*, in difference to the sense of having as something like an action or movement (*πρᾶξίς* or *κίνησις*) which obtains between, for instance, a proprietor and the thing he possesses. In the latter case we cannot say that the proprietor *has* the act of having. But in the former we are speaking not of having something but of a state we have, namely a *disposition*. Aristotle defines a disposition (*διάθεσις*) as "the arrangement of that which has parts, in respect either of place [*τόπος*] or of capacity [*δύναμις*] or of kind [*εἶδος*]; for there must be a certain position [*θέσις*], as the word 'disposition' shows."[664] A disposition is quite literally an orderly arrangement of whatever that has parts, be it the elements of speech, organs, or members of a group. Concerning the notion of habit, though, a disposition is a causal factor and this is manifest in the close relation of the notion to that of *δύναμις*. Dispositions are either passive or not yet realized powers, capacities, or potentialities (as the word *δύναμις* is usually translated), such as the disposition of someone who has learned the art to cure (or harm) patients. A habit is then defined as "a disposition according to which that which is disposed is either well or ill disposed, either in itself or with reference to something else…"[665] The example Aristotle gives of a good disposition (of the body) is health, since it is the excellence of the parts of the body in their specific arrangement. A healthy athlete is well disposed to excel in competitions. The medical doctor in the previous example may have the habit of realizing the medical knowledge and skill to the benefit of patients. A habit is a qualified disposition and implies also a consistent inclination to realize that disposition in a specific way. It is easy then to see why virtues and vices are considered as habits: a virtue (or vice) disposes for acting good (or bad) in the specific context associated with the disposition. An activity

[663]Ibid., VI, 4, 1140a1.

[664]Aristotle, *Metaphysics* V, 19, 1022b1, the Revised Oxford Translation.

[665]Ibid., 1022b11-2.

by itself cannot be called virtuous; it can *manifest* virtue. That is to say, that which is virtuous is activity in conformity with a good disposition.[666]

Aristotle's definitions of habit in the contexts of ethics and metaphysics suggest thus a relatively permanent determination, a state or constitution such as character, knowledge or health. In that regard, a habit is different from easily changeable (usually passive) determinations such as being hot or cold. The literal sense of the term disposition, namely an orderly arrangement of parts, reinforces this understanding of habit with the notion of *organization*. It is the particular organization of the parts of a musical instrument that makes it well or ill-disposed to produce likeable sounds. Similarly, it is the particular cooperation and harmony between the powers and qualities of the soul that makes a person well or ill-disposed to act in ways appropriate to the situation and efficient in realizing the goals associated with the action. A habit is thus a complex that may involve inborn dispositions, emotions, desires, purposes as well as reason. A moral habit directs a manifold of emotions and desires in certain situations in a way that influences judgment and choice, and is called rational if the desires involved are in accordance with previous judgment of what is good and what evil.

The Aristotelian notion of habit is not restricted to moral virtues and vices, but applies to intellectual virtues as well. Although intellectual virtues have reason in them and moral virtues become rational by obeying reason,[667] both virtues are cultivated through repeated realization; that is, through practical activity and rational exercise, respectively.

Thomas Aquinas also follows Aristotle in calling intellectual as well as moral virtues *habitus*, since both amount to a perfection of one's human powers. The habits whereby the person reasons properly (i.e., the habits of wisdom, science and understanding) are perfections of the "possible" intellect, which comes between pure potentiality and the actual, perfected exercise of the intellectual powers.[668] The connection to the human nature should be considered in light of Aquinas' interpretation of habit as "the mode or determination of the subject, in regard to the nature of the thing,"[669] in difference to its determinations concerning categories such as quantity, or action and passion. Habits of the soul and of the body are dispositions in accordance with one's nature to its perfection (or deviations therefrom in case of deficiencies), thus under habits and dispositions we should consider "both evil and good, and also changeableness, whether easy or difficult; inasmuch as a certain nature is the end of generation and movement."[670]

The element of repetition features in Aquinas' understanding of habits as well and it is closely linked to the status of action as the cradle of the habits of the

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[666]*Nicomachean Ethics*, 1098b.

[667]Ibid., 1102b29-1103a13.

[668]Thomas Aquinas, *Summa Theologica*, I-II, Q. 50, Art. 4, trans. the Fathers of the English Dominican Republic.

[669]Q. 49, Art. 2.

[670]Ibid.

soul. He writes that a habit (of the soul) is a disposition of the subject, which is in a state of potentiality, to act, and such habits are formed by repeated acts of the same kind.[671] Aquinas' ascription of habits of action to the soul follows from his differentiation between dispositions to act that are from nature and those that proceed from the soul. Those acts of the body that proceed directly from its nature and not from the efficacy of the soul cannot be called habitual, he argues, since natural forces have one mode of operation and habituation is not required in the absence of a potentiality to operate in various ways. Thus, the availability of some kind of choice is a condition of being disposed to something.[672] In this sense, habit is clearly a principle and source of action, and it is related to action as potentiality is related to actuality. This differentiation between natural and willful operations of a subject should not, though, suggest a dichotomy between nature and will that would be in contradiction with Aquinas' above cited formulation of habit in terms of nature. Actually only in a very limited range of cases qualitative determinations of subjects suit their natures in one fixed way, e.g. in that of basic elements such as fire or air; in all other cases where a multiplicity of factors and their variable adjustment is required to dispose a subject to some operation in regard to its nature, there is room and need for habituation. The crux of the matter is, thus, that whether a potentiality admits of actualization in a variety of ways or through various means. If so, the potentiality in question requires a habit whereby it is disposed sufficiently to its object.

What about habits of the body? The majority of habits of action proceed from the soul through the body but are called primarily habits of the soul and only secondarily habits of the body, since body has only a mediating role in their realization. The point of the argument is not ontological, though, but concerns the proper subject of a habit in question. There are habits, on the other hand, which are properly called habits of the body. These comprise habits that are not primarily dispositions of the subject to operation but to form or nature. Examples such as health or beauty are habitual dispositions in the body. They are complex and relatively long lasting qualitative determinations of a subject which are considered in relation to their suitability to its nature. Should habitual dispositions of the body then be considered as habits that are unrelated to action? The answer, from a broader angle, is negative: all kinds of habits are ultimately related to action. Since habits essentially imply a relation to nature, and nature is a principle of action, habits imply a relation to action:

> …a thing's nature, which is the end of generation, is further ordained to another end, which is either an operation, or the product of an operation, to which one attains by means of operation. Wherefore habit implies relation not only to the

[671]Q. 50, Art. 1.
[672]Q. 49, Art. 4.

very nature of a thing, but also, consequently, to operation, inasmuch as this is the end of nature, or conducive to the end.[673]

To return to the typical example of health, we call somebody healthy when that person can perform the actions of a healthy person. What about the condition of being realizable in various ways? As I have hinted above, a habitual disposition implies multiplicity of factors and their variable adjustment. This designation applies to examples such as health or beauty just as sufficiently, since they involve the adjustment of several factors, which admit of varying degrees of adjustability.

One last, neighboring question is whether there are habits in the nutritive and sensitive powers (besides the intellect and the appetitive powers) and in primitive animals. Aquinas does not ascribe habits to the nutritive part of the soul for the reason that they have no aptitude to obey reason, since their operation is sufficiently determined by nature. Regarding the sensitive powers, which can act from natural instinct as well as obey reason, we can ascribe habits to them in cases where their operation admits of participation in reason, since in those cases they can be determined to various operations. Aquinas interestingly admits that we can ascribe habits to a certain extent to primitive animals as well, since they both have certain dispositions in relation to nature that require the adjustment of various factors (for reasons similar to those regarding the habits of the body), and they can be said to act (and actually tamed to act) in customary ways.[674] These "customs" of animals develop through the motivating and deterring influence of pleasure and pain. In contemporary jargon any creature who can *learn* could, to the extent that its mode of operation is determined through learning, be said to have habits on the basis of Aquinas' criteria.

To restate the main elements that I touched upon in regards to Aristotle's and Aquinas' conceptions of habit in conclusion: A habit is a relatively long lasting qualitative determination of a subject, it is a potentiality which can be actualized in various ways or through various means, it is a principle of action or ultimately related to action, and it requires cultivation to become a perfection or excellence of the subject in the domain relevant to the habit.

Besides the nominative use of the term habit, which denotes a potentiality that is a long lasting qualitative determination, there is also a common adverbial usage of the term that makes it almost synonymous with "potential," paradigmatic in the scholastic distinction between knowing *habitualiter* as opposed to *actualiter* that one comes across often in the writings of Thomas Aquinas and Duns Scotus on mind and cognition.[675] Most generally speaking, a cognition which is not in the mind *actualiter* can be said to be so *habitualiter*. Thus, actuality is not the only modality cognitions might have. Consequently, being the object of conscious attention is not an existential condition for all that can be said to be in the mind.

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[673]Q. 49, Art. 3.

[674]Q. 50, Art. 3.

[675]See e.g. Thomas Aquinas, *Quaestiones Disputatae, de Veritate*, Q. 10, Art. 8; Duns Scotus, *Ordinatio* I, D. 3, Q. 2.

The mode of habitual existence, on the other hand, is clearly distinct from pure potentiality or, in other words, possibility. It is a midway between what is immediately present to consciousness and what can possibly be cognized (e.g., as an implication or association of another cognition). This scholastic distinction follows the classical Aristotelian notion of second order potentiality or first actuality (*ἐντελέχεια ἡ πρώτη*), which is the proper modality ascribed to habits, in a way that anticipates the contemporary notion of cognitive unconscious (or preconscious). It can moreover be argued that some cognitions can never be fully present to consciousness. A highly abstract notion, or one that surpasses the capacities of the imagination, such as that of God, can be in the mind only *habitualiter*; that is, cannot be fully present to the consciousness but can nonetheless affect judgment and action. Obviously, this particular implication is more relevant in the scholastic context than the Aristotelian one, although the issue revolves around the old question of the mode of existence of universals. Since Scotus' variety of scholastic realism was most influential in the evolution of Peirce's thought, some key Peircean notions I have presented in the preceding such as the immediate interpretant or belief as habit of action have a direct historical reference to this scholastic distinction. Most generally, thirdness is real *habitualiter*, not as a "could-be" or "is" but as a "would-be," notwithstanding that it may be actualized only in the form of secondness; i.e., in pairs of action-reaction. In consequence, *action* from the Peircean perspective can also be explicated, where appropriate, as an *actualization*—of a habit of action as disposition or capacity.

Peirce distinctively ascribes habits to all nature as well as to inert matter as one end of a continuum ranging from laws of nature to human norms. Alongside the assumption of an ontological continuum, his treatment of habit is organized around three main senses: habits in nature as regularities or laws, habits of action as dispositions[676] and epistemic habits as beliefs. The overarching law of habit, then, appears as a general tendency of all phenomena to positively bias previously travelled pathways. The Aristotelian sense does not seem to be categorically in contradiction with such an extension of the term, but if matter lacks habits it is due to its lack of an internal principle of resistance and its fixed mode of operation. There is a conceptual difficulty involved in the very notion of habit, though, which becomes more easily apparent when it is generalized to the level of a cosmological principle. If there is a general tendency towards increasing order and fixity, habit formation must preclude further formation of habits. This would make habit-change ultimately an impossibility. Habits, on the other hand, do change and a significant part of cultivating one's character is the abandonment, modification and transformation of old habits. Peirce approaches this problem by qualifying the law of habit as a peculiar kind of law:

[676] In the sense of disposition, a habit is "a rule active in us" [CP 2.643] or "operative in the organism" [W 4.249]. This use of "rule" is arguably rather metaphorical, because a rule is the symbolical articulation of a habit.

> This law of habit seems to be quite radically different in its general form from mechanical law, inasmuch as it would at once cease to operate if it were rigidly obeyed: since in that case all habits would at once become so fixed as to give room for no further formation of habits. In this point of view, then, growth seems to indicate a positive violation of law.[677]

Peirce adds that "the uncertainty of the mental law" which is a more particular case of the law of habit, "is no mere defect of it, but is on the contrary of its essence" and that "[t]here always remains a certain amount of arbitrary spontaneity in its [i.e., mind's] action, without which it would be dead."[678]

In our time, we are fortunate to possess a wider technical vocabulary than Peirce's to describe the seemingly paradoxical nature of a structure like the "mental law" in comparison to physical laws or the laws of secondness. While the so called mechanical processes bring about either *stable* or *instable* structures, the type of (negentropic) processes we chiefly attribute to living organisms most generally bring about and preserve *metastable* structures, that is structures that maintain themselves through change for a period of time without dissolving or sinking into fixity.

But what about the mind? Peirce's wording "mental" should not at all suggest that terminus of the mental-natural dichotomy with all its dualistic connotations, since what he means is much closer to the older notions of *psyche* or *anima*, and his "mental law" or the "law of mind" *is* a kind of natural law not ontologically but metaphysically or logically distinct from the mechanical law. The varieties in the operation of mind, moreover, is not a question of ontological difference but one of degrees of susceptibility to self-control and self-induced change.

It can be argued that a basic distinction is between habits that are close to self-control and those that are not (e.g., instincts and many dispositions). The distinction should, however, not be taken as all or none. The development of habit is conceived as a gradual and evolutionary one, where it increasingly becomes susceptible to change and acquires generality. Among many definitions and descriptions of habit formulated by Peirce, the following are most pertinent to the class characterized by self-control. In emphasizing the conditionality and purposefulness of habits, he says: "[Readiness] to act in a certain way under *given* circumstances and when actuated by a given *motive* is a habit."[679] In emphasizing the generality of habit, he says: "[a habit] is a *general* law of action, such that on a certain general kind of occasion a man will be more or less apt to act in a certain *general* way.[680] Habit, thus, appears under its thought aspect when the emphasis is on its purposiveness and generality, and it appears under its action aspect when the emphasis is on its conditionality; that is, on its being a *potential* law actualized through action. The notion of habit unifies those of thought and action under itself.

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[677]CP 6.613. Cited in Nöth, "Habits, Habit Change, and the Habit of Habit Change According to Peirce".
[678]CP 6.148.
[679]CP 5.480. Italics are added.
[680]CP 2.148. Italics are added.

Thought is an activity in so far as it involves *active* rules, and action is significant conduct in so far as it is habitual and purposive. Self-control too is neither a solely intellectual nor empirical matter. It is, on the one hand, an inferential process whereby the conditionals (would-be's and would-do's) are derived in internal dialogue with a future self, on the other it involves one's testing out one's predictions in experience. These two processes are inseparable.

One has of course many habits of the other kind, but these can be brought to a certain extent under the governance of habits of reflexivity. We need thus to speak of various *orders* of habit and self-control. The higher-order habit is characteristically more amenable to self-control, but this character can also resonate through other habits as they become subsumed under higher-order habits. Various beliefs, as habits, are interrelated in the same way. Moral self-control, moreover, is the same as logical self-control in terms of the way in which it operates; namely, both involve the derivation of future conditionals, which is subject to normative evaluation, and their testing out in experience.

Speaking of orders of habits and self-control might suggest, on the other hand, a thoroughly hierarchical picture of the mind with discursive thought sitting mightily at the psychic throne. The manner in which various habits are interrelated is actually much less linear. In order to outline how a more intricate and multi-dimensional picture might look like, let us pause the discussion for a moment to introduce some differentiations.

From the Peircean perspective all rational habits are conceived to be ultimately habits of action. Depending on particular cases, though, it is possible to narrow down the concept into innumerably many species, since habits are characterized by their objects and the kind of action they give rise to, besides their general structure. Thus, a categorization in terms of certain faculties or "parts of the soul" is also possible, as when we speak of habits of imagination or perception.

"Habit of feeling" can be conceived as an umbrella term that comprises habits determining perceptual and affective judgments as well as those that underline practical and theoretical value judgments.[681] It must be noted, though, that this usage is not strictly the same as Peirce's categorical usage, as thirdness of firstness, but resorts to a broader understanding of the term as habituated patterns of interpretation involved in perceptual-affective processes.

What is generally considered as taste, for example, can be regarded as a habit of feeling determining aesthetical judgments, and good taste requires the deliberate and critical formation of such habits. This should not suggest that good taste or any other reflectively and critically formed habit is necessarily formed through *individual* reflection and self-criticism. Deliberate and critical formation of habits, especially in the case of habits of feeling, is throughout a social affair. The social institution of education, for instance, can serve the deliberate and

[681] While these can be theoretically extended to include inborn as well as acquired dispositions to feel in a certain way in response to certain cues, situations and so on, I will focus on a narrower, more relevant set here.

critical formation of habits of feeling, even when in their formation the reflective involvement of the individual who gradually comes to embody the habits happens to be relatively little. Because the habits that are desired to be cultivated are, as types, themselves the products of a history of collective discovery, experimentation, negotiation, deliberation and criticism. Experience tells us that intensive exposure to works of art as cultural artifacts can also contribute to the establishment of good taste. Because the kind of taste they help to cultivate is already embodied in their production and, given enough time and experience, it can be to some extent transmitted to the individuals who come to appreciate them. Obviously, to the extent that the person is reflectively and critically involved in the formation of habits of feeling, exercising agency over them becomes more probable.

Habits of thought and action, on the other hand, organically involve habits of feeling in their formation and instantiation. This picture is also in conformity with how Peirce conceives habits of thought and action[682] as involving habits of feeling. Not merely the categorical considerations of Peirce but also contemporary psychological research points towards increasingly more intimate relations between cognition and affect on the one hand, and between affect and behavior on the other. If not all abstract reasoning, at least deliberation and decision making necessarily involve habits determining affective and perceptual judgments, which in turn bring with them certain tendencies to act.[683] Although the domain of affect started relatively recently to gain ground against strictly cognitivist models in modern psychology, it is worth noting that philosophical psychology in the Aristotelian tradition gave habits of feeling always a very central role in the psyche and the conception of affect was far from being epiphenomenal, the consequences of which we see especially clearly in the domain of ethics.

## VIII.2 ORDERS OF SELF-CONTROL AND THE HABIT OF HABIT-CHANGE

Habits are not immovable structures but involve an element of spontaneity, otherwise they would hardly be habits, but nonetheless there is a certain conceptual tension involved in the notion of habit-change. Moreover, a notion such as Peirce's "habit of habit-change" seems outright paradoxical. Common-

[682]For reasons I touched upon in the context of pragmatism, "habits of thought an action" should be seen as a unit and the term "habit of thought" alone does not have a distinct sense except for habits of imagining and reflection which nonetheless bear a connection to habits of action in so far as they precede and prepare for actual conduct. Thought after all is for Peirce a species of conduct. The term habit of action, on the other hand, may be used alone to refer to habits determining deliberate as well as non-deliberate action.

[683]Antonio Damasio's research line is a prime example. In particular, see Antonio R. Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (Houghton Mifflin Harcourt, 1999); Antonio R Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain* (Putnam, 1994).

sense would have it that processes of habit formation and those of habit-change require not a single principle such as the law of habit but two: one directing towards fixity and one towards novelty. One reasonable way out of this impasse seems to be through acknowledging interrelated orders and kinds of habits. Such an account of habit finds implication in Peirce's writings to a limited degree and when it does, it is characterized by a heavily cognitivist and not a very systemic view of the mind. The notion of habit of habit-change, though, carries a wider conceptual potential than Peirce has developed it in the context of and in line with the demands of his pragmatist method.

When we talk about a single habit, we are generally talking about a bundle of interrelated habits. For instance, a habit of practical action that can be expressed in the form "If I am in a situation where somebody is not given opportunity despite sincere effort and evident skill, I speak up for that person to the best of my ability" obviously involves the habit of categorizing some situations and actions in these terms, but it also involves associated habits of expectation, habits of emotional evaluation of the situation that can facilitate or impede the action (such as anticipated regret) and habitual responses to such emotional factors. The cultivation of such a habit usually requires control over many other habits of feeling, thought and action. What is involved in controlling one's habits, if not the formation of novel habits? In order to control a habit of feeling indifferent towards other people's predicaments or of feeling anxious when one needs to take initiative, one would usually try to cultivate other auxiliary habits such as employing perspective-taking in judging situations or imagining the long-term consequences of remaining silent. If the person becomes eventually successful in establishing the habit of speaking up against injustice, previous habits that impede or rule out the action do not evaporate but are placed under the control of the higher-order habit. Any such higher-order habit can only be established through harmonizing, coordinating, monitoring or modifying a rich bundle of already systematically interrelated habits.

Self-control, then, implies to a significant extent control over one's habits. Put this way, it is not a spontaneous event of exercising will but a diachronic process, which admits of degrees. Since thought processes associated with self-control such as logical reasoning, critical evaluation, planning and formation of attitudes can have as their object either past or future action but not action in the present, it is pertinent to ascribe self-control to such retrospective and prospective processes and not to any given action. A person can be said to be self-critical, self-controlled, or even autonomous not on the basis of the qualities of any single action but on that of how that person prepares for future events and is disposed towards the past. Under this light, self-controlled, deliberate action can be seen less as an obscure phenomenon of causally efficacious intentionality and more as the product of a diachronic process of critical habit formation. A paradigmatic case of self-control would then be giving promises to others and to oneself.

Most habits can operate without conscious intervention, and many can be formed through unconscious or pre-conscious inferential processes. Some highest habits of logical inference, though, require conscious reasoning since their formation demands consciousness of the premises, the conclusion, its derivation from the premises and of the assent to or approval of the conclusion. These are cases of self-controlled thinking, or thought controlling previous thought. Yet the role given to consciousness in the case of deliberate habit formation need not be more than a functional one. Moreover, consciousness as a function in logical formation of habits appears to depend on a variety of skills and capacities such as working memory, attention and some familiarity with classes of inferences, which themselves come close to habits in that they can be cultivated.

Self-control manifests itself, then, as a phenomenon much wider than consciousness and intentional agency. It admits of degrees and evidently implies a hierarchy of innumerable nested habits. Peirce explicitly addresses this hierarchical structure:

> To return to self-control, [...] of course there are inhibitions and coördinations that entirely escape consciousness. There are, in the next place, modes of self-control which seem quite instinctive. Next, there is a kind of self-control which results from training. Next, a man can be his own training-master and thus control his self-control. When this point is reached much or all the training may be conducted in imagination. When a man trains himself, thus controlling control, he must have some moral rule in view, however special and irrational it may be. But next he may undertake to improve this rule; that is, to exercise a control over his control of control. To do this he must have in view something higher than an irrational rule. He must have some sort of moral principle. This, in turn, may be controlled by reference to an esthetic ideal of what is fine. There are certainly more grades than I have enumerated. Perhaps their number is indefinite. The brutes are certainly capable of more than one grade of control; but it seems to me that our superiority to them is more due to our greater number of grades of self-control than it is to our versatility.[684]

As habit formation permeates nature, various degrees of self-control are present both across organisms and within a single organism such as the human being. From the perspective of self-control, thinking appears as a particularly efficient means of habit formation and modification. Moreover, thought has the peculiarity of not only resulting from or leading to other clusters of thoughts, as it is the case with emotions, but being able to address other thoughts as its object with the help of semiotic tools such as abstraction and reification, thereby allowing for potentially infinite iterations of self-control. If thinking is essentially in the service of achieving higher orders of self-control, it comes as no surprise that it is a thoroughly moral and ultimately aesthetical affair. In this regard, theoretical and the practical reason, to use Kant's terminology, are not essentially different. Higher order processes such as abstract reasoning and deliberation have the same

[684]CP 5.533.

semiotic structure and their goodness and badness (normativity) is ultimately a matter of self-control, thus a matter of the degrees of semiotic mediation introduced into psychic processes.

As Karl-Otto Apel points out, Peirce's conception of a self-analyzing, deliberate formation of habits is a model of progressive rationalization of conduct.[685] This process should not be equated, however, to one of knowledge accumulation, because intellectual sophistication does not necessarily bring with it more versatility in thinking and more readiness to change in habits of thought. Theoretical learning at bottom is a process of intellectual habit formation, which by itself does not imply a habit of habit-change. It is geared towards, as all habits are, an increase in the stability of the system of beliefs and attitudes. Moreover, as it is commonly observed, mere exposure to conflicting evidence, differing opinion or incommensurable theoretical perspectives does not bring with it openness and versatility of thought, but on the contrary most often leads to a strengthening and sophistication of the existing system of beliefs and attitudes. We tend to accept with less scrutiny those ideas, or even factual information, which are in conformity with our own hypotheses and we tend to become sceptics in the face of conflict. Habits resist change to the point where disturbance becomes threatening. Contrary to our most favorable assumptions, moreover, especially in those areas of knowledge that are less suitable to be freed from practical motives such as politics, more knowledgeable people can be less prone to persuasion through presentation of conflicting facts and theories.[686]

Habit-change, on the other hand, is also an epistemic process but in the other direction. More clearly, it is an epistemic process directed not towards the world as the object of knowledge, but towards the very processes of knowledge acquisition, of belief and attitude formation—in short, of processes of intellectual habit taking. Evidently, habits change in various ways as they fall out of harmony with the environment. But self-induced, deliberate habit-change is an essentially reflexive processes which requires a willingness and effort to identify and acknowledge one's habits of feeling, acting and thinking. In contemporary psychological terms, it is not a matter of more sophisticated cognition but of *meta*cognition.[687] The establishment of norms of "good" and "bad" thinking in the form of rules of inference and logical fallacies can be seen under this light as ages-old technologies for preventing motivated adherence to belief-habits as well as for arming the mind against sophistry. Reflexive habit-change, however, cannot rely merely on formal critical evaluation of cognition. When we do not endorse a cognitivist reductionism of affect to the status of an epiphenomenon and show more interest in discovering the systemic relations between affect, cognition and

[685]Karl-Otto Apel, *Der Denkweg von Charles S. Peirce* (Suhrkamp, 1975), p. 327.

[686]See Charles S. Taber and Milton Lodge, "Motivated Skepticism in the Evaluation of Political Beliefs," *American Journal of Political Science* 50, no. 3 (2006): 755–69.

[687]See e.g. Max Rollwage, Raymond J. Dolan, and Stephen M. Fleming, "Metacognitive Failure as a Feature of Those Holding Radical Beliefs," *Current Biology* 28, no. 24 (2018): 4014–21.

behavior, it becomes harder to isolate cognition as the main process behind belief formation. Habits of action, to use the term in Peirce's most general sense of psychic habits, seem to involve emotions to an essential degree since they are the central mediator between perception and action. Reflexive habit-change, then, must involve not only the theoretical evaluation of the contents of one's beliefs but also, even more importantly, the identification and evaluation of one's motivations for adhering to those beliefs, hence, of a wide and complex system of habits. If engaging in this kind of critical, self-directed reflection is made into a habit that can determine actions, then it can be rightly called a habit of habit-change. Thinking obviously is our chief tool for attaining higher-order control on habits, but as Aristotle insightfully hinted at centuries ago, its relation to other psychic processes is much more complex and intricate than it seems to be when conceived in purely hierarchical terms of domination and subordination.

Moving from critical self-reflection to the motivational dimension of habit-change, we can add volitional identification as a further necessary condition for the consummation of self-induced habit-change. Volitional identification, in the sense of identifying with one desire over others in accordance with the kind of person one wants to be, is crucial for the critical and purposeful kind of habit-change. In order to have an effective desire to change a habit, one needs to be able to envision a better considered self (or an aspect thereof), since one can be simply discontent with one's frustrating habits without being able to find or imagine a reference point according to which one can harbor a second-order desire. If there are more than one such reference points that one cannot discriminately evaluate, on the other hand, volitional identification could be in peril. Moreover, one needs to be able to identify, through others or self-reflection, the motive or motives guiding a certain habit of action, since these are more often than not transparent to the consciousness. Most crucially, one needs to identify with the desire to change the habit in accordance with the better considered self and disown the motive guiding the problematized habit.

Such an analysis of identification with second-order desires shares with Peirce's analysis of deliberate formation of habits of conduct its emphasis on the future. Peirce's positing of the future as the reference point of deliberate, purposive conduct indeed opens up an elucidative perspective on the relationship between habit, agency and self. Volitional agency is not to be chiefly looked for, it is implied, among the determining factors operative in the fleeting present instant, in which case it is bound to be posited as an explanatory principle itself in dire need of explanation, but in the diachronic process of habit formation. The present is obviously of paramount importance in that it is the sphere of tension, opposition and resistance. The impetus for any kind of change, e.g. learning, stems from that struggle over what shall be. However, the poles of the struggle are not *present*; they belong either to the actual past or to the indeterminate future and acquire whatever meaning they have in reference to future actions, experiences or states of affairs. Volitional agency is to be looked for, instead, in

how one *prepares for* imagined situations, events, facts or experiences. This preparation involves, on the one hand, the inference of and identification with a self that can be regarded as consistent, fitting, able or, most generally, desirable. On the other, it involves an effort extended over time to establish the kind of habit that can determine one's actions, feelings or thoughts in the real case. The content of such determination would of course not be strict efficient causation, but mostly placement of normative boundary conditions on action as well as establishment of certain patterns and schemata (or biases and paradigms). Peirce also gives a hint in the proposed direction:

> Thus, when you say that you have faith in reasoning, what you mean is that the belief habit formed in the imagination will determine your actions in the real case. This is looking upon the matter from the psychological point of view. Under a logical aspect your opinion in question is that general cognitions of potentialities *in futuro*, if duly constructed, will under imaginary conditions determine *schemata* or imaginary skeleton diagrams with which percepts will accord when the real conditions accord with those imaginary conditions; or, stating the essence of the matter in a nutshell, you opine that percepts follow certain general laws.[688]

In this connection, I can remark once more that the present interpretation of the relations between temporality, habit and action does not apply exclusively either to the sphere of theoretical reasoning or to that of practical action but to both. The process of self-critique and volitional identification implies a normatively guided change in certain meaning structures or semiotic scaffolds, where the norms in question may be moral, aesthetical, political, logical or of any other possible kind. In all cases, some reference to future conduct is necessarily involved. Being normative, moreover, alternative interpretive attitudes and forms of conduct that serve as reference points are always given through the lens of social meanings, which pertain ultimately to the topology and temporality of the social act.

Autonomous habit-change, in difference to habit persistence or to mere habit-taking, is then a habituated, self-directed process of semiotic scaffolding, which consists in modifying, over time, patterns and contents of interpretative processes. With respect to its reflective aspect, autonomous habit-change requires that one engages in self-interpretation and perspective-taking, thereby referring to these patterns and contents from a different interpretive attitude. With respect to its motivational and agentive aspect it requires that one commits to certain attitudes and forms of conduct in volitional identification with them, and acts on these in modifying established habits. Self-persuasion involves both of these aspects equally indissolubly.

In the light of these considerations, we can say that having a capacity for self-persuasion is at the core of personhood, and it amounts to having a capacity for autonomous habit-change; that is, a capacity for cultivating habits of habit-change.

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[688]CP 2.148.

This is arguably also why certain dramatic cases of psychopathology can damage one's standing as a person, as these result in a crystallization of some habits of feeling, action or thought to a degree that prevents self-induced, reflexive change through the formation of higher-order habits. We can thereby also see that the capacity for autonomous habit-change underlies our attributions of accountability. A being who does have such a capacity, even if it is not actualized, can be legitimately hold accountable, because the ground of accountability is ultimately how one cultivates or neglects the habits that determine him or her to act, rather than the particular acts themselves. A being who does not have such a capacity due to fixity of habit or inability to cultivate higher-order habits, by the same token, cannot be hold accountable or can be done so in a much more limited way.

# CONCLUSION

> *When we come to study the great principle of continuity and see how all is fluid and every point directly partakes the being of every other, it will appear that individualism and falsity are one and the same. Meantime, we know that man is not whole as long as he is single, that he is essentially a possible member of society. Especially, one man's experience is nothing, if it stands alone. If he sees what others cannot, we call it hallucination. It is not "my" experience, but "our" experience that has to be thought of; and this "us" has indefinite possibilities.*
>
> Peirce, "*How to make our ideas clear*"

I have begun this investigation with the claim that a genetic approach to the question of personhood reveals more about its subject matter and yields a more holistic and adequate understanding than an analysis of the concept of a person by itself can. My ontological guiding heuristic has been that personhood is a relational and processual phenomenon; that is, one whose individuation is intrinsic to its being in that the processes that generate it are also those that determine its essential characteristics as well as keep it in existence as such. Just as one cannot identify the vital processes that animate an organism by dissecting the organism and conducting an autopsy, I assumed that the surface characteristics of a person mean little when we do not regard them as structures that arise from the relative stabilization or crystallization of interpersonal processes of communication. When we take a step back, these structures are also patterns of an ongoing relationship between the organismic level (with its own phylogenetic history) and the social level (with its own cultural history), which brings about and maintain in existence a middle zone, where we find psychic individuals we call persons.

Persons occupy a very narrow time scale, but their existence consists in putting in relation various processes that are above the proper time scale of the individual: the relatively more entrenched patterns of a phylogenetic and sociocultural history living on in organismic, social and cultural meanings. The most dynamic and formative playground of these relationships between levels is ontogeny, I assumed, thus we find here the most apprehensible manifestation of the processes that are constitutive of persons. As a result, my investigation into the genetic conditions of how a being becomes a person have taken on various disciplinary as well as transdisciplinary perspectives, and addressed a quite vast penumbra of questions surrounding the all-too-familiar yet highly opaque and elusive phenomenon of personhood.

What came out of this genetic account is that personhood, as a constitutive process, consists in internally recreating the social process of mutual, communicative transformation of interpretive and agentive habits, with a view to cultivating a social self (or selves) in communication with the embodied, organismic self of uncritically formed attitudes, convictions and desires. This is a

temporally extended process of self-persuasion. I have conceived this process as consisting in an internal dialogue, which is characterized by an ongoing strive for attaining higher degrees of self-control. To explicate, it is an internal dialogue that starts with self-interpretation and self-evaluation and culminates in the formation of higher-order habits in accordance with an imagined future self that appears more desirable under the light of certain social (moral, aesthetical, intellectual etc.) meanings one internalizes. Self-induced habit-change through an intrapersonal communication among various perspectives is geared towards attaining higher degrees of self-control; that is, towards achieving a more coherent alignment between our habits and the kind of person we would like to be. For the same reason, self-induced habit-change is a process of appropriation or self-appropriation, through which we strive to cultivate habits of feeling, thinking, acting that we can deem more truly ours. To the degree that these habits are truly "ours," they partake of supra-individual patterns.[689] Thus, the path to psychic individuation passes through socialization and acculturation.

Conceived from the perspective I have tried to present, socialization or acculturation do not consist in relationships that are established between pre-existing, more or less self-contained individuals through, for instance, the acquisition of a language. As persons, we are not strangers that meet and form relationships upon discovering or inventing a medium of communication. On a more primordial level, we always already exist in communication of one sort of other and any medium of communication we might discover, learn or create depends for its function primarily on an intersubjective rapport and secondarily (but equally crucial) on the shared context of social interaction. The human infant in particular depends not only for its cognitive-linguistic development but also for its very survival on communicatively rich intersubjective relationships, independently of the satisfaction of its basic bodily needs. The received story of an early language deprivation experiment allegedly conducted by the Holy Roman Emperor Frederick II tells the unexpected, highly dramatic outcome of denying young infants this communicative, intersubjective rapport:

> Like Psammetichus in Herodotus, he made linguistic experiments on the vile bodies of hapless infants, "bidding foster-mothers and nurses to suckle and bathe and wash the children, but in no wise to prattle or speak with them; for he would have learnt whether they would speak the Hebrew language (which had been the first), or Greek, or Latin, or Arabic, or perchance the tongue of their parents of whom they had been born. But he laboured in vain, for the children could not live

[689]In a highly resonating perspective Jan-Ivar Lindén maintains that "Die Person gewinnt ihre Wirklichkeit dadurch, daß sie in verschiedene übergreifende Muster hineinwächst." Jan-Ivar Lindén, *Philosophie Der Gewohnheit: Über Die Störbare Welt Der Muster* (Freiburg, Munich: Verlag Karl Alber, 1997), p. 223.

without clappings of the hands, and gestures, and gladness of countenance, and blandishments."[690]

A much less disputable and historically closer observation comes from the empirical research of psychiatrist Rene Spitz with socially deprived orphans. Even in the case when these children are provided with healthy living environments with good nutrition and medical care, their social and cognitive development is often impaired, they are much more susceptible to psychosomatic damage and have a much higher death rate (approaching a stunning forty percent).[691] What these unfortunate observations as well as a big body of current research on the neuro-cognitive effects of parental bonding[692] show is that at least for human infants rich communicative interaction is a need as fundamental as food, shelter or protection from illness, and a necessary ecological condition of any further social, cognitive and linguistic development. Moreover, considering that language acquisition is only a phase of a broader, holistic development of the capacity for communicative interaction (which we can largely term the development of intersubjectivity), it can be said that verbal communication does not establish intersubjective contact, but facilitates the further sophistication and elaboration of a fundamental relatedness that is already established and continuously maintained. This sophistication and elaboration consists mainly, as I have argued, in scaffolding the primarily intersubjective and secondarily individual (internalized) process of deliberate habit formation and habit-change. Thus, a capacity for verbal communication by itself can but be a shallow criterion of personhood, because it does not specify what this capacity implies for our relations with the other fellow persons and with ourselves.

The signs that are necessary for a kind of social interaction such as mutual persuasion, where each party effectuates a change in the other through an appeal to the very interpretive agency of the other, are of such a nature that they can be referred by and refer to yet other signs, and are always unsaturated or underdetermined in their interpretation. We achieve this mostly with linguistic symbols; that is, with cultural artifacts that have their essential function in communicative social interactions where persons share, maintain, confirm as well as modify, negotiate or contest views of the world and their relations to this world as well as to one another.

Becoming a person is a psychic and semiotic individuation process during the course of which we learn to see, understand, judge ourselves through the eyes of the others and act on ourselves in the way others act on us and we on them. At

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[690]"Salimbene: On Frederick II, 13th Century," *Internet Medieval Sourcebook*, Fordham University, https://sourcebooks.fordham.edu/source/salimbene1.asp (accessed March 1, 2018). The original text from the *Chronicle of Salimbene* is translated and paraphrased by G. Coulton.

[691]Rene A. Spitz, "The Role of Ecological Factors in Emotional Development in Infancy," *Child Development* 20, no. 3 (January 14, 1949): 145–55.

[692]See e.g. D. Narvaez et al., eds., *Evolution, Early Experience and Human Development: From Research to Practice and Policy* (New York: Oxford University Press, 2012).

the same time, we learn to relate to others in a way similar or commensurable to the manner in which we relate to ourselves. The signs of a culture shape, guide and constrain this ever-repeated interchange as much as they change and evolve in our interactions.

Through the course of this investigation I have also (albeit most indirectly) ruled out certain possible conceptions of a person. If the person is a relational and processual phenomenon, it cannot be sufficiently characterized by any properly individual quality: There are no intrinsic characteristics (except for potentially social ones) that by itself can make an entity a person. Personhood cannot consist, for instance, in a particular cognitive function or in belonging to a certain species. If it is in a fundamental sense a social category, as I have argued, neither can it consist in a unique insight or experience, such as the power of introspection into an inner world or a first-person perspective. While all these and similar other criteria might also capture some features of personhood, they either lack a broader perspective into why such features should really matter to us (as our "essential" characteristics) or obscure the nature, boundaries and genesis of personhood. If, for instance, we regard something like a unique phenomenal access to the contents of one's experience as being essential to personhood, we can on this basis only account for one's recognition of one's own individual status as a person and that of the "other" becomes a matter of speculation. Any decision to acknowledge another being as a person, or denying him or her such acknowledgment, would then ultimately be arbitrary. We would also not be in a position to demand firmly that we are treated by others in a certain way. The outcome will not be any better if our criterion is something like a particular individual cognitive function, which could be assessed from an external vantage point. We would be in dark as to why we should regard it as our defining characteristic, why only persons would have it, and why it should matter to us.

I proposed, instead, inherently social qualities as person-making dispositions, such as a capacity for reciprocating a personal attitude, engaging in critical self-evaluation or giving reasons for one's actions. I have argued that the common feature of these and many other similar dispositions is that they are all actualized in interpersonal and intrapersonal communicative processes, and are acquired in the same way. Namely, by internalizing (or internally reconstructing) a kind of intersubjective semiosis that I have termed transformative communication in the form of an individual, psychological function, which we characteristically find in the process of taking others' perspective on own habits as well as of coordinating personal and social perspectives.

I have applied the idea of semiotic scaffolding to intersubjective semiosis and self-reflexive psychological processes, in order to explicate how an intersubjectively extended process is transformed into a psychological one. I have argued that both intersubjective transformative communication and certain kinds of self-reflexive mental processes that are geared towards self-interpretation and self-control are cases of semiotic scaffolding, realized either intersubjectively or

individually. The transformation of the process of intersubjective semiotic scaffolding to a psychological one was conceived in terms of a transition from other-regulation to self-regulation, from social negotiation to self-evaluation and critique, and from mutual persuasion to self-persuasion.

I thereby suggested transformative communication as the constitutive process, or as some would like to call "mechanism," whereby person-making dispositions are acquired and cultivated. I defined transformative communication as an interpersonal or intrapersonal communicative process that addresses and is efficacious on meaning structures, or semiotic scaffolds, such as social meanings, beliefs, interpersonal attitudes, or various kinds of interpretive and agentive habits. This transformative operation of communication takes place within and depends on a broader interpersonal, social and cultural context of meaning, which is organized and maintained through a confirmative and self-perpetuating operation of communication that ultimately serves the coordination of attitudes and actions. I explicated these two modes of communication in Chapter II and discussed my proposal vis-à-vis others in the field of communication theory in Chapter III.

I referred to transformative communication both in investigating the development of several cognitive-semiotic capacities that pertain to person-making dispositions and in describing how these person-making dispositions operate; namely, through an internal dialogue that is coupled with various other such dialogues in other persons in ongoing social interactions.

I have argued, thus, that person-making dispositions are essentially characterized by a reference to an internal transformative communication, and ultimately serve self-control in accordance with encultured preferences, interpersonal and social demands, socially cultivated intellectual habits and so on. We recognize, acknowledge and relate to ourselves and others as persons by virtue of this fundamental capacity for engaging in an internal dialogue among various perspectives and for realizing an ongoing strive (successful or not) for attaining higher degrees of self-control. What is essentially familiar and distinctively valuable in persons is that one can propose reasons to them for their evaluation, demand that they justify their actions in the same manner, expect them to change their convictions or attitudes, possibly persuade them to perceive events and states of affairs differently or behave in other ways, or more accurately and importantly, one can possibly persuade them to self-persuade.

Becoming a person, a being who manifests these dispositions, involves attaining three key capacities that I have placed in a presupposition hierarchy. First and foremost, all self-reflexive cognitive processes require a capacity for metasemiosis. This capacity implies that one can use signs to refer to signs and establish sign-relations that frame, constrain, guide or modify other, pre-existing sign-relations. Even in the most rudimentary self-reflexive cognitive activity such as abandoning a tool that does not work properly, one has to causally relate the failed performance to the tool, whereby one goes from interpreting the tool as a

sign that refers one to a particular activity (e.g., a cup and drinking water) to reinterpreting it as the object of another sign; that is, of the failed performance. We can also take an ordinary example from the domain of social interaction. A child who learned that if she makes a frowning face she can make her mother do something she wants, and developed a habit of frequently doing so, can possibly discover that her frowning face causes distress in her mother and reinterpret her own expression as a sign that is interpreted in her mother's negative emotion, and not only (or instead of) a sign urging her mother to do a certain action. Moreover, while semiosis operates in the present, metasemiosis brings about a temporal extension in referring to and being potentially efficacious on semiotic habits formed in the past, which scaffold semiosis in the present, and in guiding novel habit formation towards an envisioned state in the future. Thus, it is intrinsic to any activity that involves reference to a past or envisioned future action, thought, or feeling from a different perspective, and to any intersubjective or intrasubjective process of deliberate habit-change and habit-formation.

I have discussed the nature of metasemiosis in Chapter V on the basis of Peirce's semiotics I have presented in Chapter IV. There I argued, in reference to Bateson's notion of metacommunication and to empirical research in ethology and comparative psychology, that metasemiosis presupposes the availability of a higher order in communication and that this higher order is manifest to some degree in particular cases of non-human animal communication as well. I described metasemiosis as a manifold of capacities, which implies a gradual development instead of an all-or-none phenomenon. I argued that metasemiosis involves three key differentiations; namely, the differentiation of the sign from its object, the discovery of the interpretant as an aspect of semiosis, and the coordination of alternative interpretants. In development these three differentiations take place consecutively, thus the development of metasemiotic capacities is a gradual one. Each differentiation implies a transformation in the structure of semiosis. I discussed this development in three stages in Chapter VI. Transformative communication, I have argued, is responsible for intersubjectively scaffolding the three main transformations in the structure of semiosis.

Next in the ontogenetic order is a capacity for taking and coordinating perspectives. Perspective-taking implies a transition from an object-oriented perspective, where there are only sign-object relations, to a differentiated personal perspective that is experienced as one perspective among many other personal perspectives. In reference to Mead, I have argued in Chapter VII that the capacity for perspective-taking develops in the context of social interactions with significant others, where perspectives are differentiated, correlated and exchanged through enacting various roles. Personal perspectives are differentiated, assumed and coordinated primarily in social interaction, I maintained, and secondarily in the mental domain, as the child learns to mentally reconstruct the social process of perspective-taking. The developmental origins of critical self-interpretation can be traced back to taking on the perspectives of

significant others on our own feelings, thoughts and actions. Further, we come to understand and respond to social meanings, rules and norms as we go from taking on the perspectives of significant others to taking on the perspective of a generalized other. This transition is realized through the coordination of various personal perspectives in reference to an abstract social perspective, and its earliest origins can be found in rule-based interactions with others. The capacity for taking and coordinating alternative perspectives is central to the process of evaluating one's actions, convictions or attitudes as well as to envisioning and caring for possible future states and predicaments. One identifies or distances oneself with certain actions, desires, judgments or even values through engaging in an internal dialogue between a past self to whom certain dispositions or values are attributed, the organismic, embodied self of actual desires that determine present actions, and alternative future selves that are evaluated in reference to one's own desires and interpersonal or social meanings and norms (be they moral, aesthetic, or intellectual). The necessary reference point in this self-evaluation is always a social self (or selves), which is intimately related to values, norms and patterns of interpersonal relationships. The formation and modification of this social self is an internal communication in the transformative mode, which recreates the social process of meaning-construction and negotiation where concepts, identities, values, rules and norms are formed, challenged, changed or abandoned.

On this basis, I have returned in Chapter VIII to higher-order habits and self-control. I have argued that self-reflexive, deliberate habit formation is the most reasonable conception of how persons achieve self-control and thereby "liberate" their will. I have presented the process of higher-order habit formation, or in Peirce's terms the process of acquiring a habit of habit-change, as one of self-persuasion. I maintained that it is futural to the extent that it involves self-induced change; that is, it consists in an evaluation of the patterns of attitudes, beliefs, desires and actions—the *past* in us—in reference to an envisioned future self with whom we volitionally identify. It thus incorporates a retrospective and a prospective process in which we not only critically evaluate extant habits but also act on ourselves as if on another to bring into reality the future self we have volitionally identified with. To illustrate, we may cherish a certain value or principle, such as unconditional altruism, and further endorse it as a second-order desire. Such a desire by itself would be a wish that this value or principle determines one's conduct in the future in situations that manifest particular qualities. Making such a value or principle one's own in a way that it actually determines one's actions when such a situation becomes a fact, however, requires a commitment and ongoing effort in establishing a novel habit and thereby weakening or uprooting an old one. Thus, self-persuasion is a temporally extended process of transformative communication, which begins with self-interpretation and aims towards establishing higher-order habits.

I thus arrived at an idea that actually resonates with the old Aristotelian idea of habit formation as cultivation of character. I followed, however, a very modern

path that goes through semiotics, cognitive science, communication theory, psychology and several other fields and perspectives. In retrospect, my account of personhood is at bottom very Aristotelian, who thought that the rational animal is a necessarily social animal. However, I believe that in doing this I have answered the "how" question; that is, how a being becomes a person. In expanding and explicating this old and still influential notion through a genetic story, I hope that I demonstrated why a rational animal in the sense applicable to persons must also be a social animal in the sense we require of persons, and vice versa.

To recapitulate in broader terms, individuation and intersubjectivity are perfectly correlated. We are a very pronouncedly social species, not too far from the way in which bees and ants are, but in us (and to some extent in our culturally similar relatives) this sociality is achieved through a dialectic of incomparably more degrees of individuation and intersubjectivity. We are coordinated with each other on more levels than social insects or other social mammals are and can be, and to the same extent and for the same reasons each of us have a much richer and potentially infinite inward dimension. This inwardness is the other side of the same coin as intersubjectivity: The more we can know another, the more we can know ourselves (or there is a self to know about). Thus, the more the levels at which we are coordinated, hence the more socialized we are, the more individual we become. The human species, hence, has something to do with personhood, but in an indirect and contingent way; namely, through our peculiarly complex and closely-knit social organization.

That is why the higher-order intellectual capacities such as self-consciousness or rationality to which reference is often made in the theoretical philosophy literature as metaphysical conditions of personhood are intimately connected with the practical dimensions of personhood discussed in practical fields: These capacities have evolved for social needs and develop in and through social interactions. Thus, while they have other emergent functions in the epistemic domain, their ultimate function and the manner of development is social.

In concluding this work, I would like to touch upon its methodological features and theoretical implications. My investigation has been to a significant extent an interdisciplinary one. In regard to the logical underpinnings of my core premises I drew on semiotics. I also often made reference to its sub-braches such as biosemiotics and cognitive semiotics in explicating how these logical structures are manifest in actual processes of communication and cognition. In analyzing the interactional and relational dynamics of communicative processes I drew on communication theoretical and rhetorical considerations. In its more empirically informed aspects, the present investigation involved consideration of various ethological, psychological, linguistic as well as anthropological proposals and findings. On a more general level, I have brought together theoretical perspectives that are, more often than not, seen as being at odds with one another or altogether contradictory. I believe that the present investigation has featured certain elements of the naturalistic perspective of some ethological or broadly biological

considerations and certain elements of the social constructivist perspective of some sociocultural and relational considerations within a coherent, holistic picture. The medium of dialogue between several apparently incongruent takes on the question as to the nature and emergence of certain forms of human communication and cognition, which from the presented perspective provided different aspects of the same puzzle, was the study of signs and their use, in particular from the perspective articulated by Peirce.

Concerning its theoretical implications, the present account in some respects blurs the boundaries of the individual in explicating a story of individuation. The resulting concept of a person is considerably vague and admits of degrees. When we take off from the concept of a person I have fleshed out, it could be difficult to determine in absolute clarity its extension; that is, the totality of things it includes as neatly demarcated from all things excluded by it. Answers to practical questions as to whether individuals who do not manifest what I have termed person-making dispositions fully (due to immaturity, such as infants, or due to illness), or any non-human animals should be regarded as persons will thereby be far from indisputable. However, these and similar other implications are in my opinion not weaknesses, because it is in the nature of personhood that such questions are never immune to dispute. Moreover, my account suggests that personhood could in principle expand as an institution to the degree that further communicative potential is created; that is, to the degree that we can extend the community of meaning and envision the possibility of engaging in communicative interaction. It cannot be precluded, therefore, that at some point the class of persons may include non-human animals, unfamiliar species or even, though it seems at the moment very unlikely, artificial entities who can in the future perhaps acquire a certain degree of semiotic autonomy to be able to engage in meaning-making.

This also indicates that the idea of necessary and sufficient conditions of personhood misses an important fact, that personhood also has a relational and institutional character. In some contexts, we can and actually do forfeit a most intuitive and common "necessary condition" and attribute personhood to some being who does not satisfy it. In others, our most stringent "sufficient conditions" might turn out not to suffice for certain other aspects and dimensions of personhood. Thus, although in practical fields such as the legal one societies and communities will insist on postulating and endorsing clear-cut criteria, since they cannot forever postpone the decision on issues such as abortion or criminal liability, we should nonetheless acknowledge on the philosophical level that personhood is essentially vague and gradual. Such an acknowledgement will allow us to always keep in mind that these are *decisions*, and as such they come with a certain epistemic and practical responsibility.

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