

# **Image Schema Verbs in Japanese** **A Cognitive Linguistic Analysis**

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## **Abstract**

The present study examines the semantic structure of a specific class of Japanese verbs within the framework of Cognitive Linguistics. The verbs in question are highly polysemous and assumed to be centered around a particular spatial or force-dynamic schema – hence the name image schema verbs. Further, they partake in verb-verb compounding as grammatical “auxiliaries” (V2s) which functionally resemble the particles of English and German verb particle constructions (VPCs). Over the course of five case studies it is shown that the respective V2s are inherently meaningful and that their senses are motivated by the same image schematic structures that motivate the senses of the simplex. Thus, simplex and V2 are entangled in a complex network of family resemblances. Mechanisms of meaning extension such as metaphor, metonymy, and image schema transformation are examined in some detail and often from a cross-linguistic point of view. Rejecting a principled division between lexicon and grammar in favor of the symbolic continuum hypothesis, argument structure phenomena are then reexamined and reframed as issues of cognitive prominence. In the same spirit, the traditional dichotomy of “lexical” vs “grammatical” V-V compounds, a staple of Japanese linguistics, is challenged from a usage-based perspective. Based on the results of the case studies, the thesis closes with a brief cross-cultural inquiry into embodied cognition, showing that directly embodied source domains tend to have similar metaphorical scope in Japanese and German.

**Keywords:** cognitive semantics, image schemas, polysemy, V-V compounds, lexicon-grammar continuum

Gloss abbreviations:

The interlinear gloss used in this thesis largely follows the “Leipzig Glossing Rules” (<https://www.eva.mpg.de/lingua/resources/glossing-rules.php>).

- Morphemes are separated by hyphens “-“ (e.g.: *neko-ga* = cat-NOM).
- For practical reasons, some complex grammatical constructions are treated as single morphemes (e.g.: *-te iru* = PROG/RES, *-te shimau* = IRR).
- When a single object-language element corresponds to more than one meta-language element, dots “.” are used (e.g.: *desu* = COP.POL).
- Since past tense is indicated by PAST, the gloss for non-past is omitted (e.g.: *tabe-ta* = eat-PAST; but: *taberu* = eat).

ABL = ablative

ACC = accusative

ALL = allative

ATT = attributive

COM = comitative

CON = conjecture

CONJ = conjunction

COND = conditional

COP = copula

DAT = dative

DES = desiderative

EMPH = emphatic marker

EVI = evidential

HUM = humble

HON = honorific

IMP = imperative

INF = infinitive

INS = instrumental

INT = intentional

IRR = “irreversible” aspect (*-te shimau*)

LK = nominal linker

LOC = locative

M = male

NEG = negative

NMLZ = nominalizer/nominalization

NOM = nominative

PAST = past

PL = plural

POL = polite

POT = potential

PROG = progressive/continuous aspect

Q = question particle

QT = quotative

RES = resultative aspect

TE = “conjunctive form” (*-te*)

TOP = topic

VOL = volitional



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## 0. Scope, Aims, and Structure of the Thesis

The main objective of this study is to give an account of the semantic structure of a specific class of Japanese verbs, i.e. *image schema verbs*, in accordance with general cognitive principles.

The verbs under consideration here fulfill two criteria.

- (i) They are highly polysemous with a basic spatial or force-dynamic meaning.
- (ii) They partake in verb-verb compounding as grammatical “auxiliaries”.

To illustrate, consider the following examples:

- (1) *Kabe-ni e-ga kakat-te iru.*  
Wall-DAT picture-NOM KAKARU-RES ‘A picture is hanging on the wall.’
- (2) *Inochi-wo kake-ta gyanburu*  
Life-ACC KAKERU-PAST gamble ‘A gamble with one’s life at stake’
- (3) *Tarô-ga teki-no keiryaku-ni kakat-ta*  
Tarô-NOM enemy-LK scheme-DAT KAKARU-PAST  
‘Tarô fell victim to the enemy’s scheme.’
- (4) *Kuruma-wo kau Ø-ni-wa okane-ga kakaru.*  
Car-ACC buy NMLZ-DAT-TOP money-NOM KAKARU  
‘One needs money to buy a car.’
- (5) *Hanako-ga Tarô-ni warai-kake-ta.*  
Hanako-NOM Tarô-DAT smile-KAKERU-PAST ‘Hanako smiled at Tarô.’
- (6) *Jirô-ga hon-wo yomi-kake-ta tokoro-e denwa-ga nat-ta.*  
Tarô-NOM book-ACC read-KAKERU-PAST moment-ALL phone call-NOM ring-PAST  
‘As Tarô began to read the book, the phone rang.’
- (7) *Tarô-ga jiko-ni at-te, shini-kake-te i-ta.*  
Tarô-NOM accident-DAT meet-TE die-KAKERU-RES-PAST  
‘Tarô got into an accident and was on the verge of dying.’

My working hypothesis, in this exemplary case, is that the various senses of *kakaru* (and its transitive variant *kakeru*) are structured around the abstract schema CONTACT.

Several other image schema verbs are given below:

verb	central schema
<i>iru/ireru</i> (enter/put sth. in)	CONTAINMENT: ENTRY
<i>deru/dasu</i> (move out/ put sth. out)	CONTAINMENT: EXIT
<i>agaru/ageru</i> (rise/raise)	VERTICALITY: UP
<i>tsukuru/tsukusu</i> (run out/use up)	DEPLETION
<i>kiru</i> (cut)	SPLIT

*tôru/tôsu* (go through/let pass)  
*au* (meet with/match)  
etc. etc.

PATH TRAVERSAL  
MATCHING

As per the above criteria, I do not take the class of image schema verbs to have clearly demarcated boundaries. Since the notion of *image schema* as discussed in the literature is itself somewhat fuzzy, it follows that image schema verbs, too, are best treated as a prototype-centered, open category (see chapter 2).

Why are these verbs of any interest at all? There are several reasons. First, there is a vast body of research on the topic of verb-verb compounds (*fukugô dôshi*). And while a huge part of it is dedicated to the analysis of verbs like the above, their existence as simplex verbs rarely receives more than a passing glance. In other words, few studies draw a connection between the meaning of the simplex verb and the meaning of the corresponding auxiliary (henceforth called V2). The neglect of the simplex in the literature either vaguely presupposes its semantic significance or tacitly denies it. In this context, the present study seeks to fill a theoretical void: The semantics of the simplex and the semantics of the V2 are treated as two sides of the same coin. Through a series of case studies I hope to show that the V2 is inherently meaningful and that its senses, together with the senses of the simplex, form a complex network of family resemblances.

Secondly, image schema verbs serve to illustrate the inextricable relation between lexicon and syntax. The present study assumes that both are poles on a continuum rather than discrete components and aims to show how lexical semantics, in tandem with salience, directly affects syntactic phenomena such as argument selection in the case of verbal compounds.

Finally, image schema verbs in many ways resemble the particles of verb particle constructions (VPCs) in other languages. Throughout the case studies of this thesis I will discuss Japanese image schema verbs in contrast and comparison with VPCs from German and English such as *an-V* or *V up*. Therefore, the study assumes a cross-linguistic perspective and will hopefully be an asset to future investigations into VPCs and similar constructions within the Cognitive Linguistics framework.

The thesis consists of three parts. Part 1 lays out the theoretical foundations by introducing the framework of Cognitive Linguistics and its major guiding assumptions. Basic concepts that are particularly relevant to the present purpose are singled out and discussed in some detail. The study is then situated in the context of past and present research on spatial expressions.

Part 2 is concerned with the analysis of semantic structure. In a series of case studies I investigate five image schema verbs: *kakaru*, *deru*, *kiru*, *agaru*, and *tôru*. These verbs were chosen because of their high prototypicality, i.e. they are both highly polysemous and prominent as grammatical V2s. The following questions present themselves: What is the semantic structure of the simplex? Can the meaning of the simplex account for the meaning of the V2? What mechanisms of meaning extension are involved? Can we maintain the hypothesis that each of these verbs' semantics is centered around a particular image schema?

Based on this analysis, part 3 discusses further theoretical issues. The chapter on "compositional disparity" is concerned with two main questions: Given a non-algebraic approach to grammar, how can one account for the compositional properties of Japanese verb-verb compounds in the framework of Cognitive Linguistics? Moreover, how do we approach the issue of "lexical vs syntactic compounds" from a non-modular point of view? The second chapter of part 3 shifts the focus away from questions of compositionality and argument structure towards an important topic at the periphery of our main enterprise: The universal character of embodied experience. In a small-scale comparative study of German and Japanese I explore the degree of variance in metaphorical scope, starting out from a common set of embodied source domains.

## **PART I: THEORETICAL FOUNDATIONS**

### **1. The Framework: Cognitive Linguistics**

Before we turn our attention to the case studies, it is essential to clarify what conception of language and linguistics they are based on and why that conception is preferable to its alternatives. Cognitive Linguistics is not a compact theory of language but rather a loose framework, a relatively new paradigm of linguistic inquiry, consisting of diverse theoretical approaches sharing a common perspective. In the following I will sketch out what I consider to be the philosophical foundation of the cognitive linguistic enterprise – the position known as *experiential realism*. First, however, we must consider the objectivist tradition in opposition to which it emerged.

#### **1.1. The Objectivist Tradition**

Many now classic works in the field of Cognitive Linguistics include at least one passage or chapter akin to a “manifesto” in which the respective authors distance themselves from a tradition in the philosophy of mind and language often described as *objectivism* (e.g. Lakoff and Johnson 2003; Lakoff 1990b; Johnson 1990; Langacker 1990; Sweetser 1991). The term *objectivism* was coined by Lakoff and Johnson in their seminal 1980 book *Metaphors We Live By* and is probably most concisely explained in Lakoff (1990b). As he points out, objectivism is not a theory of mind or language but rather a set of *a priori* assumptions deeply entrenched in the history of Western philosophy – so deeply that many of them date back to antiquity and have been taken for granted ever since (Lakoff 1990b: xii). I believe that objectivist linguistics is best broken down into two main tenets from which its other assumptions then follow (based on Lakoff 1990b):

The correspondence model of meaning: Linguistic expressions have meaning only in virtue of their direct correspondence to the things, relations, and states of affairs that make up objectively given reality. That is, meaning is a relation between words and the world without any kind of human mediation. Lexemes correspond to pre-existing categories and their meaning is adequately represented by feature bundles. Sentences correspond to objective state-of-affairs and their meaning is adequately given in terms of truth conditions.



The computational model of the mind: The human mind essentially functions like a machine operating on a set of algebraic rules. Linguistic activity is the application of combinatorial rules to a list of lexemes in order to assemble well-formed sentences.

These two tenets have several important implications:

Meaning is disembodied and culture-independent: If meaning is a relation between words and objective reality, it follows that the human perspective has no part to play in category structure. The biological niche we have come to occupy, the physiology of our bodies, the socio-cultural context we live in, while obviously shaping our view of the world, has no bearing on semantics.

Meaning is all about truth and reference: Category structure is neat in the sense that it essentially boils down to a “checklist” of necessary and sufficient features which help us identify category members. In other words, the meaning of a lexeme is a guide to its reference. For example, a bachelor is an unmarried adult man. Everything else we know about or associate with bachelors is not part of “semantics proper”. Sentences express propositions which are either true or false. To understand the meaning of a sentence is to be able to give its truth conditions. Simply put: The sentence *Snow is white* is true if and only if snow is white. Again, all non-truth conditional aspects of a sentence (e.g. speech act meaning, grammatical voice, politeness, etc.) are not part of semantics. Consequently, there is a sharp divide between the meaning of an expression (semantics) and its use (pragmatics).

Language is autonomous and compartmentalized: According to the computational model of the mind, language is an autonomous faculty, i.e. our linguistic ability is independent from the rest of cognition (e.g. attention, figure-ground organization, etc.). Within the language faculty semantics, syntax, and phonology exist as distinct components, each with their own set of rules and constraints. These components are complemented by the lexicon, a list of lexical entries upon which they operate. In this model “pragmatics” is an umbrella term for everything concerning the actual use of language (as opposed to the internal workings of the language faculty).<sup>1</sup>

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<sup>1</sup> It is, of course, impossible within the confines of this thesis to survey over two thousand years of Western philosophy and give a half-way satisfying historical portrayal of objectivism. Nonetheless some cornerstones should be mentioned. The idea that an objective eternal reality divorced from human experience is accessible by disembodied thought can be traced back to Plato’s theory of forms. The

## 1.2. Experiential Realism

Given the above positions, we can see how the objectivist paradigm marginalizes the role of the conceptualizer. Meaning mirrors the structure of an objective reality and is grasped by logical thought. Thus, the conceptualizer has no active role in shaping semantic structure. This is problematic because, if it were true, many linguistic phenomena would become either inexplicable or irrelevant. For illustration, consider a passage from Sweetser (1991). While admitting that questions of conceptualization may be of little relevance in determining the truth value of sentences such as *Snow is white*, she goes on to make the following point:

But suppose that, instead of white, I take Latin *candidus* as my sample word. *Candidus* meant, among other things, “white” and “bright”; but it also meant “open, honest” – as in its English descendent, *candid*. But it seems unlikely that there is any objective correlation in the real world between white things and honest things, or any larger objectively chosen category which includes just these and no others. The “real world”, if we mean one which is outside of human cognitive organization, is not so constructed as to group the white with the honest. Rather, it is our cognitive structuring of the world which can create such an identification. And if language uses a word of our cognitive category, then language cannot be described in terms of Word and World: unless, by World, we mean our experiential picture of the world. (Sweetser 1991: 4-5)

What we can take from this passage is that categories in natural language usually exhibit *polysemy*, i.e. one lexical item often has several related senses (as illustrated by *candidus*). Giving an account of meaning extension in order to explain phenomena like polysemy and diachronic change is obviously part of linguistics. However, as Sweetser points out above, such an account can only be given in terms of “human cognitive organization” – which has no bearing on semantic structure according to objectivism.

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“dictionary model” (or checklist model) of lexical semantics (e.g. Katz 1972) originated with Aristotle’s decompositional account of categories in terms of necessary and sufficient conditions. Mind-body dualism (i.e. the rigid separation of immaterial mind and material body) is a central theme in Descartes’ epistemology and philosophy of mind.

However, it is not until the emergence of the Fregean philosophy of language at the end of the 19<sup>th</sup> century that we can speak of an objectivist linguistics. The major tenets of objectivist semantics were formulated in Frege’s (1892) seminal paper *Über Sinn und Bedeutung* (On Sense and Reference), in which he lays the groundwork for a truth-conditional theory of meaning. Wittgenstein’s picture theory of meaning (i.e. the view that sentence meaning mirrors states-of-affairs) and his famous claim that “[t]o understand a proposition means to know what is the case if it is true” (Wittgenstein 1922: 4.024) are hardly conceivable without Fregean philosophy. All subsequent formal approaches to semantics such as Tarsky ([1944] 2004), Montague (1973), and Davidson (1967) are built upon Wittgenstein’s identification of sentence meaning with truth-conditions. Unsurprisingly, approaches to language based on logic and algebra favor a computational model of the mind such as the one assumed by the various iterations of Chomskyan Generative Grammar (e.g. Chomsky 1957, 1965).

For a more detailed depiction of several objectivist positions see Johnson (1990). Part two of Lakoff (1990b) launches a comprehensive attack on the philosophical foundations of objectivism.

Another example is the following sentence pair from Langacker (1990: 13):

- (1a) Billy sent a walrus to Joyce.
- (1b) Billy sent Joyce a walrus.

According to Langacker, these sentences offer an alternate *construal* of the same conceptual content. In short, *to* in (1a) emphasises the path taken by the walrus, while the direct juxtaposition of *Joyce* and *a walrus* in (1b) emphasises the possessive relation (Langacker 1990: 13-14). In other words, by choosing either (1a) or (1b) the conceptualizer decides on a specific way of packaging and presenting the same content. Each version conveys a different manner of experiencing the world. Importantly, construal reflects general principles of human cognition: in this case, different ways of distributing attention across a given scene (see e.g. Talmy 2003a: 76ff.). From an objectivist perspective none of this matters. Since both versions are truth-conditionally equivalent (they are true in the same set of possible worlds), the preposition *to* is considered to be semantically vacuous.

Finally, consider the story-telling function of language. In the following passage Lakoff and Johnson (2003) illustrate the creation of a coherent narrative:

[...] faced with the energy crisis, President Carter declared “the moral equivalent of war.” The WAR metaphor generated a network of entailments. There was an “enemy”, a “threat to national security”, which required “setting targets”, “reorganizing priorities”, “establishing a new chain of command”, “plotting new strategy”, “gathering intelligence”, “marshaling forces” “imposing sanctions”, “calling for sacrifices”, and on and on. The metaphor was not merely a way of viewing reality; it constituted a license for policy change and political and economic action. (Lakoff and Johnson 2003: 156)

I have cited this passage, because it underscores how human understanding works. We understand Carter’s narrative (regardless of whether we accept or reject it), because we understand the metaphorical correspondences it is built on. Yet, from an objectivist perspective these correspondences cannot be part of a theory of meaning which assumes a principled distinction between literal and figurative speech, as well as between semantics and pragmatics. Since “semantics proper” is only concerned with so-called literal meaning and truth conditions, the meaning of Carter’s view amounts to a set of false and/or nonsensical propositions instead of a coherent whole. An experientialist account, on the other hand, recognizes communication as the primary function of language. The metaphorical correspondences, ultimately grounded in human experience, are a precondition for understanding Carter’s narrative. And all phenomena

involved in understanding linguistic communication should be part of a theory of semantics.<sup>2</sup>

Much more could be said about the differences between an objectivist and a cognitive linguistic approach to language, but I think the above examples capture the spirit of the experientialist enterprise quite well. In summary, then, experiential realism is the position that thought and meaning arise from embodied experience and are imaginative in nature. Reality is not objectively given but only accessible via our species-specific sense-perceptual capabilities which in tandem with general cognitive principles give rise to imagistic structures (e.g. psychological gestalts) that go far beyond the kind of propositional entities posited by formal semanticists (Lakoff 1990b: xv). For a theory of language this position has two major implications:

**Cognitive holism:** As the above examples from Sweetser, Langacker, and Lakoff and Johnson illustrate, linguistic phenomena reflect general principles of human cognition (in the above cases: categorisation, attention, and conceptual metaphor, respectively). “Even if the blueprints for language are wired genetically into the human organism, their elaboration into a fully specified linguistic system during acquisition, and their implementation in everyday language use, are clearly dependent on experiential factors and *inextricably bound up with psychological phenomena that are not specifically linguistic in character*” (Langacker 1987: 13, emphasis mine). Thus, Cognitive Linguistics can be described as embracing a holistic view of the relationship between language and cognition.

**Centrality of meaning:** Since much of what is known about the mind from the cognitive sciences is incompatible with a modular, algebraic view of language (Lakoff 1990a: 42) cognitive linguists have been free to discard the central commitments of such a view. First and foremost, rejecting the paradigm of empty symbol manipulation – a consequence of the strict separation of syntax and semantics – has reopened the door for a meaning-based linguistics. In other words, there is no *a priori* need for positing semantically vacuous structures. Nor is there any converging evidence suggesting their

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<sup>2</sup> See also Langacker (1990: 2): “Meaning is equated with conceptualization. Linguistic semantics must therefore attempt the structural analysis and explicit description of abstract entities like thoughts and concepts. The term conceptualization is interpreted quite broadly: it encompasses novel conceptions as well as fixed concepts; sensory, kinesthetic, and emotive experience; recognition of the immediate context (social, physical, and linguistic); and so on.”

existence. Therefore, Cognitive Linguistics assumes that “[l]exicon, morphology, and syntax form a continuum of symbolic units, divided only arbitrarily into separate components; it is ultimately as pointless to analyze grammatical units without reference to their semantic value as to write a dictionary which omits the meanings of its lexical items” (Langacker 1990: 29).

In the following sections I will introduce several key concepts that are central to my argumentation in the subsequent chapters.

## 2. Image Schemas

### 2.1. Philosophical and Linguistic Foundations: Johnson (1987) and Lakoff (1987)

Image schemas are non-propositional imagistic patterns which arise from bodily experience and structure much of our conceptualization and reasoning. As such, their importance for the principle of embodied cognition can hardly be overstated. The term image schema was introduced by Mark Johnson ([1987] 1990) and George Lakoff ([1987] 1990b) in two separate book-length studies and from slightly different perspectives. While Johnson stresses the philosophical underpinnings of image schemas, Lakoff presents linguistic evidence in the form of a case study. Let us briefly consider both perspectives in turn.

Johnson’s overarching goal is to present an alternative to the Cartesian mind-body dualism that – tacitly or explicitly – has dominated a significant part of Western philosophy and continues to be influential to the present day. All philosophical theories which are Cartesian in spirit face a common challenge: They must somehow explain how the mind is connected to the body and how the two could possibly work together. As a prominent attempt to answer this question, Johnson points to Kant’s theory of mind in the *Critique of Pure Reason*. In short, Kant assumes a division of labor between sensory-motor perception (*sensibility*) and disembodied concept formation (*understanding*):

[...] there is an overly rigid dichotomy between the *conceptual* and the *bodily*. Concepts are products of our understanding, which is formal, spontaneous, and rule-governed; sensations are bodily, given through our sensibility, which is material, passive, and lacking in any active principle of combination or synthesis. (Johnson 1990: xxviii)

In order to bridge the gap between *sensibility* and *understanding*, Kant postulates an intermediary faculty, *imagination*, tasked with unifying the slew of perceptual impressions into a coherent whole:

For example, in my perception of a dog, Kant thought that imagination ordered various sense impressions (e.g., the feel of fur, four legs, a trunk, long teeth, etc.) into a single perceptual experience (e.g., a unified image of a furry creature), such that I can then recognize it (conceptualize it) as a dog. (Johnson 1990: xxviii)

Johnson goes on to argue that Kant's account of imagination is ultimately self-contradictory. Imagination seems to belong in equal parts to the realms of bodily experience and conceptual thought – despite the fact that Kant's philosophical system precludes this very possibility. “Somehow imagination is supposed to have a foot in both worlds (in the ‘formal’ and the ‘material’), and yet it is not clear how it can have this dual nature” (1990: 166). Johnson's solution to this problem is to do away with the Cartesian legacy which gave rise to it in the first place: “Once we no longer demand a disembodied (or non-physical) rationality, then there is no particular reason to exclude embodied imagination from the bounds of reason” (1990: 168). It is for this embodied view of reason that the notion of *image schema* is integral, since image schemas are both grounded in bodily experience and employed in abstract thought:

The view I am proposing is this: in order for us to have meaningful, connected experiences that we can comprehend and reason about, there must be pattern and order to our actions, perceptions, and conceptions. *A schema is a recurrent pattern, shape, and regularity in, or of, these ongoing ordering activities.* These patterns emerge as meaningful structures for us chiefly at the level of our bodily movements through space, our manipulation of objects, and our perceptual interactions. (Johnson 1990: 29)

Johnson illustrates this by pointing out the pervasiveness of the IN and OUT schemas:

Consider just a small fraction of the orientational feats you perform constantly and unconsciously in your daily activities. Consider, for example, only a few of the many *in-out* orientations that might occur in the first few minutes of an ordinary day. You wake *out* of a deep sleep and peer *out* from beneath the covers *into* your room. You gradually emerge *out* of your stupor, pull yourself *out* from under the covers, climb *into* your robe, stretch *out* your limbs, and walk *in* a daze *out* of the bedroom and *into* the bathroom. You look in the mirror and see your face staring *out* at you. You reach *into* the medicine cabinet, take *out* the toothpaste, squeeze *out* some toothpaste, put the toothbrush *into* your mouth, brush your teeth *in* a hurry, and rinse *out* your mouth. At breakfast you perform a host of further *in-out* moves – pouring *out* the coffee, setting *out* the dishes, putting the toast *in* the toaster, spreading *out* the jam on the toast, and on and on. Once you are more awake you might even get lost *in* the newspaper, might enter *into* a conversation, which leads to your speaking *out* on some topic. (Johnson 1990: 30-31)

The key point is that, from early infancy and on a daily basis, we are subjected to myriads of sensory-motor experiences involving CONTAINERS (e.g. grasping objects,

eating, being located in various bounded spaces) which eventually lead to the emergence of a preconceptual dynamic pattern entrenched at the non-conscious level. This pattern, the image schema CONTAINER, will in turn give meaning to all our future encounters with containers. Crucially, as we shall see below, image schemas are a precondition for abstract thought, e.g. when abstract states (*walk in a daze, enter into a conversation*) are made sense of in terms of physical locations.

So far, we have sketched out Johnson’s philosophical motivations for positing image schemas and given a preliminary characterization of the notion. To get a better idea of what image schemas are and how they structure our thought, a slight change of perspective might be helpful. I therefore suggest that we take a look at George Lakoff’s work on category structure in order to observe image schemas “in action”.

Building mainly on previous work by Brugman (1981), Lakoff (1990b) asks how the various senses of English *over* are related to one another. One of the most remarkable discoveries of the study is what he calls *transformational links*. Consider the following sentences (adapted from Lakoff 1990b):

(2a)	Sam walked over the Hill.	(path focus)
(2b)	Sam lives over the Hill.	(end-point focus)
(3a)	The guards were posted all over the hill.	(multiplex)
(3b)	The board is over the hole.	(mass)
(4a)	The bird flew over the yard.	(moving 0D entity)
(4b)	The power line stretches over the yard.	(1D static entity)

In (2a) we mentally trace the trajectory of a moving entity (Sam). If we then focus on that entity’s resting location we end up with (2b). The hill in (3a) is covered by multiple individual entities (a multiplexity). However, if we mentally “zoom out” on the scene (or squint our eyes) the guards will appear as an undifferentiated whole (a mass) similar to the board in (3b). In (4a) we trace the bird’s path as we would trace a moving dot. If we then mentally connect all individual locations subsequently occupied by the bird, we end up with a static one-dimensional entity, just like the power line in (4b).<sup>3</sup>

As these examples show, *over* can be applied to a variety of spatial configurations. However, these configurations do not constitute an arbitrary collection. Instead, the

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<sup>3</sup> As Lakoff’s use of double-pointed arrows indicates (cf. 1990b: 442f.), all of these transformations are reversible. The end-point in (2b) presupposes a path, which can be mentally reconstructed. Or imagine looking at sand through a magnifying glass, so that the individual grains become discernable (mass to multiplex). Similarly, we can mentally trace the power line in (4b) from beginning to end in the same fashion we would follow a zero-dimensional object (“The power line *runs* over the yard.”).

various uses of *over* in (2)-(4) are motivated by schemas such as SOURCE-PATH-GOAL, MULTIPLEX, MASS, etc. as well as the mental operations we perform on them. Crucially, these representations are neither propositional nor inherently linguistic in nature. As Lakoff puts it, “image schemas are a reflection of our sensory and general spatial experience” (1990b: 443). Furthermore, they enable abstract thought by serving as input for metaphorical source domains. For example, the UP-DOWN axis can lend imagistic structure to the domain of control, thus motivating expressions such as *She has a strange power over me* (Lakoff 1990b: 435f.).<sup>4</sup>

Like Johnson, Lakoff concludes that image schemas “structure our perceptions and that their structure is made use of in reason” (1990b: 440). And certainly, subsequent applications of image schema theory to topics as diverse as English modals (Sweetser 1991), case in German (Smith 1992), mathematical reasoning (Lakoff and Núñez 2000), and literary theory (Lakoff and Turner 1989; Turner 1991) provide strong evidence in favor of this hypothesis. However, at the same time the notion of image schema, as introduced by Johnson and Lakoff, remains rather vague in several respects and this has led to some controversy regarding its exact characterization. Let us take inventory, then, of what we know about image schemas at this point. So far, we have established the following:

- Image schemas are entrenched sensory-motor patterns that emerge from continued bodily interaction with our environment .
- As embodied representations they play an important role in structuring both perception and thought.
- They are imagistic in the sense the term *image* is used in Gestalt psychology, i.e. image schemas are not merely visual but multimodal representations. For example, schemas like BALANCE, BLOCKAGE or CONTACT rely heavily on non-visual sense-data.
- They are schematic in the sense that they are maximally underspecified. In other words, even the most general depiction (a drawing/diagram) of, say, a container would still have to specify the boundaries, shape, size, degree of opacity etc. of the container to some degree and therefore fall short in terms of schematicity. (Furthermore, a diagram necessarily fails to capture the dynamic and multimodal aspects of an image schema.)

Yet, as we will see in the following section, the exact definition of the term *image schema* remains a hotly contested topic among researchers.

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<sup>4</sup> I will discuss metaphorical mappings in more detail later on (see chapter 4).



## 2.2. Refining and Defining the Notion: Diverging Opinions

A quick review of the literature reveals that different researchers hold different opinions as to what counts as an image schema. The most liberal use of the term is probably found in Turner (1991):

The following are all different image schemas: A circle with a marked point at its center; a circle with a marked point somewhere else interior to the boundary; a circle with a marked point on the boundary; and a circle with a marked point exterior to the boundary. [...] The image schema associated with *cup* need not have an exact degree of curvature; but if we flatten out the sides to the point that the image schema begins to approach an image schema associated with *plate*, for example, then we have not preserved the original image schema. (Turner 1991: 177)

Following Johnson's (1990) understanding of images as multimodal gestalts, Turner (1991: 57) describes image schemas as "extremely skeletal images that we use in cognitive operations". However, as the above passage shows, this characterization is apparently broad enough to include complex geometrical constellations as well as relatively rich visual images (*cup*, *plate*) into the category.

An entirely different approach is taken by Clausner and Croft (1999), for whom the criterium of pervasiveness is central. They suggest that image schemas can be equated with those background knowledge structures (i.e. *domains*) that are presupposed by the largest number of concepts:

For example, the domain APPLE is concrete, that is, it is relatively non-schematic. In the scope of human experience it is presupposed by relatively few other domains (e.g., CIDER). On the other hand, almost all domains make some reference to SCALES; for example, any domain involving gradable properties. Also IDENTITY and SIMILARITY can be found in nearly every concept profile. The domains of TIME and CHANGE (that is, the PROCESS image schema) can be found in the matrix of any event or process concept. An enormous number of domains involving physical objects or motion include SPACE in their domain matrix.

These facts suggest a natural definition of image schematicity: *domains which are image schematic are those found in the largest number of domain matrices (for the concepts used in human experience)*. (Clausner and Croft 1999: 21-22)

While this characterization excludes rich images such as *cup* and *plate*, it allows extremely general concepts such as the basic domains of TIME and SPACE into the category. In fact, based on the pervasiveness criterium, these basic domains would be far better examples of image schemas than the CONTAINER schema, which is only granted peripheral membership by Clausner and Croft (1999: 22). Evidently, this clashes with the understanding of image schematicity in Johnson (1990: 126), who includes CONTAINER (but neither SPACE nor TIME) in his list of "the more important image schemata."

Grady, on the other hand, stresses the importance of perceptual grounding in his definition of image schemas as “mental representations of fundamental units of sensory experience” (2005: 44). He argues that several schemas such as CYCLE or SCALE (see Johnson 1990: 126) fail to qualify as image schemas because they are not inherently perceptual: “While schemas like CYCLE and SCALE may be strongly associated with perceptual content such as CIRCLE, PATH, etc., the schemas are also recognizable as free-standing concepts in their own right, referring to basic (nonsensory) dimensions of phenomenological experience, independent of the sensory associations”(Grady 2005: 41). But is there, in principle, any reason to exclude our experience of temporal passage from the realm of perception? Surely, the mechanisms that enable us to keep track of time are biologically no less real than our other senses. And can we truly conceive of the SCALE schema in a way that is “independent of sensory associations”? It should be kept in mind that scalarity and gradable quality (e.g. amount, intensity, etc.) are not the same thing – scalarity is the superimposition of gradable quality onto the SOURCE-PATH-GOAL schema. As these examples show, it is extremely difficult to make a clear-cut binary distinction between what is inherently perceptual and what is merely associated with perceptual content. Rather, the category of *perceptual representation* itself seems to exhibit prototype-effects and graded membership.

In a recent paper Mandler and Pagán Cánovas (2014) attempt to define the notion of image schema from a developmental perspective. They argue that the term should be reserved for those “[r]epresentations of simple spatial events” (2014: 17) that infants rely on most heavily in order to make sense of their surroundings up to the age of six to seven months. They note, for example, that infants are aware of occlusion and containment events from the age of two and a half months (2014: 6) and acquire the concept of a goal-directed motion event at about five months (2014: 8). The suggestion is that we differentiate between these simple events (e.g. PATH TO THING, THING INTO CONTAINER), the building blocks they are made up of (e.g. PATH, CONTAINER), and more complex representations that emerge by adding non-spatial elements (e.g. force, time, emotion) to spatial events (2014: 17). As a consequence, many image schemas from Johnson’s list (1990: 126) such as PATH, LINK, THING or CONTAINER are

“demoted” to spatial primitives while others, such as FORCE, are considered part of more complex schematic blends due to their non-spatial nature.<sup>5</sup>

All of this shows that there is very little consensus on how to define the notion of image schema. In particular, we see that different researchers emphasize different aspects: For Clausner and Croft pervasiveness/schematicity is central. According to Grady, the criterium of perceptual grounding takes precedence. And Mandler and Pagán Cánovas suggest that image schemas are best understood as simple stories which are, first and foremost, dynamic and spatial. It is worth noting that all of these aspects play a role in Johnson’s and Lakoff’s early characterizations of image schemas. However, in their work no particular aspect seems to utterly outrank any other aspect. When Johnson revisits the notion in a later paper, he gives a relatively inclusive and broad characterization of an image schema as “a dynamic recurring pattern of organism-environment interactions” that “will often reveal itself in the contours of our basic sensory-motor experience” (2005: 19). Instead of postulating a set of definitional criteria, Johnson suggests that most image schemas will “show themselves” through a method of “informal phenomenological analysis” (2005: 21). He gives several examples:

Ask yourself what the most fundamental structures of your perception, object manipulation, and bodily movement are, given that human bodies share several quite specific sensory-motor capacities keyed to the size and constitution of our bodies and the common characteristics of the different environments we inhabit. Certain obvious patterns immediately jump out at you. For example, given the relative bilateral symmetry of our bodies, we have an intimate acquaintance with right-left symmetry. [...] Because of our particular embodiment, we project RIGHT and LEFT, FRONT and BACK, NEAR and FAR, throughout the horizon of our perceptual interactions. [...] Because of our ongoing bodily encounter with physical forces that push and pull us, we experience the image schematic structures of COMPULSION, ATTRACTION, and BLOCKAGE OF MOVEMENT ... . [...] Because we must continually monitor our own changing bodily states, we are exquisitely attuned to changes in degree, intensity, and quality of feelings, which is the basis for our sense of scales of intensity of a quality (the SCALARITY schema). Because we must constantly interact with containers of all shapes and sizes, we naturally learn the “logic” of containment (for the CONTAINER schema). (Johnson 2005: 20-21)

One might be inclined to dismiss this sort of survey as too subjective and vague, and object that it dodges the real issue. But I believe that Johnson has good reason for not attempting to give a definition of image schematicity. To be sure, *image schema* has become a technical term and a key notion in Cognitive Linguistics and it is therefore crucial to make sure that everyone is talking about the same thing. Nevertheless, expecting a definition to solve the issue seems odd to begin with – especially within a theoretical framework that has time and time again criticized how definitional

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<sup>5</sup> “[...] so far as we know, prelinguistic image schemas are strictly SPATIAL. [...] Neither force nor any other non-imageable information is available to the conceptual system when image schemas begin to be formed” (Mandler and Pagán Cánovas 2014: 17-18).

approaches typically misrepresent category structure. After all, we would not expect a set of definitional criteria to settle once and for all the seemingly mundane question of what a table is. Carpenters might eventually agree on a definition as the result of a lengthy international conference, but the new notion would be artificial and somewhat arbitrary. I therefore propose that we should avoid an impoverished expert definition of image schematicity in lieu of the view that the category *image schema* exhibits prototype effects and graded membership (I made the same suggestion above regarding the notion *perceptual representation*). From this perspective, all of the previously discussed criteria contribute to category structure. That is, a prototypical image schema is cognitively pervasive, grounded in perception, dynamic and spatial. It is important to note, however, that not all image schemas rank equally in respect to each of these parameters. For example, a FORCE schema like COMPULSION is highly dynamic but does not necessarily evoke the spatial domain as strongly as the CONTAINER schema does. Conversely, the CONTAINER schema is less dynamic: While the schema is inextricably linked to our experiences of things moving IN and OUT, a static CONTAINER is still a coherent mental representation. Schemas like OBJECT and PATH are more pervasive (i.e. presupposed by a larger number of cognitive domains) than LEFT and RIGHT. The ITERATION schema, while grounded in perceptual experience, has no perceptible instances. (I.e., the perceptible events that are iterated are instances of the event schema, not instances of the ITERATION schema.) Now compare this to the LINK schema and its instances, which are themselves links.

The conclusion is rather straightforward. The best examples of the category are those image schemas that rank highly with respect to all of the parameters. At the other end of the spectrum we have fringe members that rank low in average or with respect to a particular parameter. From this perspective it is probably impossible to exhaustively enumerate all image schemas in existence. But this does not imply that “anything goes”, either. For instance, we can confidently exclude relatively rich visual images such as *cup* and *plate* from the image schema category for their lack of pervasiveness. For the same reason, image schemas cannot be infinitely complex. In fact, CONTAINER – with its sub-schemas INTERIOR, EXTERIOR, and BOUNDARY – seems to be among the more complex ones.<sup>6</sup>

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<sup>6</sup> I have intentionally left out discussion of one key aspect within the image schema debate, namely the neuro-psychological status of image schemas (see e.g. Gibbs 2005; Rohrer 2005). There are several reasons for this: First, research into this topic is still in the early developing stages and highly speculative.

### 3. Trajector/Landmark Organization (Figure and Ground)

#### 3.1 Linguistic Structure as a Reflection of Cognitive Prominence

Imagine (visualize) the scenes described by the following sentences:

- (5) The dog is running across the field.
- (6) The book is on the table.
- (7) The little star circles the big star.

In each of these scenes one participant stands out as particularly salient against the rest of the environment: *The dog*, *the book*, and *the little star*. This asymmetrical segmentation of the visual field into a prominent *figure* and a less prominent *ground* is a basic principle of human perception and a cornerstone of Gestalt psychology (see Rubin [1915] 1958; Bahnsen 1928; Koffka 1935).

Cognitive linguists (e.g. Talmy 1975; Langacker 1987, 1991) have subsequently adapted the notion of figure/ground organization into their frameworks on the assumption that linguistic structure reflects conceptual organization. Again, consider (5)-(7): The prominent subject role and sentence initial position are reserved for the entity corresponding to the figure of the encoded scene, while the ground appears as direct or prepositional object. According to Talmy, figure and ground have the following associated characteristics:

#### figure

- more movable
- smaller
- geometrically simpler (often pointlike) in its treatment
- more recently on the scene/in awareness
- of greater concern/relevance
- less immediately perceivable
- more salient, once perceived
  
- more dependent

#### ground

- more permanently located
- larger
- geometrically more complex in its treatment
- more familiar/expected
  
- of lesser concern/relevance
- more immediately perceivable
- more backgrounded, once figure is perceived
  
- more independent

(adapted from Talmy 2003a: 315-16)

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Secondly, discussion would require the introduction of numerous experiments, which in turn presuppose concepts from neuroscience. A proper representation of the debate would therefore go beyond the scope of this introduction. And lastly, while anchoring the notion of image schema in the empirical sciences is ultimately a matter of fundamental importance, no knowledge of the topic is required for understanding any of the arguments presented in this thesis.

Based on Talmy's work, Langacker has demonstrated that figure/ground asymmetry plays a fundamental role in the analysis of grammatical structure.<sup>7</sup> He refers to the most prominent participant of a profiled relation as the *trajector* (TR) and to the second most prominent participant as the *landmark* (LM). By way of illustration, consider (8):

(8) [the lamp]<sub>TR</sub> above [the table]<sub>LM</sub>

According to Langacker, the preposition *above* encodes a spatial relation between two schematic entities. These entities are elaborated (instantiated) by *the lamp* and *the table*. It is important to note, however, that *above* does not construe the two as equally salient. I.e., the thing profiled by the phrase *the lamp above the table* is a lamp, not a table.<sup>8</sup> Hence, the lamp is the most salient participant in the relation and corresponds to the TR of *above*, while the table as second most prominent participant corresponds the LM of *above* (Langacker 1990: 25). In summary, the terms *TR* and *LM* are functionally roughly equivalent to the notions *figure* and *ground*. For Langacker, TR/LM alignment is an instance of figure/ground asymmetry pertaining to the level of linguistic structure. But since the terms *TR/LM* have become prevalent in Cognitive Linguistics (e.g. Lindner 1981; Lakoff 1990b), I will use them exclusively, even where non-linguistic cognitive structure is concerned.

### 3.2. Relevance for Image Schematic Structure

Recall from the previous discussion that image schemas are imagistic and grounded in perception. As such, the principle of TR/LM organization will naturally play a role when we talk about a given schema. Take the CONTACT schema, for instance. CONTACT, even when considered in the most abstract, presupposes at least two schematic entities between which the relation obtains. Confronted with a scene where A and B are related via CONTACT, we will recognize one entity as the TR and the other entity as the LM. While the bare image schema CONTACT by itself is neutral in terms of TR/LM alignment, any scene which instantiates the schema will necessarily have to be construed in a certain way, i.e. force us to impose TR/LM organization upon it. In other words, we will

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<sup>7</sup> One of the most significant consequences of this analysis is Langacker's characterization of the grammatical notions *subject* and *direct object* as clausal trajector and landmark, respectively (1987: 324).

<sup>8</sup> In the terminology of Cognitive Grammar *lamp* is the *profile determinant* of the phrase.

identify a TR and LM on the grounds of certain characteristics, such as the ones listed by Talmy (see above).

Note that linguistic coding is always a commitment to a specific construal of a given scene. For example, the verb *touch* relies heavily on the CONTACT schema *and* construes the CONTACT relation in a specific way. Consider the scene in figure 1:

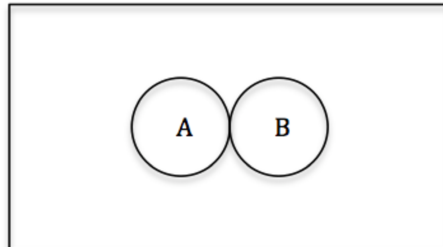


FIGURE 1

The depicted scene can be construed as both (9) or (10):

- (9) Circle A touches circle B.
- (10) Circle B touches circle A.

While the scene itself is not inherently asymmetric (at least not obviously so), the verb *touch* forces asymmetric construal by including a schematic TR and LM:

- (11)  $[X]_{TR}$  touch  $[Y]_{LM}$

The concept of TR/LM organization is integral to the case studies presented in the main part of this thesis because the senses (meaning variants) of a linguistic item will often differ in their TR/LM specifications (Lindner 1981; Lakoff 1990b). To illustrate this point, consider the parameters of dimensionality and enclosure in the following configurations encoded by the preposition *in*:

- (12) The point in the line            1D-LM, full enclosure
- (13) The point in the circle        2D-LM, full enclosure
- (14) The bird in the cage            3D-LM, full enclosure
- (15) The apple in the bowl         3D-LM, partial enclosure

Before closing this section I must address a terminological issue that could potentially be confusing when dealing with transitive verbs. It is important to note that the notions TR/LM are relative, not absolute. For example, something can be a TR in respect to one relation and at the same time a LM in respect to another relation. This becomes evident when we consider sentences like the following:

- (16a) The paper plane flew into the house.  
 (16b) Jane threw the paper plane into the house.

The preposition *into* profiles a spatial relation between a CONTAINER (the LM) and some other entity (the TR) which moves from its EXTERIOR to its INTERIOR. In both sentences the TR and LM of *into* are elaborated by *the paper plane* and *the house*, respectively. However, in (16b) *the paper plane* also corresponds to the LM of *threw* (while the TR of *threw* is elaborated by *Jane*). Furthermore, in Japanese, the motion path expressed by the prepositional “satellite” *into* is coded by the verb itself<sup>9</sup>:

- (17a) *Saru-ga ori-ni hait-ta.*  
 Monkey-NOM cage-DAT enter-PAST ‘The monkey entered the cage.’
- (17b) *Tarô-ga saru-wo ori-ni ire-ta.*  
 Tarô-NOM monkey-ACC cage-DAT put into-PAST  
 ‘Tarô put the monkey into the cage.’

Note that (17) expresses roughly the same schematic content as (16): *Y moves into CONTAINER* (a version) and *X causes Y to move into CONTAINER* (b version). Although in (17b) we cannot say that *saru* elaborates the TR of some overt relational element (like *into* in the English sentences), we *can* say that – as far as mental imagery is concerned – *saru* corresponds to the TR (the figure) of what we might call the “entry relation”. Therefore, when I speak of “the TR” or “the LM” throughout this thesis I will be referring to the level of image schematic structure. For example, in regards to (17b) – and focussing on the ENTRY schema – I would refer to *saru* simply as “the TR” even though the TR of *ireru* (i.e. the most prominent participant of the process) is elaborated by *Tarô*. Conversely, when referring to the level of grammatical structure, I will be as explicit as possible, using terms such as “clausal TR”, etc. As mentioned above, this use of terminology is mainly a concession to the verb-framed nature of Japanese.

## 4. Metaphor

### 4.1. Complex, Primary, and Image Metaphor

Conceptual metaphor, as first described by Lakoff and Johnson ([1980] 2003), is a basic principle of human cognition whereby one conceptual domain (the *target*) is structured

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<sup>9</sup> See Talmy’s (1991) distinction between satellite-framed vs verb-framed languages.



and understood in terms of another conceptual domain (the *source*). To illustrate, consider the classic example LOVE IS A JOURNEY, which underlies utterances such as the following:

Look *how far we've come*.  
It's been a *long, bumpy road*.  
We can't *turn back* now.  
We're at a *crossroads*.  
We may have to *go our separate ways*.  
The relationship isn't *going anywhere*.  
We're *spinning our wheels*.  
Our relationship is *off the track*.  
The marriage is *on the rocks*.  
We may have to *bail out* of this relationship.

(from Lakoff 2006: 189)

According to metaphor theory, we can think and talk about the target domain LOVE in terms of the source domain JOURNEY, because a set of mappings obtains between them (Lakoff 2006: 190ff.):

JOURNEY		LOVE
travellers	-->	lovers
vehicle	-->	relationship
impediments to travel	-->	difficulties encountered
crossroads	-->	choices
destination	-->	common life goals
etc.		

Thus, the mnemonic shorthand LOVE IS A JOURNEY is neither a proposition nor a single metaphorical expression. Instead it is the name for a cognitive operation that maps a complex body of knowledge about our experiences with journeys onto the domain of LOVE via a set of systematic correspondences.

Note, however, that there is no obvious connection between love relationships and journeys in the real world that compels us to draw a connection between these domains. Love and journeys are experiences of quite a different nature that do not typically co-occur. How, then, is the metaphor motivated? Why does JOURNEY “fit” as a source domain for LOVE? Why can we map travellers onto lovers, destinations onto life goals, and so on?

In order to answer the question of motivatedness, it is important to realize that the metaphor LOVE IS A JOURNEY can only exist in virtue of a larger system of more schematic

metaphors collectively known as the EVENT STRUCTURE METAPHOR. Lakoff (2006: 204) characterizes this system as follows:

- States are locations (bounded regions in space).
- Changes are movements (into or out of bounded regions).
- Causes are forces.
- Actions are self-propelled movements.
- Purposes are destinations.
- Means are paths (to destinations).
- Difficulties are impediments to motion.
- Expected progress is a travel schedule; a schedule is a virtual traveler, who reaches prearranged destinations at prearranged times.
- External events are large, moving objects.
- Long term, purposeful activities are journeys.

It immediately springs to attention that LOVE IS A JOURNEY is an instance of *long term, purposeful activities are journeys*. But there is more to it. All of the above mappings constitute generic-level metaphors in their own right. More specifically, the majority of them are what Grady (e.g. 1997a, 1997b, 1999) calls *primary* or *correlation metaphors*.

Primary metaphors are different from complex conceptual metaphors like LOVE IS A JOURNEY in two major respects. First, they only involve a single mapping between two experientially equally basic domains. As Grady (1997a: 26) puts it, primary source domains have *image content*: “[...]content which is tied to physical perception or sensation. The feeling of an itch; the perception of shape, weight, and distance; the detection of movement – all of these experiences involve the (apparently) direct perception of features of our bodies or our environments.” Primary target domains, on the other hand, have *response content*: “They are not direct perceptions of the world, but responses to [...] our perceptions of the world” (1997a: 26). In other words, while image and response content differ in kind, they do not differ in degree of abstractness or complexity. Secondly, primary metaphors are directly motivated by the experiential correlation of source and target domain. To illustrate this point, consider STATES ARE LOCATIONS:

If I am in a very hot place [...] I will find myself in a state of discomfort. More generally, it may be the case that we form metaphorical associations between certain sensations and the perception of being in particular places – i.e. the correlation in our experience between the places and the states leads to binding between the concepts. (Grady 1997a: 106).

Returning to LOVE IS A JOURNEY, we now see that the metaphor is decomposable into several primary metaphors such as STATES ARE LOCATIONS, PURPOSES ARE DESTINATIONS,

DIFFICULTIES ARE IMPEDIMENTS TO MOTION, and so forth. I.e., the states, common goals, and difficulties of a love relationship can be understood in terms of the locations, destinations, and terrain obstacles of a journey because the source and target domains of the respective primary metaphors – which in turn make up the complex metaphor – correlate in experience.<sup>10</sup>

In addition to complex metaphors and the primary metaphors that constitute them we need to briefly consider a third kind of projection before we move on. The following expressions are examples of *image metaphors*:

- (18) hourglass-waist (based on Lakoff and Turner 1989: 90)
- (19) submarine sandwich (from Benczes 2006: 108)
- (20) barcode hairstyle (from Benczes 2006: 110)

All of the above are “[o]ne-shot image mappings” (Lakoff and Turner 1989: 91) which project the shape properties of the source onto the target concept. Note, for example, that a submarine sandwich derives its name exclusively from the schematic silhouette of a submarine. No other aspects of the SUBMARINE domain are mapped onto the SANDWICH domain (as opposed to the numerous correspondences in LIVE IS A JOURNEY). Nor is there any salient experiential correlation between submarines and sandwiches (as opposed to PURPOSES ARE DESTINATIONS).

## 4.2. Metaphor and Meaning Extension

In the case studies of this thesis we will be interested in metaphor mainly as a mechanism of meaning extension. Let us therefore consider several examples from the literature that illustrate how metaphor functions as a driving force behind polysemy.

In her seminal 1981 study, Lindner analyses the systematic relationships between the senses of verb particle constructions with *out* and *up*. The following passage deals with the relation between spatial *up* and and what we may call the *activity sense of up*:

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<sup>10</sup> It is worth pointing out that the notions of *image content* and *image schema* are co-extensional for a large number of primary source domains (Grady 1997a: 179). Observe, for example, that the mappings which constitute the EVENT STRUCTURE METAPHOR have the following image schemas among their source domains: MOTION, FORCE, PATH, GOAL, BLOCKAGE, OBJECT. Lakoff's (2006: 199) invariance principle holds that “[m]etaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain.” From the perspective of primary metaphor theory this preservation of image schematic topology is an emergent aspect of the experiential correlation between primary source and target. For example, destinations are mapped onto purposes because destination-reaching and purpose-fulfillment naturally co-occur.

[...] when something is in hand, it is available for use or action. Thus when I pick up or take up my sword, I am ready to fight. More abstractly we may pick up a conversation where we left off ('continue acting on it') or take up sailing ('incorporate into the range of our activities'). (Lindner 1981: 161)

With the gift of hindsight (Lindner's study falls into the earliest days of metaphor theory), we can attribute this semantic extension to the primary metaphor ACTIVITY IS UP. In fact, what the passage cited above describes is exactly the experiential correlation the metaphor is based on: elevation to hand-level and readiness for use/action.

Several extensions of *over* into the non-physical domain are discussed by Lakoff (1990b). Recall the example mentioned briefly in 2.1.:

(21) She has a strange power *over* me.

As Lakoff (1990b: 435) points out, this sense is based on the metaphor(s) CONTROL IS UP/LACK OF CONTROL IS DOWN. Again, the experiential correlation grounding this primary metaphor should be evident: control is associated with an elevated position and an optimal overview.

Finally, consider a slightly more complex example concerning grammatical rather than lexical polysemy. Sweetser (1991) has famously claimed that the epistemic sense of modals such as *must* and *may* are metaphorically derived from their root (or deontic) sense. Her argument is based on a system of correspondences known as the *mind-as-body metaphor* for which she provides extensive diachronic and cross-linguistic evidence – mainly in the form of mappings from the sense perceptual to the mental domain (Sweetser 1991: 38):

sense perceptual/external domain		mental/internal domain
VISION	-->	KNOWLEDGE
HEARING	-->	INTERNAL RECIPTIVITY
FEEL	-->	EMOTION
TASTE	-->	PERSONAL PREFERENCE

As Sweetser (1991: 45) puts it, “[t]he internal self is pervasively understood in terms of the bodily external self, and is hence described by means of vocabulary drawn [...] from the physical domain.” In light of this system, which we might sum up under the generic level shorthand INTERNAL IS EXTERNAL, the modals *may* and *must* can be paraphrased in the following fashion (adapted from Sweetser 1991: 61):

(22a) John may go. (root)

"John is not barred by my or some other authority from going."

- (22b) John may be there. (epistemic)  
"I am not barred by my premises from the conclusion that he is there."
- (23a) You must come home by ten. (Mom said so.) (root)  
"The direct force (of Mom's authority) compels you to come home by ten."
- (23b) You must have been home last night. (epistemic)  
"The available (direct) evidence compels me to the conclusion that you were home."

That is, the epistemic senses are derived from the root senses by mapping the image schemas FORCE, BLOCKAGE, and ENABLEMENT from the external sociophysical onto the internal psychological domain.

## 5. Metonymy

### 5.1. Metonymic Shifts and Encyclopedic Knowledge

Metonymy is another mapping process central to human cognition. Here, one concept serves as a point of access for another concept from within the same experiential domain or domain matrix (e.g. Langacker 1993: 30; Kövecses and Radden 1998: 39; Barcelona 2000: 37). The following examples illustrate this:

- |      |                                                       |                        |
|------|-------------------------------------------------------|------------------------|
| (24) | The Giants need a <i>stronger arm</i> in right field. | (BODY PART FOR PERSON) |
| (25) | I'll have a <i>Löwenbräu</i> .                        | (PRODUCER FOR PRODUCT) |
| (26) | The <i>sax</i> has the flu today.                     | (OBJECT FOR USER)      |
| (27) | <i>Watergate</i> changed our politics.                | (PLACE FOR EVENT)      |

(from Lakoff & Johnson 2003: 38-39)

The notion of a *domain*, as introduced by Langacker (1987: 147ff.), is essential to the encyclopedic view of semantics assumed by cognitive linguists. On this view, linguistic items are points of access to potentially open-ended background knowledge structures (as opposed to being definable by feature bundles). For example, the word *knuckle* is understood relative to the conceptual domain FINGER. If a given concept is understood relative to more than one domain (which is the norm), we speak of its *domain matrix* (Langacker 1987: 147). Thus, additional domains in the domain matrix of KNUCKLE include HUMAN BODY PARTS, ANATOMY, BAR FIGHTS, and so forth. Note that some domains are strictly presupposed by a concept (FINGER for KNUCKLE) while others are more peripheral (e.g. BAR FIGHTS). Nevertheless, all are part of the domain matrix as they contribute to our encyclopedic knowledge.

We can now easily see how the above sentences involve a domain internal shift from one entity to another. (24) is understood against the experiential domain of BASEBALL, which includes the players, their functions and the body parts used in the game. (25) evokes a RESTAURANT domain – a conceptual structure that includes drinks as physical objects as well as knowledge about their producers, branding, and so on. The domain of MUSIC EVENTS includes musicians and their instruments among its parts. The POLITICS domain includes knowledge of political events as well as the places they occur at.

As pointed out by Langacker (1993) and Kövecses and Radden (1998), metonymical shifts are not arbitrary but governed by principles of relative salience. According to the classification of Kövecses and Radden (1998: 63ff.), relative salience is determined by four major factors: human experience (e.g. HUMAN OVER NON-HUMAN, CONCRETE OVER ABSTRACT), perceptual selectivity (e.g. MORE OVER LESS, GOOD GESTALT OVER POOR GESTALT), cultural preferences (e.g. STEREOTYPICAL OVER NONSTEREOTYPICAL, IDEAL OVER NON-IDEAL), and communicative principles (CLEAR OVER LESS CLEAR, RELEVANT OVER IRRELEVANT). Furthermore, they (1998: 71ff.) observe that several conflicting principles may apply at the same time. For example, in (26) the principle HUMAN OVER NON-HUMAN is at odds with RELEVANT OVER IRRELEVANT. In such cases, one or more principles can be overridden for “social, communicative or aesthetic reasons” (1998: 71). Given the context of (26), the musician’s function of playing the sax is considered the most important aspect by far, while his or her other human qualities are hardly relevant. Hence, the PRINCIPLE HUMAN OVER NON-HUMAN is reversed in favor of RELEVANT OVER IRRELEVANT.

## 5.2. Metonymy and Meaning Extension

As with metaphor, we will be concerned with metonymy primarily as a mechanism of semantic extension. To illustrate, consider the entry for the verb *paint*<sup>11</sup> in the *Merriam-Webster Dictionary*:<sup>12</sup>

			transitive verb
1	a	(1)	to apply color, pigment, or paint to
		(2)	to color with a cosmetic
	b	(1)	to apply with a movement resembling that used in painting
		(2)	to treat with a liquid by brushing or swabbing

<sup>11</sup> The verb *paint* is also used as an example by Tuggy (1993) in his discussion of ambiguity, polysemy and vagueness (see 7.3.), although not specifically in the context of metonymy.

<sup>12</sup> "Paint." Merriam-Webster.com., retrieved 18 Aug. 2016.

2	a	(1)	to produce in lines and colors on a surface by applying pigments
		(2)	to depict by such lines and colors
	b		to decorate, adorn, or variegate by applying lines and colors
	c		to produce or evoke as if by painting
3			to touch up or cover over by or as if by painting
4			to depict as having specified or implied characteristics
			intransitive verb
1'			to practice the art of painting
2'			to use cosmetics

Recall from above the notion of a domain. What elements would the domain of PAINT include? Surely, it includes the application of a substance onto a surface. This is done for some purpose which can be artistic or utilitarian. There is a set of characteristic movements involved. Further, painting can have a variety of effects, i.e. the result can have an expressive, evocative and/or representational function. All of this (and much more) is part of our encyclopedic knowledge about painting.

Now, allowing for the possibility that the entry cited is not an entirely accurate representation of semantic structure, we still get a rough idea of what some of the senses of *paint* are and how they differ from one another. The main point is this: Many of the senses characterized above can be distinguished in terms of the relative weight of the various elements constituting the domain(-matrix) of PAINT.<sup>13</sup> This is a salience-based phenomenon which is essentially metonymic in character (see also Croft 1993: 348). Consider, for example, an instance of 1b(2):

(28) The doctor *painted* the wound with iodine.

Here, the use of *paint* is licensed by shifting the bulk of salience to the subdomain of ASSOCIATED CHARACTERISTIC MOVEMENT and away from other aspects such as DEPICTION, ARTISTIC EXPRESSION, etc. Compare this to the distribution of salience in the following sentence, an instance of 1':

(29) The beauty of life inspires her to *paint*.

In this case, *paint* is licensed by foregrounding the aesthetic and expressive aspects of painting absent in (28) while ignoring all utilitarian aspects.

<sup>13</sup> See also Langacker's notion of *centrality*: "The multitude of specifications that figure in our encyclopedic conception of an entity clearly form a gradation in terms of their **centrality**. Some are so central that they can hardly be omitted from even the sketchiest characterization, whereas others are so peripheral that they hold little significance even for the most exhaustive description" (1987: 159). We can therefore say that many senses of *paint* differ in terms of the centrality of domain-internal elements.

## 6. A Note on the Relation between Metaphor and Metonymy

A particularly challenging aspect of the theory of conceptual metaphor and metonymy is the interaction and distinction between the two (see e.g. Goossens 1990, Radden 2000). In some expressions the relationship is quite intricate:

(30) He laid down the pen and took up the sword.

Here, as indicated by *lay down* and *take up*, the METAPHOR UP IS ACTIVE/DOWN IS INACTIVE is at work (Lindner 1981: 161). In this regard, (30) is no different from a sentence like (31):

(31) She took up knitting as a hobby.

However, (30) also features an encapsulated metonymy, i.e. *pen* and *sword* stand for scholarship and warfare, respectively (INSTRUMENT FOR ACTION). Goossens (1990) has coined the term *metaphtonymy* for the interplay between metaphor and metonymy in linguistic expressions.

Now, note that meaning extension, too, may involve metaphor and metonymy at the same time. Consider the following sentence:

(32) A witness at Jian Ghomeshi's trial painted him as a violent egomaniac.<sup>14</sup>

On the one hand, this use of *paint* (sense 4 listed in the *Merriam Webster* entry) is clearly metaphorical, since the domain of VERBAL DESCRIPTION is understood in terms of PAINTING. On the other hand, the descriptive and evocative function of painting (EFFECT FOR ACTION) is part of our encyclopedic knowledge about the PAINTING domain – and thus metonymic. In other words, the meaning extension process seems to have a bipartite structure, whereby the metonymy licenses the metaphor:

- (i) Metonymy: EFFECT OF PAINTING (description, evocation) FOR PAINTING
- (ii) Metaphor: DESCRIBING IS PAINTING

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<sup>14</sup> <http://www.vice.com/read/lucy-decouteres-testimony-paints-jian-ghomeshi-as-a-violent-egomaniac>, retrieved 23 Aug. 2016.



In fact, this example is no different from the primary metaphors discussed earlier. Recall that primary metaphors are based on the experiential correlation of source and target. For instance, the classic MORE IS UP is grounded in our experience that an increase in amount often causes an increase in height (Lakoff and Johnson 2003: 16). Likewise, painting and its descriptive/characterizing function are part of the same experiential domain. Therefore, if we understand metonymy as a mental access operation within a given experiential domain (and not merely a tool of linguistic reference) it can indeed be claimed that all metaphors have a metonymic basis (Barcelona 2000: 51). The reasoning behind this is as follows: If complex metaphors (e.g. LOVE IS A JOURNEY) can be decomposed into primary metaphors (e.g. STATES ARE LOCATIONS), and if primary metaphors have a metonymic basis (e.g. the correlation between being in certain states and being in certain locations), then all metaphors are ultimately motivated by metonymy.<sup>15</sup>

## 7. Polysemy and Lexical Networks

### 7.1. The Case for Polysemy

When a linguistic item has several interrelated meanings, we speak of *polysemy*. When it has only a single meaning, we speak of *monosemy*. The dominant view within Cognitive Linguistics is that polysemy is the norm, not the exception (e.g. Langacker 1987, 1991; Lakoff 1990b; Rice 1992). When we look at something like the dictionary entry of *paint*, it seems innocuous enough to suggest that the word has more than one meaning. However, instead of simply taking this view for granted, we should inquire why it is preferable over a strong monosemy position. Such a position would amount to the claim that even linguistic items with many different established usages have only one highly schematic meaning that subsumes all the variants (see Rice 1992: 89). That is, the variants are not full-fledged meanings in their own right, but created and understood on the fly in accordance with pragmatic principles on the basis of a single semantic value.

There are several problems with this account. First, this view of semantic structure requires an all-encompassing meaning that is schematic enough for all category members to be subsumed under. In many cases this seems extremely ambitious. For

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<sup>15</sup> Note that this also applies to the one-shot image metaphors (e.g. hourglass-waist, barcode hairstyle) mentioned earlier, since these are based on the correlation of *object* and *shape*. Missing from this discussion are synaesthetic metaphors (e.g. loud color, sweet music). But see Barcelona (2000: 35ff.) for a metonymy-based account.

example, it is unlikely that there is a single meaning of *paint* that is schematic for both *He painted the house green* and *His story painted her as the villain*. Yet, as we have seen above, both usages are related. In other cases, finding such a super-schema is outright impossible. Wittgenstein's observation about the category *game* comes to mind as a famous counterexample against staunchly monosemic accounts:

Consider for example the proceedings that we call "games". I mean board-games, card-games, ball-games, Olympic games, and so on. What is common to them all? – Don't say: "There *must* be something common, or they would not be called 'games' " – but *look and see* whether there is anything common to *all*. – For if you look at them you will not see something that is common to all, but similarities, relationships, and a whole series of them at that. [...] (1953: section 66)

I can think of no better expression to characterize these similarities than "family resemblances"; for the various resemblances between members of a family: build, features, colour of eyes, gait, temperament, etc. etc. overlap and criss-cross in the same way. – And I shall say: 'games' form a family. [...] (1953: section 67)

Secondly, in many cases where a super-schema *does* exist, we can reasonably doubt its semantic significance on the grounds of insufficient cognitive entrenchment. It is simply not plausible that a highly schematic concept which abstracts away from most of the characteristic features of its instances should be stored in long-term memory, while said instances – which we are generally much better acquainted with – are not. As Langacker (1987: 381) notes, "even if an all-subsuming superschema can plausibly be posited for a category, it may well be only minimally entrenched and have very little cognitive salience." Empirical support for this view comes from studies such as Rosch (1977, 1978), who suggests that categories are structured around prototype effects and that these effects are most likely to emerge at intermediate specificity (i.e. the "basic level"), not at the level of highest schematicity.<sup>16</sup>

Lastly, it should be noted that the strong monosemic view has been so attractive for generative and formal semanticists not least because of its alleged economy: Why posit additional semantic entities when they can in theory be "computed" on the fly, based on a single value? As argued above, this concern flies in the face of cognitive reality. For an encyclopedic semantics that embraces redundancy and overlap in conceptual structure it is a non-issue (Langacker 1987: 275).

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<sup>16</sup> For example, the features prototypically associated with the category bird (ability to fly, feathers, average size, etc.) emerge at an intermediate level that subsumes only "typical" members such as sparrows, doves, and so forth. A super-schema that subsumes *all* members (penguins, ostriches, etc.) has to abstract away from these features and is therefore not as well-entrenched in the cognitive system.

## 7.2. Making Sense of Senses – Some Proposals

Given these considerations, and based on the general theoretical commitments of Cognitive Linguistics outlined earlier, a lexical network model promises the most accurate representation of conceptual structure (and therefore semantic structure). According to this approach, linguistic categories are natural bundles of senses held together by family resemblances (e.g. Brugman 1981, Lakoff 1990b). Of course, this raises the delicate question of how to identify and differentiate the senses of a word (or any linguistic construction, for that matter). As may be expected, this is a topic of much heated debate among cognitive linguists. Consider, for example, some of the criticisms directed towards the seminal Brugman/Lakoff analysis of *over* (Lakoff 1990b), one of the earliest lexical network proposals. According to Lakoff (1990b: 420ff.), all of the following usages of *over* constitute discrete senses (i.e. meaning variants):

- |      |                              |                                      |
|------|------------------------------|--------------------------------------|
| (33) | The bird flew over the yard  | (extended LM, no contact)            |
| (34) | The plane flew over the hill | (vertical & extended LM, no contact) |
| (35) | The bird flew over the wall  | (vertical LM, no contact)            |
| (36) | Sam drove over the bridge    | (extended LM, contact)               |
| (37) | Sam walked over the hill     | (vertical & extended LM, contact)    |
| (38) | Sam climbed over the wall    | (vertical LM, contact)               |

Thus, in the Brugman/Lakoff model each different combination of dimensional parameters is granted the status of a meaning variant. Some linguists (e.g. Vandeloise 1990; Dewell 1994) have criticized this “full-specification approach” (Lakoff 1990b: 420) as a relapse into compositional feature analysis. For example, instead of relying on LM specifications (i.e. the bracketed parameters above) Dewell suggests that the only semantic extension mechanisms relevant for *over* are image schema transformation and metaphor. He further argues that the categorial prototype is not the above-and-across schema posited by Lakoff (1990b: 419) but a curved arc schema (Dewell 1994: 352ff.). Others (e.g. Kreitzer 1997; Tyler and Evans 2001, 2003) have objected that the Brugman/Lakoff analysis is methodologically unconstrained and vastly inflates the number of senses by downplaying the role of context and on-line inference. Kreitzer argues that many of the parameters used by Brugman/Lakoff (contact, extended, vertical, etc.) actually belong to the *component level* of schematic structure, which is below “the basic level of granularity at which individual prepositions are defined” (1997: 304). At this basic *relational level* he recognizes only three schemas from which the entire range of usage types of *over* can then be derived (Kreitzer 1997: 308ff.):

over1	static relation without occlusion	(e.g. 'The picture is over the fireplace.')
over2	dynamic relation	(e.g. 'The cat jumped over the post.')
over3	static object with occlusion	(e.g. 'The tablecloth is over the table.')

In a similar spirit (i.e. of providing a constraining methodology), Tyler and Evans (2001: 105) propose two criteria for differentiating the senses of *over*:

[...] for a sense to count as distinct, it must involve a meaning that is not purely spatial in nature and/or in which the spatial configuration between the TR and LM is changed *vis-a-vis* the other senses associated with a particular preposition. Secondly, there must be instances of the sense that are context-independent, instances in which the distinct sense could not be inferred from another sense and the context in which it occurs.<sup>17</sup>

In summary, then, the discussion of *over* shows that there is considerable dissent when it comes to representing polysemy in a lexical network. Depending on which linguist you ask, the number of senses proposed varies between three (Kreitzer 1997), sixteen (Tyler and Evans 2001) and twenty-four (Lakoff 1990b). So who is right?

### 7.3. Polysemy as a Fuzzy Notion – The Langacker/Tuggy Model

Much of the controversy surrounding polysemy and lexical networks in general hinges on our understanding of what constitutes a meaning variant. However, when striving for cognitive realism there seems to be only one plausible way of characterizing the notion of *sense*, i.e. as a semantic structure that has achieved *unit status* within the cognitive system. Langacker (1987: 57) characterizes a *unit* as follows:

A **unit** is a structure that a speaker has mastered quite thoroughly, to the extent that he can employ it in largely automatic fashion, without having to focus his attention specifically on its individual parts or their arrangement. Despite its internal complexity, a unit constitutes for a speaker a “pre-packaged” assembly; because he has no need to reflect on how to put it together, he can manipulate it with ease as a unitary entity. It is effectively simple, since it does not demand the **constructive effort** required for the creation of novel structures. Psychologists would speak of a “habit”, or say that “automization” has occurred.

In other words, whether a structure has unit status or not depends on its degree of *entrenchment*. As Tuggy puts it, entrenchment is best thought of as the “enduring salience” of a structure as a result of that structure’s repeated usage (1993: 279). Crucially, there can be no “nonarbitrary cutoff point” for unit status, since cognitive entrenchment is clearly a matter of degree (Langacker 1987: 59). Thus, if we accept that

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<sup>17</sup> Recall that the issue of contextual inference has also been raised by proponents of the monosemic view. However, it is important to note that both Kreitzer (1997) and Tyler and Evans (2001) reject the claim that all usages of *over* are inferred on-line from a single super-schema.

senses are units, we must conclude that there is no nonarbitrary line of demarcation separating senses from less well-entrenched semantic structures.

Based on the insights of Langacker (1987, 1991), Tuggy (1993) proposes a model that embraces the indeterminacy of polysemy by placing the notion on a continuum between the poles of ambiguity (homonymy) and vagueness. A prototypical example of ambiguity would be the case of *bank*<sub>1</sub> (river bank) and *bank*<sub>2</sub> (financial institution). Both are very well entrenched and there is no salient schema subsuming them. The structures are not even etymologically related, and if one were to look for a common schema, it would have to be something highly abstract like *thing*. Such a schema would also show a high degree of *elaborative distance* from both instances, i.e. it would have to ignore almost all of their characteristic specifications. Conversely, *aunt*<sub>1</sub> (mother's sister) and *aunt*<sub>2</sub> (father's sister) is given as an example of prototypical vagueness. Here, the subsuming schema (parent's sister) is much better entrenched than its instances. Additionally, elaborative distance is minimal, i.e. schema and instances are identical, except that the schema ignores the parent's gender specifications.<sup>18</sup> In this model polysemy constitutes an in-between case. Consider, for instance, *paint*<sub>1</sub> (artistic painting) and *paint*<sub>2</sub> (utilitarian painting): Both structures are well-entrenched, but so is the subsuming schema (apply paint to surface) which is located at intermediate elaborative distance (Tuggy 1993: 283). This is exactly the kind of case where we would speak of *paint*<sub>1</sub> and *paint*<sub>2</sub> (as well as the subsuming schema) as different *senses* of *paint*.

To summarize, we speak of ambiguity if two or more semantic structures have unit status while the subsuming schema does not; of vagueness if they lack unit status while the subsuming schema has unit status; and of polysemy if both the structures and the subsuming schema have unit status. Yet, as Tuggy (1993: 282) observes, due to the dynamic and gradual nature of salience it is "impossible to draw absolute boundary lines between the categories of ambiguity, polysemy and vagueness."

So how do the various analyses of *over* fare in light of the Langacker/Tuggy model and how can we account for the differences in results? According to the Brugman/Lakoff analysis, each minimal distinction in TR/LM specifications qualifies as a sense. But as Tyler and Evans point out (2001: 99), the linguistic expressions corresponding to the

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<sup>18</sup> As Tuggy (1993: 283) notes, there is an inverse (albeit not completely parallel) correlation between a schema's elaborative distance and its entrenchment. That is, schemas are less likely to become entrenched vis-a-vis their instances once they surpass a certain threshold of abstractness, i.e. what Rosch (e.g. 1977) calls the *basic level* (see also 7.1.). This is, of course, the result of usage-based reinforcement: Highly abstract structures tend to be less frequently used/activated than their elaborations.

TR/LM often underspecify these minimal distinctions. Consider the following two examples from Lakoff (1990b: 421):

- (39) The bird flew over the yard. (extended, non-vertical LM; no contact)  
(40) The plane flew over the hill. (extended, vertical LM; no contact)

In the Brugman/Lakoff model (39) and (40) are minimal variants. Everything else being equal, the former features a horizontally extended LM, whereas the latter features a horizontally *and* vertically extended LM. Now compare this to (41):

- (41) The bird/plane flew over the area. (extended, ?vertical LM; no contact)

Unlike *yard* and *hill*, the noun *area* underspecifies whether the LM is also vertically extended or not. Considering the minimal degree of elaborative distance from (41) to (39) and (40), and on the assumption that the schema in (41) is more firmly entrenched, the Langacker/Tuggy model would predict that *over* in (39) and (40) is vague rather than polysemous. Accordingly, one might argue that the Brugman/Lakoff account ascribes polysemy to several cases that are more aptly characterized as vague. On the other hand, estimates of a structure's degree of entrenchment based on introspection are best taken with a grain of salt and experimental data indeed suggests that "subjects seem to make distinctions of a rather fine-grained nature" (Sandra and Rice 1995: 122-123) when confronted with semantic decision tasks. While a given structure is not automatically guaranteed unit status in virtue of its TR/LM specifications, it is still plausible that language users make distinctions at this low level of granularity.

Assuming the entrenchment-based vagueness-polysemy cline of the Langacker/Tuggy model, Kreitzer (1997) as well as Tyler and Evans (2001) postulate criteria for polysemy that ultimately seem both rigid and arbitrary. Recall from above Kreitzer's (1997: 304) claim that Brugman/Lakoff style TR/LM specifications are below the level of granularity at which prepositions are defined, and thus irrelevant. Like Tyler and Evans, he observes that linguistic expressions such as *The man went over the fence* are often underspecified: "Here, it is unimportant whether the man jumped over the fence or climbed the fence – *over* remains grammatical either way as long as (1) there is motion and (2) the trajectory traverses the boundaries of the landmark" (Kreitzer 1997: 304). In other words, Kreitzer suggests that a specification is only relevant if there are contexts where an expression's grammaticality hinges on its presence or absence. But there is no psychological evidence to suggest that a semantic structure cannot attain unit status in

the cognitive system of a language user merely because its specifications do not cause ungrammaticality in certain linguistic contexts.<sup>19</sup> Likewise, Tyler and Evans's (2001: 105) criterium that there "must be [...] instances in which the distinct sense could not be inferred from another sense and the context in which it occurs" begs the question. Even in the most extreme scenario where a usage type can *always* be inferred from another usage type or from contextual factors, we cannot conclude that the structure in question is insufficiently entrenched. If a structure is mentally accessed time and time again it *will* attain unit status, i.e. the language user will produce it without "constructive effort" (Langacker 1987: 57) – regardless of whether such effort could theoretically be employed to infer it or not.

#### **7.4. Implications for the Present Study**

The above considerations have several implications for the following case studies. While I agree that lexical networks are the most suitable tool available for accurately representing semantic structure, it is also important to be aware of their limitations. As the Langacker/Tuggy model reminds us, the representation of polysemy is an approximation at best. It is not possible to draw a hard and fast boundary line between vagueness and polysemy. Although there are certain indicators for clear cases of polysemy, none of them can serve as necessary or sufficient conditions. For example, if usage type B is a metaphorical extension of usage type A, chances are that A and B represent distinct senses. Yet, we cannot conclude that metaphorical extension always entails polysemy. As Tuggy (1993: 285) points out, during the process of meaning extension a given semantic structure "can straddle the the fence [i.e. between the poles of vagueness and ambiguity] indefinitely, shifting its weight back and forth, before gradually moving more to one side than the other." This applies to metaphor, metonymy, and any other mechanism of semantic extension alike. If we want something resembling a "perfect inventory" of senses for some construction at some specific point in time, our best bet would be to collect large amounts of data on language user intuitions regarding entrenchment – whatever the exact nature of such an experiment might be.<sup>20</sup> It should also be noted, that these experiments would somehow have to take into account

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<sup>19</sup> In fact, the fine-grained distinctions attested by Sandra and Rice (1995) provide evidence to the contrary.

<sup>20</sup> Semantic decision tasks such as the ones presented in Sandra and Rice (1995) might be a good starting point.

individual as well as cultural variation among test subjects. For instance, Langacker (1987: 376) remarks that “[e]lms and maples may not survive as prototypical trees for a speaker who has lived for forty years in the desert.”

Meanwhile, the aim of my case studies is not to present a perfect inventory of senses for the verbs under scrutiny. Instead, my goal is to give the reader an idea of how the different usage types are connected via family resemblances and to make explicit the mechanisms of meaning extension by which they are derivable from one another. In the end it should hopefully become clear that, in the case of these particular verbs, the respective image schemas are the glue which “holds the family together”, so to speak. The reader should keep in mind that the senses postulated in this thesis are the result of introspection checked against the intuitions of native speakers. Consequently, the proposed category structures are best viewed as approximations and to be taken with a grain of salt. While for simplicity’s sake the term *sense* is used for each proposed usage type, the reader should be well aware that several cases are probably closer to vagueness than polysemy.

## **8. Spatial Expressions in Cognitive Linguistics: An Overview of the Literature**

Given the imagistic stance on language outlined earlier, it comes as no surprise that the analysis of spatial terms has been a staple of cognitive linguistic research since the earliest days. This is evidenced by a variety of studies featuring network-type analyses of prepositional polysemy and verb particle constructions. Of these I have already mentioned the pioneering contributions of Brugman (1981) and Lindner (1981). In a comprehensive case study Brugman has successfully shown that the various uses of English *over* are not a random aggregate, but instead constitute a systematically interrelated category of senses. This work, a revised version of which appeared in Lakoff (1990b), illustrates how semantic structure is dependent on and motivated by image schematic structure. In the same spirit, but from the perspective of Langackerian Cognitive Grammar (then called “Space Grammar”), Lindner’s analysis of the English verb particle constructions *V-out* and *V-up* makes a strong case for the substantial semantic contribution of the respective particles. Alternative analyses of *over* within the cognitive framework include Dewell (1994), Kreitzer (1997) and Tyler and Evans (2001). Morgan (1997) proposes a metaphor-based account of verb particle



constructions with *out*. Notable book-length studies of English prepositions and/or particles include Hawkins (1984), Herskovits (1986), Lindstromberg (1998), Hampe (2002), and Tyler and Evans (2003). Outside of English, spatial terms have been explored from a cognitive perspective by Smith (1987)(German two-way prepositions), Cuyckens (1991) (Dutch prepositions), Vandeloise (1991) (French prepositions), and Delbeque (1996) (Spanish *por* and *para*), to name but a few examples.

All of these studies agree in one central respect. Namely, that the image schematic structure of the preposition/particle is inherently meaningful. Insofar I am greatly indebted to these works for providing the major working hypothesis of the present thesis. Although Japanese has no verb particle constructions, the grammatical V2s considered in this thesis fulfill a similar function by contributing an abstract spatial meaning – which may then serve as basis for various mechanisms of semantic extension. Since there is currently no convenient way to refer to this specific group of verbs (akin to *spatial preposition*), I have coined the term *image schema verb* for practical purposes.

As briefly mentioned earlier, the verb-verb compound (*fukugô dôshi*) is likely among the most widely studied phenomena in Japanese linguistics.<sup>21</sup> Nonetheless, we can roughly divide the vast amount of research on the topic into theory neutral and generative approaches. The former camp – either rooted in traditional “school grammar” (*gakkô bunpô*) or assuming no specific theoretical framework – is generally open to the possibility that grammatical V2s such as *-kakaruru* or *-deru* may carry conceptual content related to their simplex counterparts. However, the details of this relation remain implicit and no sophisticated explanation is usually offered. Most of the earlier research on V-V compounds falls into this category (e.g. Teramura 1969; Nagashima 1976), as well as the insightful series of studies by Himeno (e.g. 1976, 1977, 1979, 1980).<sup>22</sup> Yamamoto’s (1984) famous essay on “case government” (*kaku shihai*) marks a shift towards syntactocentric accounts of V-V compounds, predominantly occupied with questions of “argument structure”. Then, ever since Kageyama’s (1993) highly influential introduction of the *lexical vs. syntactic* distinction – postulating two fundamentally different kinds of V-V compounds assumed to emerge in separate “components” of the grammar – , research on V-V compounds has been dominated by

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<sup>21</sup> An extensive bibliography is available from the homepage of the National Institute for Japanese Language and Linguistics (NINJAL): [http://pj.ninjal.ac.jp/lexicon/files/bunken\\_v3.pdf](http://pj.ninjal.ac.jp/lexicon/files/bunken_v3.pdf); retrieved 22 Oct. 2016.

<sup>22</sup> But note that Himeno adopts the generative distinction between lexical and syntactic compounds in her later work (e.g. 1999).

generative approaches (e.g. Kageyama 1996, 2009; Yumoto 1996, 2008; Matsumoto 1998a; Fukushima 2005).

So where do we currently stand? Although Cognitive Linguistics has become a well-established research paradigm among Japanese scholars (e.g. Yamanashi 2000, 2009; Taniguchi 2003, 2005; Momiyama 2014), and despite their many insightful contributions to the field, Japanese image schema verbs have rarely been a focus of interest.<sup>23</sup> This is somewhat surprising, considering the amount of attention prepositions and verb particle constructions have received from a cognitive perspective since the early 1980s. Meanwhile, the dominant generative, and thus formalist, approaches to Japanese V-V compounding make little to no attempt to draw a connection between the meaning of grammatical V2s and their simplex counterparts – at least not in the sense of what we have called *encyclopedic semantics*. In this context, the present study is intended as a modest first step towards establishing the study of Japanese image schema verbs as a research topic in Cognitive Linguistics.

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<sup>23</sup> However, see Matsuda's (2001a, 2001b) schema-based studies on *V-komu*.

## PART II: CASE STUDIES

### 9. KAKARU and the CONTACT Schema

Since *kakaru/kakeru* is an intransitive/transitive pair, I shall treat both forms as variants of the same verb, not as two separate “lexical entries”. (I will therefore use KAKARU as an umbrella term for all morphological variants and lower case when referring to any specific form.) For the purpose at hand we need to concern ourselves mainly with three constructions<sup>1</sup>:

(A)	Phon: X-ga (NOM)	Y-wo (ACC)	Z-ni (DAT)	kakeru (V)
	Sem: X CAUSE	Y MOVE TO	CONTACT-GOAL	
(B)	Phon:	Y-ga (NOM)	Z-ni (DAT)	kakaru (V)
	Sem:	Y MOVE TO	CONTACT-GOAL	
(C)	Phon:	Y-ga (NOM)	Z-ni (DAT)	kakat-te iru (V)
	Sem:	Y BE AT	PLACE	

The respective semantic poles give us highly schematic meanings for KAKARU. Most usage types are instances of these schemas. Of course, being highly schematic – much more so than the actual usage types – the above characterizations are insufficient to differentiate KAKARU from many other verbs.

Figure 1 below shows how (A), (B) and (C) are systematically related.<sup>2</sup>

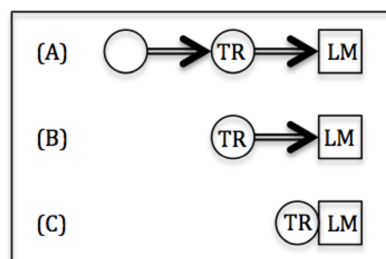


FIGURE 1

If the agent from (A) is absent or backgrounded from the scene, we end up with (B). If we direct our attention at the result of (A) or (B), we get (C).

With this in mind, I will now attempt to sketch out a lexical network for the various usage-types of KAKARU.

<sup>1</sup> The following can be thought of as including the past forms (*kake-ta*, *kakat-ta*, *kakat-te i-ta*). I have not included the transitive progressive *kake-te iru* in the list, since it is rather peripheral.

<sup>2</sup> The illustration is loosely based on Langacker's action chain model (1991: 283).

## 9.1. The Senses of KAKARU

### 9.1.1. Sense (Ia): Physical Support (fig. 2)

- (1) *Kabe-ni e-ga kakat-te iru.*  
Wall-DAT picture-NOM KAKARU-RES 'A picture is hanging on the wall.'
- (2) *Monchû-ni hyôsetsu-ga kakat-te iru.*  
Gatepost-DAT nameplate-NOM KAKARU-RES 'There is a nameplate on (fixed to) the gatepost.'
- (3) *Yôfuku-ga hanga-ni kakat-te iru.*  
Clothes-NOM hanger-DAT KAKARU-RES 'The clothes are on the hanger.'
- (4) *Kabe-ni hashigo-ga kakat-te iru.*  
Wall-DAT ladder-NOM KAKARU-RES 'A ladder is leaning against the wall.'

Both TR and LM are concrete objects. The TR exerts force on the LM, which the LM resists. This SUPPORT configuration is typically vertical, rarely horizontal as in (4). In either case the force is gravitational. Since the TR is an inanimate entity incapable of self-propelled movement, construction (B) is usually not realized.

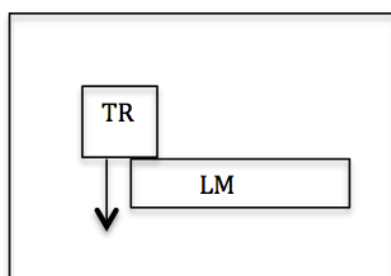


FIGURE 2

### 9.1.2. Sense (Ib): Imagined Support (fig. 3)

- (5) *Tsuki-ga sora-ni kakat-te iru.*  
Moon-NOM sky-DAT KAKARU-RES 'The moon is hanging in the sky.'
- (6) *Sora-ni kumo-ga kakat-te iru.*  
Sky-DAT clouds-NOM KAKARU-RES 'Clouds are hanging in the sky.'
- (7) *Yama-no chôjô-ni moya-ga kakat-te iru.*  
Mountain-LK summit-DAT mist-NOM KAKARU-RES 'Mist is hanging over the mountain top.'

This sense is available from (Ia) via image metaphor (Lakoff 2006: 215ff.). Due to similar TR-LM arrangements, the force dynamics of scenes like (1) and (2) are left intact although no actual SUPPORT is involved in (5)-(7). As shown below, (1) and (5) share the same basic spatial configuration.

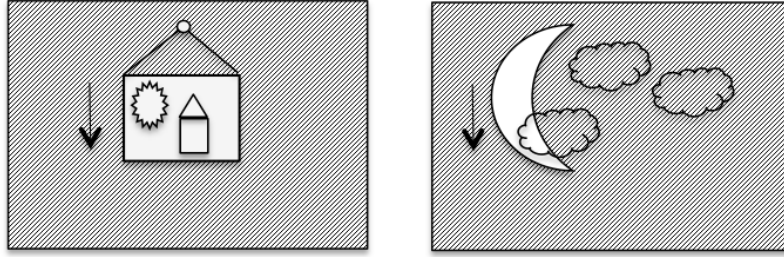


FIGURE 3

### 9.1.3. Sense (Ic): Physical Force (fig.4)

- (8) *Paipu-ni atsuruyoku-ga kakat-te iru.*  
 Pipe-DAT pressure-NOM KAKARU-RES 'There is pressure on the pipe.'
- (9) *Migi ashi-ni taijû-wo kakeru*  
 Right foot-DAT body weight-ACC KAKERU 'To shift ones weight onto the right foot'

This sense is available via metonymic shift from (Ia): The focus is not on the source of physical force, but on the force itself. This force need not be vertically orientated, but can include various kinds of internal or external pressure, as exemplified by (8).

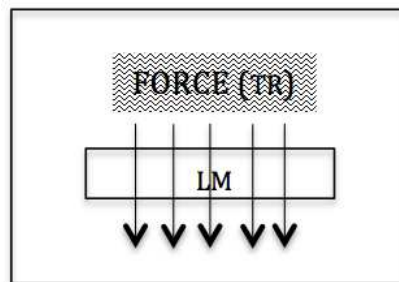


FIGURE 4

### 9.1.4. Sense (Id): Psychological Burden

- (10) *Seijika-ni fuhai-no utagai-ga kakat-te iru.*  
 Politician-DAT corruption-LK doubt-NOM KAKARU-RES  
 'The politician is suspected of corruption.'
- (11) *Wakashachô-ni kitai-ga kakat-te iru.*  
 Young CEO-DAT expectations KAKARU-RES 'Expectations rest on the young CEO.'
- (12) *Kimi-ni meiwaku-wo kake-te, môshiwake na-ku omot-te iru.*  
 You-DAT trouble-ACC KAKERU-TE excuse exist.NEG-INF think-RES  
 'I am sorry for troubling you.'
- (13) *Jukensei-ni puresshâ-ga kakat-te iru.*  
 Test candidates-DAT pressure-NOM KAKARU-RES 'There is pressure on the test candidates.'

Via metaphor this sense can be obtained from (Ia) or (Ic), depending on whether the psychological burden is construed as an object (10-12) or a force (13). The respective metaphors are PSYCHOLOGICAL BURDENS ARE PHYSICAL BURDENS and PSYCHOLOGICAL FORCES ARE PHYSICAL FORCES. In either case, the sensation of weight is mapped onto the domain of psychological states.

#### 9.1.5. Sense (Ie): Precondition for Success (fig. 5)

- (14) *Boku-no shôrai-ga kyô-no kaigi-ni kakat-te iru.*  
 I.M-LK future-NOM today-LK meeting-DAT KAKARU-RES  
 'My future depends on today's meeting.'
- (15) *Rôjin-ga musuko-ni kakat-teiru.*  
 Old man-NOM son-DAT KAKARU-RES 'The old man depends on his son.'
- (16) *Kare-ga keiba-ni zenzaisan-wo kake-ta.*  
 He-NOM horse racing-DAT whole fortune-ACC KAKERU-PAST  
 'He bet his all of his fortune on horse races.'

This sense involves the application of force dynamics to the domain of abstract reasoning. (Ie) is available from (Ia) via two metaphors: PRECONDITIONS ARE SUPPORTING OBJECTS and the more general STATES OF AFFAIRS ARE PHYSICAL OBJECTS (of which the former is an instance). The underlying cognitive principle that allows us to conceive of non-things as things has been variously discussed – most prominently under the label of *reification* (e.g. Talmy 2003a: 43f.). Langacker (1991: 35) refers to reification in the context of nominalization and relative clauses, noting that the latter allow us “to ‘step back’ from the situation [...] and construe it as an abstract object or **proposition** capable of being manipulated, evaluated, and commented on.” Abstract objects, in turn, can be construed metaphorically as concrete objects, making them compatible with force dynamic notions of the physical domain. We therefore speak of claims *supported* by evidence or certain assumptions *resting* on other assumptions etc. In (14)-(16) one state of affairs is supported by another. In (14) the TR *boku-no shôrai* metonymically stands for a proposition like “I will not be fired (or might even get promoted)” while *kyô no kaigi* metonymically stands for something along the lines of “the outcome of today’s meeting will be positive”.<sup>3</sup> Let us call the former q and the latter p. The implication in (14)-(16) is: If p turns out false, q will be false. If p turns out true, q will be true. In other words, q (reified as a THING) is *supported* by p (also reified as a THING). Thus, (Ie) is an

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<sup>3</sup> Put in another way, the overt nominals in (14)-(16) have propositional *active zones* (Langacker 1991: 456).

example of construing the logical principle of entailment in terms of the embodied schema SUPPORT.<sup>4</sup> The diagram below illustrates this.

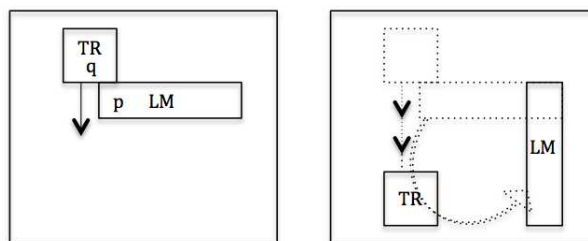


FIGURE 5

### 9.1.6. Sense (If): Ontological Dependence

- (17) Kuruma-ni hoken-ga kakat-te iru.  
Car-DAT insurance-NOM KAKARU-RES 'There is insurance on the car.'
- (18) Subete-no shina-ni yu'nyūzei-ga kakat-te iru.  
All-LK goods-DAT import tax-NOM KAKARU-RES  
'All goods are subject to import tax.'
- (19) Dokusaisha-ga hangyakusha-no kubi-ni shōkin-wo kake-ta.  
Dictator-NOM rebel-LK head-DAT bounty-ACC KAKERU-PAST  
'The dictator put a bounty on the rebels' heads.'

This is another case of abstract support which is metaphorically available from (1a). The TR is supported by the LM insofar as the TR's existence presupposes – and therefore depends on – the LM's existence. The relation between TR and LM is somewhat akin to a mereological one. Although one would be hesitant to describe car insurance as *part of* a car, it is certainly impossible to grasp the concept of car insurance without the concept of a car. Neither can one conceive of import tax without the concept of goods. Prize money is only meaningful against the background of some challenge or competition, and so forth. In Langackerian terms, TR and LM in (17)-(19) are connected by a *profile-base* relationship, where the base is a cognitive domain (or domain matrix) and the profile a salient substructure within that domain (Langacker 2006: 34f). This explains why in (17)-(19) the TR is ontologically and conceptually dependent on the LM.

### 9.1.7. Sense (II): Elicited Effect (fig. 6)

- (20) Kare-ga pureiyâ-ni rekôdo-wo kake-ta.  
He-NOM player-DAT record-ACC KAKERU-PAST 'He put a record on the player.'

<sup>4</sup> For further discussion of how logical notions are understood in terms of image schemas see Johnson (1990: 63f.) and Sweetser (1991: 58ff.) on modality.

- (21) *Jazu-no kyoku-ga kakat-te iru.*  
 Jazz-LK song-NOM KAKARU-RES 'A jazz song is playing.'
- (22) *Doa-ni kagi-ga kakat-te iru.*  
 Door-DAT key-NOM KAKARU-RES 'The door is locked.'
- (23) *PDF-ni rokku-ga kakat-te iru.*  
 PDF-DAT lock-NOM KAKARU-RES 'The PDF file is locked.'
- (24) *Kono ken-ni mahô-ga kakat-te iru.*  
 This sword-DAT magic-NOM KAKARU-RES 'A spell rests on this sword.'
- (25) *Yatto kuruma-no enjin-ga kakat-ta.*  
 Finally car-LK engine-NOM KAKARU-PAST 'The car's engine finally caught (on).'
- (26) *Ocha-ni akami-ga kakat-te iru.*  
 Tea-DAT redness-NOM KAKARU-RES 'The tea has a reddish hue.'

This usage type exploits the experiential correlation between CONTACT and resulting effect. It seems plausible to suppose that (II) gradually emancipated itself from SUPPORT senses such as (Ia) and (Id). Note that (20) can be read as an instance of (Ia), since the record player physically supports the record. However, if we background the physical support arrangement and focus our attention on the effect elicited by putting the record in contact with the player, we arrive at something like (21). There are no more traces of the SUPPORT schema in (21), since the sentence is felicitous even if the music comes from a device such as an MP3 player. Similar observations can be made about (22) and (23). Read as an instance of (Ia), the former describes the physical SUPPORT arrangement between keyhole and key. Again, focussing on the locking effect instead, we arrive at scenes like (23), devoid of any SUPPORT configuration. Considering the sentences under (Id), we can see how (24) is related to abstract SUPPORT. In English as well, a spell can be *placed on* a sword and then *rest on* the sword as a result. In fact, the line between abstract SUPPORT and elicited effect is not clear-cut at all, since cases like (24) (and some instances of [Id]) exhibit both. Of course, such inbetween-cases are to be expected in the gradual and dynamic process of meaning extension. Once the *elicited effect* sense of KAKARU is established, it can be extended to non-SUPPORT scenes such as (25) and (26) – since the the relevant experiential correlation obtains between CONTACT and effect, rather than SUPPORT and effect. That is, CONTACT between functional parts elicits an effect, whether SUPPORT is involved or not

Before moving on, it is worth noting that (25) (*enjin ga kakaru*) is never realized with a *ni*-argument. So where is the LM in (25)? And what about the arrangement in (21)?



Langacker (1991: 232) distinguishes between the “internal structure of a predicate” and “its combinatorial properties”. The former pertains to the more general level of conceptual organization, the latter to the linguistic level of clause structure. It is therefore possible for a predicate to have an internal TR/LM (at the level of conceptual structure) that is not realized as an overt nominal. In (21) and (25) the matter is further complicated by metonymy and idiomaticity. As stated above, usage type (II) focusses on the effect elicited when one functional part (the TR) of a system comes into CONTACT with another functional part (the LM). That is, the verb *kakaru* profiles the relationship between key and keyhole or record and record player etc. Now consider (27)-(29):

- (27) *Rekôdo-ga pureiyâ-ni kakat-te iru.*  
 Record-NOM player-DAT KAKARU-RES ‘The record is (playing?) on the record player.’
- (28) *Rekôdo-ga kakat-te iru.*  
 Record-NOM KAKARU-RES ‘The record is playing.’
- (29) *(Ribingu-ni) Shûberuto-ga kakat-te iru.*  
 (Living room-DAT) Schubert-NOM KAKARU-RES ‘Schubert is playing (in the living room).’

(27) makes overt linguistic reference to the functional parts record and player, which correspond to the schematic TR and LM of *kakaru*. This sentence is still ambiguous between usage types (Ia) and (II), although it will most likely be interpreted metonymically (CONTACT --> effect of CONTACT) in favor of the latter. (28) invites this metonymical interpretation even stronger by linguistically omitting the record player as a functional part. Finally, as stated above, (29) is felicitous even if the music comes from an MP3 player. On this interpretation, *kakaru* has already assumed the idiomatic meaning below (see fig. 6):

- (30) *X-ga kakat-te iru*  
 [Musical entity] is playing

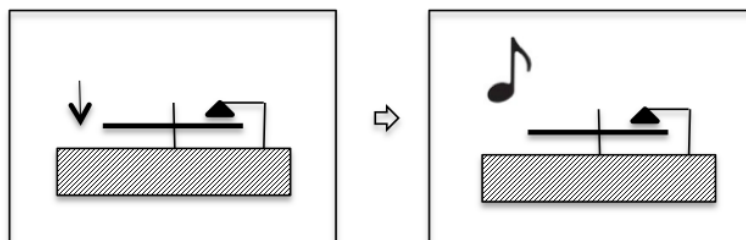


FIGURE 6

In (27) we have two easily identifiable functional parts which, when brought in CONTACT, cause music to play. An MP3 player with no physical medium however, causes music to play in an entirely different way – so we have no TR and LM in the CONTACT sense of (27) anymore. Instead, *kakaru* in (29) is interpreted idiomatically according to (30) and the most salient participant (i.e. the music represented metonymically by its composer) is promoted to clausal TR. While a clausal LM such as *ribingu* can be introduced, such a LM does obviously not correspond to the internal LM of *kakaru* as via (27) (i.e., the living room is not a functional part of a CONTACT-system a la *record – record player, key – key hole, etc.*).

Now let us consider (25), which is quite similar. Our layman’s knowledge or “folk-model” of how machinery works involves the CONTACT of functional parts: Entity A comes into CONTACT with entity B and something happens. This is no less true for starting up a car. However, exactly which parts of a mechanical system need to be in CONTACT with one another is usually expert knowledge and beyond the grasp of our folk-model. And even if we can identify those parts, their salience is usually overshadowed by other entities. Compare the following sentences:

(31) *Enjin-ga kakat-ta.*  
 Engine-NOM KAKARU-PAST ‘The engine caught (on).’

(32) With a roar the engine *caught (on)*.

Here both *kakaru* and *catch on* have a non-transparent argument structure. What is it the engine *caught (on)*? What functional parts are involved in both cases? And would they be relevant from a layman’s perspective when starting up a car? The upshot is that *kakaru* in (31) has a schematic TR and LM corresponding to functional parts, which we may or may not be able to identify (depending on our technical expertise). But because of their low salience as far as our everyday experience with cars is concerned, these parts remain conceptually schematic and nebulous. As a consequence, *kakaru* gains an idiomatic meaning analogous to (30) and the most salient entity (car, engine) takes the place of clausal TR/subject. This, of course, is a metonymic process, as it constitutes a domain internal shift (i.e. WHOLE FOR PART).

#### 9.1.8. Sense (III): Covering (fig. 7)

(33) *Hanako-ga sarada-ni doresshingu-wo kake-ta.*  
 Hanako-NOM salad-DAT dressing-ACC KAKERU-PAST ‘Hanako put dressing on the salad.’

(34) *Beddo-ni beroa-no kabâ-ga kakat-te iru.*  
 Bed-DAT velour-LK cover-NOM KAKARU-RES 'There is a velour cover over the bed.'

(35) *Kawazura-ni kiri-ga kakat-te iru.*  
 River surface-DAT mist-NOM KAKARU-RES 'The river is covered by mist.'

The COVERING sense is obtained by backgrounding the force dynamics of SUPPORT from certain usages of (Ia) or (Ib), such as (1), (5), or (6). There are two requirements for (III). The first is concerned with the *shape of the TR*, which must be planar and cover at least an extended portion of the LM. Secondly, the *saliency* of the COVERING schema must be higher vis-a-vis the saliency of the SUPPORT schema.

Both applies to (33)-(35). The TR is a planar entity which makes a considerable portion of the LM visually inaccessible. This object can be either discrete (individual specks of dressing covering a salad) or continuous (a blanket covering a bed or mist covering a river). In all of the above sentences the supporting function of the LM is strongly backgrounded (33, 34) or non-existent (35).

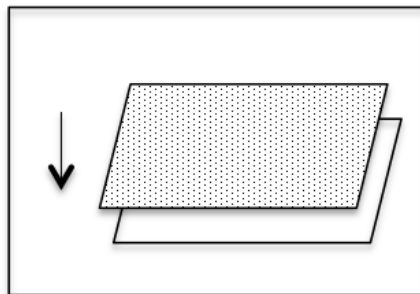


FIGURE 7

It should be noted that both the TR's shape as well as the saliency of COVERING vs SUPPORT are a matter of degree. Consequently, categorial fringe cases like (36) are to be expected.

(36) *Mado-ni kâten-ga kakat-te iru.*  
 Window-DAT curtain-NOM KAKARU-RES 'There is a curtain over the window.'

There are two possible ways to construe this scene. We can either focus on the curtain covering the window, yielding a COVERING reading. Or, alternatively, we focus on the curtain track supporting the curtain, yielding a physical SUPPORT reading (see Ia). In the latter case *mado* would be metonymically representing the curtain track. Depending on the context, either schema's saliency can be heightened vs the other:

(37) *Mado-ni kâten-ga kakat-te i-te, heya-ga kurai.*  
 Window-DAT curtain-NOM KAKARU-RES-TE room-NOM dark  
 'There is a curtain over the window, so the room is dark.'

- (38) *Mado-ni kâten-wo kake-yô to shi-ta ga, uma-ku kakara-nakat-ta.*  
 Window-DAT curtain-ACC KAKERU-INT-PAST but good-INF KAKARU-NEG-PAST  
 'I tried to put a curtain over the window but couldn't attach it properly.'

Focussing on the brightness of the room will raise the salience of the COVERING schema. In contrast, if we direct our efforts towards fixing the curtain to the curtain track, the SUPPORT schema will gain a salience boost.

### 9.1.9 Sense (IVa): Physical Restraint (fig. 8)

- (39) *Kitsune-ga wana-ni kakat-te iru.*  
 Fox-NOM trap-DAT KAKARU-RES 'The fox is caught in the trap.'
- (40) *Sakana-ga hari-ni kakat-te iru.*  
 Fish-NOM hook-DAT KAKARU-RES 'The fish is on the hook.'
- (41) *Sêtâ-ga kugi-ni kakat-ta.*  
 Sweater-NOM nail-DAT KAKARU-PAST 'The sweater got caught on a nail.'
- (42) *Oki-ni fune-ga kakat-te iru.*  
 Offshore-DAT ship-NOM KAKARU-RES 'A ship is anchored off the shore.'

This usage type is linked to (Ia) via a perspectival shift, since the notions SUPPORT and RESTRAINT refer to different construals of the same force dynamic arrangement. Adopting Talmy's (2003a: 409ff.) framework and terminology, this arrangement can be characterized as follows: An *agonist* with a tendency towards action is blocked by a stronger *antagonist* (see fig. 8). However, SUPPORT and RESTRAINT differ as to whether the presence of the antagonist's counterforce is deemed favorable from the agonist's perspective. The English verb *keep* illustrates this for the physical – and by metaphorical extension – for several abstract domains. By way of example, consider the sentences below:

- (43) The fence keeps the wolves from attacking the sheep. (RESTRAINT)  
 (44) The tail keeps the kangaroo from toppling over. (SUPPORT)  
 (45) Coffee keeps me from falling asleep on the job. (SUPPORT)  
 (46) Too much coffee kept me from getting a good night's sleep. (RESTRAINT)

With this in mind, consider the SUPPORT and RESTRAINT readings of KAKARU:

- (47) *E-ga kabe-ni kakat-te iru.*  
 Picture-NOM wall-DAT KAKARU-RES 'The picture is hanging on the wall.'
- (48) *Kitsune-ga wana-ni kakat-te iru.*  
 Fox-NOM trap-DAT KAKARU-RES 'The fox is caught in the trap.'

In (47) the picture is subject to the force of gravity and therefore has a tendency to fall to the ground. However, some other object (a nail etc.) is blocking this tendency. We consider this BLOCKAGE a case of SUPPORT, since from the (admittedly anthropocentric) “perspective of the picture” falling to the ground and shattering to pieces is an unfavorable outcome. In (48) the fox’ self-propelled motion is counteracted on by the trap. Since this counterforce is obviously unfavorable from the perspective of the fox, it is interpreted as an instance of RESTRAINT. Now recall (42), which is particularly interesting, because it can be interpreted either way. If we conceive of ships primarily as vehicles controlled and operated by people, (42) yields a SUPPORT reading. But if we choose to view them as entities which are capable of drifting away “on their own” (backgrounding the current etc.) – i.e. construe the ship as capable of “self-propelled” motion – we arrive at a RESTRAINT reading.

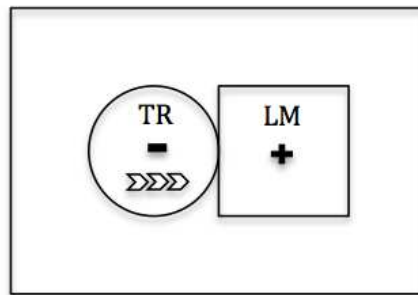


FIGURE 8

#### 9.1.10. Sense (IVb): Abstract Restraint

- (49) *Kare-wa teki-no keiryaku-ni kakat-ta.*  
 He-TOP enemy-LK scheme-DAT KAKARU-PAST  
 ‘He fell victim to the enemy’s scheme.’
- (50) *shiken-no koto-ga ki-ni kakat-te, nemur-e-nai.*  
 Test-LK thing-NOM mind-DAT KAKARU-TE sleep-POT-NEG  
 ‘(I’m) worried about the test and can’t sleep.’
- (51) *O-me-ni kakaru no-wo tanoshimi-ni shi-te i-masu.*  
 HON-eye-DAT KAKARU NMLZ-ACC pleasure-DAT do-PROG-POL  
 ‘I’m looking forward to meeting you.’

As stated under (IVa), force dynamic notions such as RESTRAINT are often metaphorically extended to a number of abstract domains. In (49), for instance, physical RESTRAINT is mapped onto the social, psychological, or other limitations, imposed on the agonist. Notable in particular are the idiomatic uses that construe sense data or

propositional content as “free-floating” entities, which are “caught on” the respective perceptive or mental faculties used for processing them.

#### 9.1.11. Sense (Va): External Control (fig. 9)

- (52) *Tarô-ga wazawai-ni kakat-ta.*  
 Tarô-NOM misfortune-DAT KAKARU-PAST ‘Tarô suffered a misfortune.’
- (53) *Hanako-ga byôki-ni kakat-te iru.*  
 Hanako-NOM illness-DAT KAKARU-RES ‘Hanako is sick.’
- (54) *Kanja-ga isha-ni kakat-te iru.*  
 Patient-NOM doctor-DAT KAKARU-RES ‘The patient is consulting a doctor.’

This sense is linked to (IVb) via a subtle metonymic shift, since we experience RESTRAINT usually in tandem with external control. The latter notion, however, is broader and not limited to RESTRAINT. I.e., an illness, a misfortune or a scheme will not just limit our scope of action but can affect and manipulate our behavior in various ways. (Since the difference is gradual, [49] would be somewhere inbetween [IVb] and [Va], depending on what exactly *keiryaku* denotes.) Note that (50) constitutes a curious unprototypical case, because the TR *intentionally* surrenders itself to external control. This will be discussed in the next section.

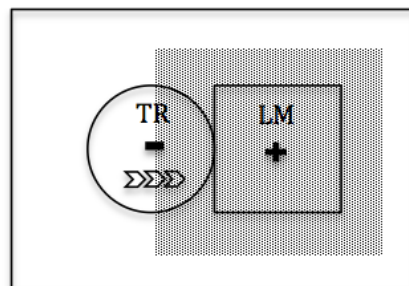


FIGURE 9: A weaker TR in the sphere of influence of a stronger LM

#### 9.1.12. Sense (Vb): Agentive Control (fig. 10)

- (55) *Sate, shigoto-ni kakar-ô.*  
 Now work-DAT KAKARU-VOL ‘Now, let’s get to work.’
- (56) *Hanako-ga kodomo-no sewa-ni kakat-te iru.*  
 Hanako-NOM children-LK care-DAT KAKARU-RES ‘Hanako is taking care of the children.’
- (57) *Shôsetsuka-ga shinsaku-ni kakat-te iru.*  
 Novelist-NOM new work-DAT KAKARU-RES ‘The novelist is working on a new book.’

When comparing (53), (54), and (55), one will notice what might be called a *cline of agentivity*. All of these scenes share a common image schematic structure: The TR moves

along a PATH, spatial or virtual, which terminates at the LM (recall the schematic constructions [B] and [C] from before). They differ, however, in regards to the TR's intentionality and the perceived relative strength of TR and LM. Specifically, the TR's "degree of agentivity" gradually increases from (53) to (55):

	TR's movement towards LM	relative strength	degree of agentivity
(52-53)	unintentional	TR < LM	low
(54)	intentional	TR < LM	intermediate
(55-57)	intentional	TR > LM	high

In other words, the cline of agentivity amounts to the following (reverse) hierarchy: unintentional movement towards stronger LM --> intentional movement towards stronger LM --> intentional movement towards weaker LM. In each case, the weaker participant is construed as being in the *sphere of influence* of the stronger participant.

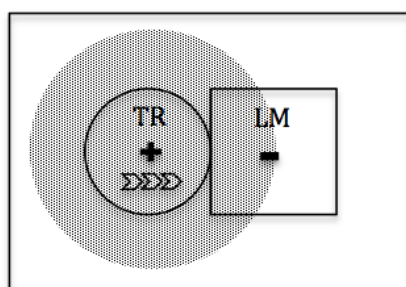


FIGURE 10: A weaker LM in the sphere of influence of a stronger TR

### 9.1.13. Sense (VIa): Physical Arrival (fig. 11)

- (58) *Mori-wo deru to tōge-ni kakaru.*  
 Forest-ACC get out COND mountain pass-DAT KAKARU  
 'Once out of the forest, we'll arrive at the mountain pass.'

The RESTRAINT and control senses (IV and V) have a strong tendency to feature an animate (or quasi-animate) TR capable of self-propelled motion, thereby raising the relative salience of PATH traversal inherent in constructions (A), (B) and presupposed by construction (C).<sup>5</sup> (VIa), as well, foregrounds PATH traversal but abstracts away from any force dynamic notions. In other words, the TR's PATH terminates as it comes into CONTACT with the LM, but neither exerts any force on the other.

<sup>5</sup> I.e. (C) is the *result* of PATH traversal.

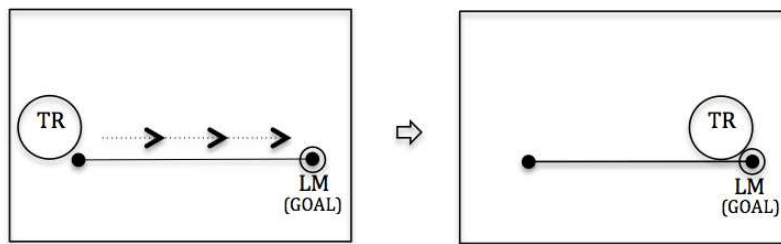


FIGURE 11

#### 9.1.14. Sense (VIb): Transmission

- (59) *Hanako-ga Tarô-ni koe-wo kake-ta.*  
 Hanako-NOM Tarô-DAT voice-ACC KAKERU-PAST 'Hanako said hello to Tarô.'
- (60) *(Tarô-kara) Hanako-no ie-ni denwa-ga kakat-ta.*  
 (Tarô-ABL) Hanako-LK house-DAT phone call-NOM KAKARU-PAST  
 'Hanako's house got a phone call (from Tarô).'
- (61) *(Taisa-kara) shôsa-ni meirei-ga kakat-ta.*  
 (Captain-ABL) major-DAT command-NOM KAKARU-PAST  
 'The major received a command (from the captain).'

This sense is a slight variation of (VIa). Here, the TR is an informational entity travelling along a PATH from sender (SOURCE) to recipient (GOAL). As the above examples show, the SOURCE can be linguistically profiled either as subject of a caused motion event (59) or, if the TR's motion is construed as self-propelled, as an oblique (60, 61). As in (VIa), the relationship between TR and LM is force dynamically neutral.

#### 9.1.15. Sense (VIc): Temporal Arrival

- (62) *Shingata terebi-no kaihatsu-ga oikomi-ni kakat-ta.*  
 New model TV-LK development-NOM final stage-DAT KAKARU-PAST  
 'Development of the new TV model has reached the final stage.'
- (63) *Koko-wa mô sugu uki-ni kakaru.*  
 Here-TOP soon rainy season-DAT KAKARU  
 'We're headed for the rainy season.'

This is a straightforward metaphorical extension of (VIa) into the temporal domain. The TIME IS SPACE metaphor is extremely pervasive cross-linguistically (Radden 2006). For example, in English one can "approach" a deadline or be worried about an "approaching" deadline. Note that this sense may feature an extended TR (such as *kaihatsu* in [62])

#### 9.1.16. Sense (VII): Resource Requirement (fig. 12)

- (64) *Kono shôsetsu-wo kaku no-ni gonenkan kakat-ta.*  
 This novel-ACC write NMLZ-DAT five years KAKARU-PAST



'Writing this novel took five years.'

(65) *Ie-wo kau-Ø-ni-wa takusan okane-ga kakaru.*  
 House-ACC buy-NMLZ-DAT-TOP a lot money-NOM KAKARU  
 'To buy a house one needs a lot of money.'

(66) *Kanojo-wa tema-wo kake-te, sono e-wo kai-ta.*  
 She-TOP effort-ACC KAKERU-TE that picture-ACC draw-PAST  
 'She put (a lot of) effort into the drawing.'

The resource requirement sense is a variant of the arrival sense, featuring an extended TR which incrementally “grows” from a SOURCE (0%) along a PATH, until it makes CONTACT with its GOAL/LM (100%). This image schematic structure applies to all kinds of resources, such as time, money, effort, or ability. In each case, there is some GOAL which represents the end-point of a SCALE. In order to reach (i.e. make CONTACT with) this GOAL, the TR needs to be of sufficient length. The conceptualization of amount in terms of physical length is based on the experiential correlation between both domains and constitutes a primary metaphor.<sup>6</sup> Likewise, there is a very real experiential basis for understanding the achievement of a goal in terms establishing physical contact.

As is to be expected, then, expressions that construe resource requirement via the SOURCE-PATH-GOAL schema are not limited to Japanese. By way of example, consider the German verb (*aus*)*reichen* (reach) and its dialectal variant *langen*, derived from the adjective *lang* (long).

(67) Mein Geld *reicht* nicht (*aus*), um ein Boot zu kaufen.  
 I don't have enough money to buy a boat.

(68) Die Vorräte *langen* noch bis Monatsende.  
 The provisions will last until the end of the month.

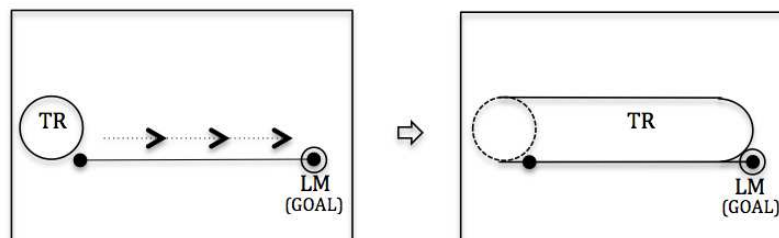


FIGURE 12

### 9.1.17 Sense (VIIIa): Physical Link (fig. 13)

(69) *Murabito-tachi-ga kawa-ni hashi-wo kake-ta.*  
 Villager-PL-NOM river-DAT bridge-ACC KAKERU-PAST  
 'The villagers built a bridge across the river.'

<sup>6</sup> Consider the similar case of MORE IS UP (Lakoff and Johnson 2003: 16).

(70) *Toguchi-ni kumo-no su-ga kakat-te iru.*  
 Doorway-DAT spider-LK web-NOM KAKARU-RES  
 'There is a spider web in the doorway.'

(71) *sora-ni niji-ga kakat-te iru.*  
 Sky-DAT rainbow-NOM KAKARU-RES  
 'A rainbow spans across the sky.'

Terminative PATHs and LINKs are alternative construals of one another. If a road runs between X and Y, it connects Y with X. We construe LINKs when following an object's trajectory from SOURCE to end-point. Imagine someone swimming across a river. Then mentally connect all the "dots" on the swimmer's PATH. This will yield a LINK from shore to shore. We can also go the opposite route and construe LINKs as PATHs:

(72) That mountain range goes from Canada to Mexico. (Talmy 2003a: 104)

This operation involves what has variously been called *virtual motion* (Talmy 1983) or *abstract motion* (Langacker 1987: 168ff.), i.e. mentally scanning an extended entity along a trajectory in successive fashion.<sup>7</sup> In a way, then, (terminative) PATHs are "dynamically" construed LINKs whereas LINKs are "statically" construed (terminative) PATHs.

Keeping the PATH-LINK transformation in mind, we can now see how (VIIIa), too, is related to the arrival sense (VI). In (69)-(71) the LINK is the result of the TR's extension from SOURCE to GOAL. I.e., the bridge, the spiderweb, and the rainbow are construed as gradually moving from one side to the other. However, like the TRs in (VII) they are not punctual but extended and therefore move by "growing". As they make CONTACT with their GOAL, these TRs have evolved into static structures extending from their point of departure to their point of termination.

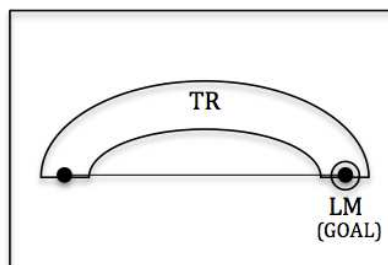


FIGURE 13

<sup>7</sup> In more recent work Talmy (2003a: 138f) uses the term *coextension path*.

(VIIIa) also features what we may call a *salience based argument shift*. (Recall our discussion of *engine ga kakaru* under [II].) This kind of metonymic shift occurs when the entity most directly involved in the profiled relation is outranked in prominence by some other participant of the scene and thus fails to appear as an overt nominal.<sup>8</sup> In (69)-(71) this entity corresponds to the point at which the TR's PATH terminates, i.e. the "other side" of the river (69), the "other side" of the door frame (70), and the point where the rainbow terminates (71). However, since in each case the TR ends up occupying the whole PATH instead of just the GOAL and its vicinity, attention is redistributed accordingly and the PATH replaces the GOAL as clausal LM/DAT-Obj.

#### 9.1.18 Sense (VIIIb): Relevance Link

(73) *Hanbai keiyaku-ni kakaru shôhin*  
Sales contract-DAT KAKARU goods 'Goods subject to the sales contract'

(74) *Shôgai-no aru kodomo-ni kakaru kyôiku sôdan*  
Disability-NOM exist children-DAT KAKARU education advice  
'Educational advice concerning children with disabilities'

The metaphorical construal of relevance in terms of the LINK schema is cross-linguistically quite common. This is not surprising, since our most basic embodied experience of relevance involves physical LINKs between objects: "two pieces of wood are nailed together, the child holds the parent's hand, the snaps on the child's coat are connected, the lamp is plugged into the wall socket. In these simple physical cases there is a spatial contiguity and closeness of the linked objects, and the connected objects are related via the link" (Johnson 1990: 118). Likewise, TR and LM in (73) and (74) are metaphorically construed as physically connected entities in virtue of being relevant to one another. As in (VIIIa), we may view the TR as an extended object making CONTACT with the LM.

#### 9.1.19. Summary

The above analysis shows that the semantic structure of KAKARU consists of at least eight clusters, all of which are linked to the CONTACT schema by virtue of experiential correlation. These clusters are SUPPORT (I), effect (II), COVERING (III), RESTRAINT (IV), CONTROL (V), arrival (VI), resource requirement (VII), and LINK (VIII). In the following

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<sup>8</sup> Again, these cases can be analyzed as *active zone* phenomena. Compare, for example, *I blinked* vs *\*My eyelid blinked* (Langacker 1987: 272).

sections of this chapter I will argue that the senses of *V-kakaru/V-kakeru*, too, are linked to the CONTACT schema and consequently should be viewed as part of the same lexical network.

## 9.2. The Senses of V-KAKARU

Himeno (1979, 1999), who offers the most comprehensive treatment of V-KAKARU, recognises two general meanings: “do towards” (*shikô*) and “start (and be interrupted)” (*shidô*) (1979: 61). She further subdivides these into the following senses.

### (i) DO TOWARDS (*shikô*)

(i1) contact by falling (*rakka sesshoku*)

-kakaruru *Ha-ga atama-ni chiri-kakaruru.*  
Leaf-NOM head-DAT fall-KAKARU ‘The leaf falls onto the head.’

-kakeru ---

(i2) supportive contact (*ikyo sesshoku*)

-kakaruru *Hito-ga kabe-ni yori-kakaruru.*  
Person-NOM wall-DAT move towards-KAKARU ‘Someone leans against the wall’

-kakeru *Kabe-ni ita-wo tate-kakeru*  
Wall-DAT board-ACC put-KAKERU ‘To put a board against the wall’

(i3) oriented contact (*shikô sesshoku*)

-kakaruru *Inu-ga hito-ni osoi-kakaruru.*  
Dog-NOM person-DAT attack-KAKARU ‘The dog pounces at the person’

-kakeru *Hito-ni tsuba-wo haki-kakeru*  
Person-DAT spit-ACC spit-KAKERU ‘To spit at a someone’

(i4) psychological orientation (*shinriteki shikô*)

-kakaruru ---

-kakeru *Hito-ni warai-kakeru*  
Person-DAT smile-KAKERU ‘To smile at someone’

(i5) oriented movement (*shikô idô*)

-kakaruru ---

-kakeru *Kaijô-ni tsume-kakeru*  
Assembly hall-DAT cram-KAKERU ‘To crowd (into) an assembly hall’

(i6) grasping (*hasoku*)

-kakaruru ---

-kakeru *Inu-wo oi-kakeru*  
Dog-ACC chase-KAKERU ‘To chase after a dog’

(i7) encounter in passing (*tsûka sôgû*)

-kakaruru *Hito-ga mise-no mae-wo tôri-kakaruru.*  
Person-NOM store-LK front-ACC pass-KAKARU  
‘A person passes by in front of a store.’

-kakeru ---

### (ii) START (*shidô*)

(ii1) beginning (*shidôtai*)

-kakaruru ---

-kakeru      *Hon-wo yomi-kakeru*  
 Book-ACC read-KAKERU 'To begin reading a book'

(ii2)      emergence (*shôgentai*)  
 -kakaruru      *Jiko-ni at-te, shini-kakaruru*  
 Accident-DAT meet-TE die-KAKARU  
 'To be on the verge of dying after an accident.'

-kakeru      *Jiko-ni atte, shini-kakeru*  
 (same as above)

(based on Himeno 1979: 59)

Is there reason to suggest conceptual links between the grammatical V2s *-kakaruru/-kakeru* and their simplex counterparts? I believe there is, and that crosslinguistic data can provide evidence for this. As we have seen, the CONTACT schema is central to the semantics of KAKARU, while *-kakaruru/-kakeru* can be paraphrased as “do V towards” and “begin to V/be about to V”. Curiously, this resembles the relationship between the German preposition *an* – which prototypically involves CONTACT between TR and LM – and the derived verb particle construction *an-V*, which among its various meanings includes two senses similar to (i) and (ii). Let us suppose, for the sake of argument, the relationship between KAKARU and V-KAKARU is conceptually arbitrary. Then why would we encounter a highly similar relationship in a drastically different language? It would be quite a coincidence, to say the least. Consequently, it seems worthwhile to explore the possibility of conceptual links between the CONTACT schema and the notions of *directedness* and *inchoative aspect*. In the following, I will (1) discuss the preposition *an* in respect to the CONTACT schema, (2) compare V-KAKARU and *an-V* in respect to CONTACT and directedness, and (3) compare V-KAKARU and *an-V* in respect to CONTACT and inchoative aspect.

### 9.2.1. The German Preposition *an* and the CONTACT Schema

As Smith (1987: 94) notes in his study of German 2-way prepositions (i.e. prepositions which occur with both dative and accusative case), *an* “prototypically profiles a relation between a TR and a vertical LM in which the TR makes contact with the surface of the LM itself.” He illustrates this with the following pair of sentences:

(75)      Das Bild hängt an der (DAT) Wand.  
 The picture hangs on the wall.

(76)      Hans hängt das Bild an die (ACC) Wand.  
 Hans hangs the picture on(to) the wall.

(Smith 1987: 95)

There has been some debate in the literature regarding the importance of CONTACT for the meaning of *an*. While some (e.g. Brinkmann 1962; Saile 1984) argue that *an* entails some form of CONTACT, others reject this view maintaining that CONTACT is implied by the verb rather than the preposition itself (Li 1994: 76) or that “ ‘contact’ and ‘non-contact readings’ [...] are due to size relationships, edge properties, and similar features of both relatum and theme” (Nüse 1999: 16). First of all, it is true that neither CONTACT nor a vertical LM are necessary features of *an*. This is illustrated by the examples below:

(77) Anna wartet an der Haltestelle.  
Anna waits at the bus stop.

(78) Das Haus steht am (an dem) See.  
The house stands by the sea.

My stance on the issue, however, is not that *an* necessarily entails CONTACT but rather – following Smith (1987) – that *an* is prototypically associated with CONTACT. This position is compatible with the possibility that the issue of CONTACT vs non-CONTACT depends on factors such as the choice of verb and/or the configurational properties of TR and LM. For an encyclopedic view of meaning this is of little relevance. If *an* frequently profiles CONTACT relations, then CONTACT will become conventionally associated with *an*. Furthermore, CONTACT is present in those cases where *an* profiles the kinds of relations that are most deeply entrenched in our everyday experience. I.e., *an*-relations that involve physical CONTACT between mundane entities from the domain of daily life are arguably the most basic in terms of cognitive entrenchment:

(79) Der Zettel am (an dem) Kühlschrank  
The note on the fridge

(80) Der Ring am (an dem) Finger  
The ring on the finger

(81) Der Knopf am (an dem) Mantel  
The button on the coat

### 9.2.2. CONTACT and Directedness: The DO TOWARDS Sense of *an-V* and *V-KAKARU*

One of the senses of the German particle verb construction *an-V* can be characterized as “directed activity”. According to Fleischer and Barz (2012: 402), “[*a/n-* indicates that the action denoted by the simplex verb is directed towards a person or thing.” They (2012: 402) further observe that these simplex verbs characteristically belong to semantic

fields such as *seeing* and *speaking*, *motion*, *measuring* and *targeting*, as well as *touching*, *attaching*, and *resistance*. Some examples are:

- (82) Hans sieht Helga an. (ansehen)  
Hans looks at Helga.
- (83) Helga lächelt Hans an. (anlächeln)  
Helga smiles at Hans.
- (84) Der Hund springt den Jungen an. (anspringen)  
The dog jumps at the boy.
- (85) Die Yacht segelt den Hafen an. (ansegeln)  
The yacht sails towards the harbor.
- (86) Der Jäger visiert den Hirsch an. (anvisieren)  
The hunter takes aim at the stag.
- (87) Klara kämpft gegen die Langeweile an. (ankämpfen)  
Klara fights against boredom.

So is there a conceptual link between (79)-(81) and (82)-(87) – between CONTACT and directedness? For illustrative purposes, I suggest that we consider the notion of a *search domain*. The concept was originally introduced by Hawkins (1981) and subsequently adopted into Langacker's framework of Cognitive Grammar. In Langackerian terms, "[t]he search domain (sd) of a locative predication (LOC) is defined as the region to which it confines the trajector" (Langacker 1987: 286). Based on the notion of search domain, Smith (1987: 91) postulates the following "configurationally-based definitions for DAT and ACC in the 2-way prepositional realm."

DAT: the TR of the preposition is confined throughout the process to a set of points satisfying the locative specification of the preposition (i.e. the SD of the preposition). In this respect, the situation is described as unchanging.

ACC: the TR of the preposition is NOT always confined to the SD of the preposition, but enters the SD at some point along a path. The situation involves change of some type with respect to the locative configuration.

(Smith 1987: 92)

By way of illustration consider the sentences with *auf* and *in* below:

- (88a) Die Kinder springen auf die Parkbank. (ACC)  
The children jump on(to) the bench.
- (88b) Die Kinder sind auf der Parkbank. (DAT)  
The children are on the bench.
- (88c) Die Kinder springen auf der Parkbank. (DAT)  
The children are jumping (up and down) on the bench.
- (89a) Die Kinder rennen in den Laden. (ACC)

The children run into the store.

(89b) Die Kinder sind im Laden. (DAT)  
The children are in the store.

(89c) Die Kinder rennen im (in dem) Laden. (DAT)  
The children run (around) inside the store.

The dative versions confine the TR – whether stationary (b) or in motion (c) – to the search domain of the LM, whereas the accusative versions involve motion of the TR into the LM’s search domain (Smith 1987: 93). So while the accusative versions “involve goal-oriented movement”, the DAT versions do not (Smith 1992: 391). Of course, this is not the whole story as far as German 2-way prepositions are concerned. Smith notes that there are many instances where accusative case does not entail spatial motion, but rather some kind of abstract change on part of the TR:

(90) Die Tablette löst sich in das Wasser auf.  
The tablet dissolves into the water.

(91) Er hat ein Zitat in den Text eingefügt.  
He put a quote into the text.

(from Smith 1995: 312, 314)

He (e.g. Smith 1995: 319f.) therefore argues in favor of a more schematic *change vs no change* distinction which would subsume the *motion vs location* distinction, while accounting for these more abstract cases as well.<sup>9</sup> For our purposes though, it is important to emphasize, firstly, that the *goal oriented spatial motion* sense is the categorial prototype for accusative case in German and, secondly, that instances which involve change still exploit the motion concept via the EVENT STRUCTURE METAPHOR, e.g. STATES ARE LOCATIONS, CHANGES ARE MOVEMENTS, etc. (Lakoff 2006: 204). In fact, Smith (1992: 387) holds that “[German] ACC is motivated whenever a grammatical construction [...] evokes an aspect of the path-goal schema.”

Having discussed German 2-way prepositions in terms of *confinement to vs movement into* a LM’s search domain, we can now return to the specific case of *an*. As I have argued above, the search domain of *an* prototypically encompasses the external boundaries of the prepositional object (see also Leys 1989: 101). Again, consider the DAT/ACC pair from before:

(75) Das Bild hängt an der (DAT) Wand.

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<sup>9</sup> In a similar vein, Leys (1989) argues for an account in terms of an incipient (ACC) vs an existing (DAT) relationship.



The picture hangs on the wall.

- (76) Hans hängt das Bild an die (ACC) Wand.  
Hans hangs the picture on(to) the wall.

In (75) the TR (*das Bild*) is at all times confined to the search domain of the LM. In (76) the TR starts out outside the LM's search domain, then moves along a PATH towards it, and finally comes to rest within the search domain. Where (76) construes the LM as a GOAL, (75) construes it as a PLACE. Furthermore, since (75) is easily interpreted as the *result* of (76), the two configurations are closely interconnected by experiential correlation. In this way, a search domain analysis of *an* with dative vs *an* with accusative reveals a conceptual link between CONTACT and directedness.

If we extend our scope from concrete spatial to *fictive motion* (Talmy 2003a: 103ff.), we can account for directional *an-V* in analogous fashion. In other words, (82)-(87) are all instances where an entity moves into the search domain specified by the preposition *an* – either via self-propelled or via caused motion. (82) and (83) can be understood as involving caused motion of reified sense data (e.g. a gaze or a smile) along a PATH that terminates upon CONTACT with the LM.<sup>10</sup> (84) and (85) straightforwardly involve self-propelled spatial motion into the LM's search domain. (86) traces the “targeting path” (Talmy 2003a: 109f.) of the bullet until CONTACT with the stag is established. And (87) involves the TR's psychological motion towards an abstract antagonist. I.e., prepositional *an* with ACC and directional *an-V* share the same image schematic topology.

At this point it should come as no surprise that the same analysis serves to account for the relation between KAKARU and directional *-kakarū/-kakeru*. Consider the following pairs of sentences in light of the above discussion.

- (92a) *Kôto-ga kabe-ni kakat-te iru.*  
Coat-NOM wall-DAT KAKARU-RES ‘The coat is hanging on the wall.’

- (92b) *Tarô-ga kabe-ni kôto-wo kake-ta.*  
Tarô-NOM wall-DAT coat-ACC KAKERU-PAST ‘Tarô hung the coat on(to) the wall.’

- (93a) *Sakana-ga hari-ni kakat-te iru.*  
Fish-NOM hook-DAT KAKARU-RES ‘The fish is caught on the hook.’

- (93b) *Sakana-ga hari-ni kakat-ta.*  
Fish-NOM hook-DAT KAKARU-PAST ‘The fish caught the hook.’

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<sup>10</sup> See also Felfe (2012: 155), who points to the conceptual similarity of *Er lächelt sie an* (He smiles at her) and *Sein Lächeln gelangt an sie* (His smile reaches her).

Since KAKARU prototypically involves CONTACT between TR and LM, we can assume that KAKARU and *an* specify roughly the same search domain, i.e. the external boundaries of the LM. Now, comparing the (a) and (b) versions, it is plainly evident that in terms of TR-LM arrangement *kakat-te iru* (see schema C) corresponds to *an* with dative, while *kakeru* and *kakaru* (see schemas A and B) correspond to *an* with accusative:

KAKARU	<i>an</i>	image schematic topology
<i>kakat-te iru</i>	<i>an</i> w/ DAT	confinement of TR to SD of LM
<i>kakaru</i>	<i>an</i> w/ ACC (intransitive)	(self-propelled) motion of TR into SD of LM
<i>kakeru</i>	<i>an</i> w/ ACC (transitive)	(caused) motion of TR into SD of LM

Consequently the relation between simplex *kakaru/kakeru* and directional *V-kakaru/V-kakeru* can be accounted for in analogy to the relation between *an* with accusative and directional *an-V*:

<i>an</i> w/ ACC	→	directional <i>an-V</i>	} motion of TR into SD of LM
<i>kakaru/kakeru</i>	→	directional <i>V-kakaru/V-kakeru</i>	

With this, we can straightforwardly account for most of the senses listed by Himeno (1979):

- (i1) *Ha-ga atama-ni chiri-kakat-ta.*  
 Leaf-NOM head-DAT fall-KAKARU-PAST  
 'The leaf landed on the head.'
- (i2) *Tarô-ga kabe-ni yori-kakat-ta.*  
 Tarô-NOM wall-DAT move towards-KAKARU-PAST 'Tarô leaned against the wall.'
- Hanako-ga kabe-ni ita-wo tate-kake-ta.*  
 Hanako-NOM wall-DAT board-ACC put-KAKERU-PAST  
 'Hanako put the board against the wall.'
- (i3) *Inu-ga Tarô-ni osoi-kakat-ta.*  
 Dog-NOM Tarô-DAT attack-KAKARU-PAST 'The dog pounced at Tarô.'
- Tarô-ga Jirô-ni tsuba-wo haki-kake-ta.*  
 Tarô-NOM Jirô-DAT spit-ACC spit-KAKERU-PAST 'Tarô spat at Jirô.'
- (i4) *Hanako-ga Jirô-ni warai-kake-ta.*  
 Hanako-NOM Jirô-DAT smile-KAKERU-PAST 'Hanako smiled at Jirô.'
- (i6) *Inu-ga neko-wo oi-kake-ta.*  
 Dog-NOM cat-ACC chase-KAKERU-PAST 'The dog chased after the cat.'

It should be obvious how all of the above examples involve the TR's movement into the search domain specified by KAKARU – especially in light of our previous discussion of (82)-(87). Analogous to the case of directional *an-V*, this limits the choice of V1 to semantic fields which allow for spatial or fictive motion.<sup>11</sup>

However, we might ask why some verbs that normally take a direct object (marked with *wo*) mark the corresponding nominal with *ni* instead when appearing in tandem with *-kakarū*. As Himeno notes, verbs with *assault*-like meanings are particularly prone to this shift:

(94a) *Tarô-ga Jirô-wo osot-ta.*  
 Tarô-NOM Jirô-ACC attack-PAST  
 'Tarô attacked Jirô.'

(94b) *Tarô-ga Jirô-ni osoi-kakat-ta.*  
 Tarô-NOM Jirô-DAT attack-KAKARU-PAST  
 'Tarô darted at Jirô.'

(95a) *Tarô-ga Jirô-wo nagut-ta.*  
 Tarô-NOM Jirô-ACC hit-PAST  
 'Tarô hit Jirô.'

(95b) *Tarô-ga Jirô-ni naguri-kakat-ta.*  
 Tarô-NOM Jirô-ACC hit-KAKARU-PAST  
 'Tarô took a swing at Jirô.'

She (1973: 43) suggests that such V1s are “influenced” by the directional meaning of *-kakarū*, so that the compound as a whole marks the argument in question with *ni* instead of *wo*. Building on this, we can further specify the issue in terms of alternative construal. While *ni* marks an argument as indirect object and GOAL<sup>12</sup>, *wo* marks it as direct object – a grammatical role prototypically associated with the notion *energy sink* (Langacker 1991: 292). The former is a characterization in terms of what we might call *thematic role* (such as *recipient*, *experiencer*, etc.), the latter a primarily force dynamic characterization in terms of the action chain model.<sup>13</sup> In other words, the choice of *ni* over *wo* by the above compounds raises the salience of the PATH-GOAL schema favored by *-kakarū* vis-a-vis the force dynamic construal favored by the V1s (*osou*, *naguru*).

<sup>11</sup> An example for the latter would be (i4), which corresponds to (83).

<sup>12</sup> At least in the allative sense relevant here. For a network analysis of *ni* see Kabata and Rice (1997).

<sup>13</sup> See Langacker's (1991: 304ff.) discussion of basic grammatical relations. While he suggests that subjects are prototypical action-chain heads and objects prototypical action-chain tails, Langacker seems to reject a primarily force dynamic characterization for indirect/oblique objects. Instead, he argues that indirect objects are best understood in terms of the *experiencer* role. Related notions such as *recipient* or *goal* may be viewed as semantic extensions of this thematic role.

There is a fairly simple reason for this. Many of the compounds with assault-like meanings do not strictly entail that the LM is actually subjected to the action denoted by the V1. Consider these sentence pairs:

- (96a) *Tarô-ga Jirô-ni naguri-kakat-ta ga, Jirô-ga kawashi-ta.*  
 Tarô-NOM Jirô-DAT hit-KAKARU-PAST CONJ Jirô-NOM dodge-PAST  
 ‘Tarô took a swing at Jirô, but Jirô dodged (the blow).’
- (96b) \**Tarô-ga Jirô-wo nagut-ta ga, Jirô-ga kawashi-ta.*  
 Tarô-NOM Jirô-ACC hit-PAST CONJ Jirô-NOM dodge-PAST  
 \*‘Tarô hit Jirô, but Jirô dodged (the blow).’
- (97a) *Samurai-ga teki-ni kiri-kakat-ta ga, teki-ga kawashi-ta.*  
 Samurai-NOM enemy-DAT slash-KAKARU-PAST CONJ enemy-NOM dodge-PAST  
 ‘The samurai lashed his sword at the enemy, but the enemy dodged away.’
- (97b) \**Samurai-ga teki-wo kit-ta ga, teki-ga kawashi-ta.*  
 Samurai-NOM enemy-ACC slash-PAST CONJ enemy-NOM dodge-PAST  
 \*‘The samurai cut (down) the enemy with his sword, but the enemy dodged away.’

In other words, in the (a) versions the effect of the simplex verb/V1 on the LM (*Jirô*, *Hanako*) can be felicitously cancelled. In comparison to the (b) versions this makes the LM a relatively poor energy sink, but a better candidate for the role of *experiencer* or *goal*.<sup>14</sup> This kind of alternative construal is not limited to Japanese. Similar constructions can be encountered in English and German:

- (98a) He stabbed at me, but I dodged the knife.
- (98b) \* He stabbed me, but I dodged the knife.
- (99a) Er hat *nach mir* (DAT) getreten, aber ich bin ausgewichen.  
 He kicked at me, but I dodged.
- (99b) \* Er hat *mich* (ACC) getreten, aber ich bin ausgewichen.  
 He kicked me, but I dodged.

Still, two senses from Himeno’s list may strike us as somewhat problematic:

- (i5) *Hito-ga kaijô-ni tsume-kake-ta.*  
 People-NOM assembly hall-DAT cram-KAKERU-PAST  
 ‘People crowded (into) the assembly hall.’
- (i7) *Hito-ga mise-no mae-wo tôri-kakat-ta.*  
 Person-NOM store-LK front-ACC pass-KAKARU-PAST  
 ‘Someone passed by in front of the store.’

<sup>14</sup> The fact that no physical CONTACT is entailed does not affect our search domain interpretation. Rather, such cases are best understood as involving a targeting path (Talmy 2003a: 109f.) along the lines of (86).

(i5) seems to not quite fit our interpretation, since it emphasises the interior region rather than the external boundaries of the LM. However, the issue is easily resolved once we realize that this particular example involves a metonymic shift triggered by the *gestalt* properties of the LM rather than by *tsume-kakeru* itself. Consider the following examples:

(100) *Hôdôjin-ga joyû-ni tsume-kake-ta.*  
 Press-NOM actress-DAT cram-KAKERU-PAST  
 ‘The press besieged the actress.’

(101) *Hitogomi-ga ie-no iriguchi-ni tsume-kake-ta.*  
 Crowd-NOM house-LK entrance-DAT cram-KAKERU-PAST  
 ‘The crowd besieged the entrance of the house.’

(102) *Hitogomi-ga ie-ni tsume-kake-ta.*  
 Crowd-NOM house-DAT cram-KAKERU-PAST.  
 ‘The crowd besieged the house.’ *Or:*  
 ‘The crowd poured into the house.’

(100) is completely consistent with an external boundary interpretation. This is true for (101) as well. Although, since *iriguchi* is the BOUNDARY of a CONTAINER, the interior region’s salience is heightened. (102), finally, is vague between a BOUNDARY and an INTERIOR reading. That is, *tsume-kakeru* will by default specify the LM’s BOUNDARY as its search domain, but a CONTAINER-like LM – which consists of both BOUNDARY and INTERIOR – can metonymically override the BOUNDARY reading in favor of an INTERIOR reading.

(i7) is somewhat idiosyncratic because *tôri-kakaru* takes a PATH argument (marked by *wo*) although *-kakaru/-kakeru* typically favors a GOAL argument. It seems plausible to suggest that the specific usage context of *tôri-kakaru* is responsible for this. According to Himeno (1979: 44) *tôri-kakaru* typically appears within the limited syntactic environment of certain temporal clauses expressing coincidence. Some examples are:

(103) *Heya-no mae-wo tôri-kakat-tara, hito-ga de-te ki-ta.*  
 Room-LK front-ACC pass-KAKARU-when person-NOM move out-TE come-PAST  
 ‘As I passed by (in front of) the room, someone came out.’

(104) *Kafeteria-wo tôri-kakaru to, shiriai-ga koe-wo kake-ta.*  
 Cafeteria-ACC pass-KAKARU as acquaintance-NOM voice-ACC KAKERU-PAST  
 ‘As I passed by (in front of) the cafeteria, an acquaintance greeted me.’

(105) *Kôsaten-wo tôri-kakat-ta tokoro, kôtsu jiko-ga oki-ta.*  
 Crossing-ACC pass-KAKARU-PAST moment traffic accident-NOM happen-PAST  
 ‘As I crossed the intersection, a traffic accident occurred.’

That is, we might characterize the majority of constructions containing *tôri-kakaru* informally as:

(106) As X passes by Y [LOC], X encounters Z [EVENT]

I therefore suggest that *tôri-kakaru* does in some abstract sense indeed have a GOAL argument, namely the event Z. On this interpretation, one might paraphrase (103) by something like:

(107) [*Heya-no mae*]<sub>LOC</sub>- *tôt-tara,* [*hito-ga de-te kuru no*]<sub>EVENT</sub>-*ni* *sashi-kakat-ta.*  
*wo*  
 [Room-LK front]- pass- [Person-NOM move out-TE come NMLZ]- come across-  
 ACC when DAT PAST  
 'As I passed by (in front of) the room I encountered the event of someone coming out.'

Of course, this is just a rough paraphrase and should in no way be understood as some sort of underlying structure. It merely serves to illustrate how *tôri-kakaru* might be understood as implying a GOAL although no GOAL argument is linguistically realized.<sup>15</sup> But what about our initial example?

(i7) *Hito-ga mise-no mae-wo tôri-kakat-ta.*  
 Person-NOM store-LK front-ACC pass-kakaru-PAST  
 'Someone passed by (in front of) the store.'

I would argue that even without the kind of clause linkage found in (103)-(105) such a sentence still tends to imply some sort of schematic event Z. This seems plausible, since expressions of coincidence from English and German invite the same interpretation. Compare the following sentence pairs:

(108a) I passed by a furniture store.

(108b) I *happend to* pass by a furniture store.

(109a) Ich bin an einem Möbelgeschäft vorbeigekommen.  
 (corresponds to 110a)

(109b) Ich bin *zufällig* an einem Möbelgeschäft vorbeigekommen.  
 (corresponds to 110b)

Here the (b) versions, more so than the (a) versions, seem to suggest some kind of unforeseen event or state of affairs. I.e., (108b) and (109b) may be followed up more

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<sup>15</sup> This is consistent with Chen's (2013) observation that important frame elements – e.g. “core arguments” of V1 or V2 – are not always overtly realized as arguments of the compound.

naturally by something like: “And guess what – they had that lamp you’ve been looking for!”<sup>16</sup>

### 9.2.3. CONTACT and Inchoativity: The START Sense of *an-V* and V-KAKARU

In this section I will make the case for a conceptual relation between CONTACT and inchoative aspect. While an account of directional V-KAKARU in terms of image schematic topology agrees with our pretheoretic intuitions, the same can hardly be said for inchoative V-KAKARU. In her study on the grammaticalization of inchoative *-kakarū/-kakeru*, Kikuta (2008: 118) remarks that directedness – but not inchoativity – can be traced back to the semantics of the simplex verb. Dismissing the possibility of any conceptual links between inchoative *-kakarū/-kakeru* and its simplex counterpart (2008: 157, 165), she proposes a strong version of an *invited inferencing* account based on the usage of the compound *kure-kakarū*:

According to the data examined, in the case of *V-kakarū*, the inchoative interpretation was made available in such collocations as *kure-kakarū*, which originally meant ‘the sun sets and the darkness hangs low.’ Since becoming dark takes a while after the sunset, this phrase implies some kind of indeterminacy as to the exact time denoted. In addition, the phrase apparently became idiomatic, referring to dusk in general, which is at the onset of night. The inchoative sense associated with *kure-kakarū* was gradually generalized and schematized until around 12-13C, when *V-kakarū* became a productive pattern of inchoatives applicable to other verbs than *kure*. The gradual, context-based process of the emergence of inchoative usage directly follows the prediction made by the usage-based approach to grammaticalization (Traugott & Dasher 2002; Hopper & Traugott 2003). [...] [T]he inchoative usage of *V-kake* started analogically after its intransitive counterpart *V-kakarū* had been sufficiently grammaticalized and recognized as inchoative construction. (Kikuta 2008: 164)

I agree that invited inferencing can play a substantial role in semantic change and consequently take no issue with the idea that certain items may feature more prominently than others in the early stages of grammaticalization. However, there are two points to consider here – one general and one more specific. First, an account like the above, which relies on pragmatic reanalysis alone, runs the risk of trivializing the role of image schematic topology and conceptual metaphor in meaning extension.<sup>17</sup> Secondly, Kikuta’s emphasis on *kure-kakarū* in this specific case begs the question in light of the linguistic evidence she provides. To back up her claim that frequency of use along with contextual reinterpretation of *kure-kakarū* led to the emergence of inchoative *V-kakarū*, she cites only a handful of occurrences from classical literature (2008: 141ff.).

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<sup>16</sup> However, it should be noted that this *unforseen event* reading is a cancellable conversational implicature (Grice 1975) rather than an entailment.

<sup>17</sup> For the role of metaphor in grammaticalization see e.g. Heine et al. (1991) and Sweetser (1991).

For a grass-roots level phenomenon like pragmatic strengthening this is a rather shaky empirical basis – leaving room for the possibility that other factors might have played a role after all. In the following I will argue, not from a historical but from a synchronic and cross-linguistic viewpoint, that the conceptual links dismissed by Kikuta do indeed exist and may well have provided the macro-structure for the meaning extension from simplex verb to inchoative marker (and in the case of German: from spatial preposition to inchoative marker).

I will begin by examining the inchoative sense of German *an-V*. Consider the following examples:

- (110) Ich habe das Buch angelesen. (anlesen)  
I have started reading the book.
- (111) Hans brät das Fleisch an. (anbraten)  
Hans cooks the meat gently. (i.e., until it is rare/medium-rare)
- (112) Lisa hat das Auto angezahlt. (anzahlen)  
Lisa has made a down payment on the car.
- (113) Wenn du die Bretter anbohrst, hast du es später leichter. (anbohren)  
If you partly drill/pre-drill the boards, you'll have it easier later.
- (114) Das Brot schimmelt an. (anschimmeln)  
The bread starts to get moldy.
- (115) Das Auto fuhr hupend an. (anfahen)  
Honking, the car started moving.

According to Felfe (2012: 156ff.), *an-V* in the above examples expresses transitive (110-113) or intransitive (114-115) partiality (Partialität), i.e. the beginning, weak intensity or weak after-effect of an event or action. In any case, the process denoted by the simplex verb has entered but not surpassed the initial stage, which is why I will refer to all such instances as “inchoative *an-V*”.<sup>18</sup>

Felfe (2012: 164) argues that this sense is related to directional *an-V* in two ways. Firstly, he notes that establishing physical contact with a concrete object often

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<sup>18</sup> Here the term “initial stage” pertains to an *ideal script* of going through all possible stages of a process from start to finish, regardless of whether these stages are actually realized or not. In this sense *anbraten* refers to the initial stage of *cooking something until it is well done* (German: *durchbraten*, lit. “cook through”) – not the initial stages of the *actual* process (which might end prematurely).



constitutes the initial stage of a process.<sup>19</sup> Secondly, and more crucially, he suggests a metaphorical link between matter and action in terms of the *surface* concept:

On the other hand, one may suppose that the expression of partiality constitutes a **metaphorical extension of the feature “surface”**. This is implied by the contact-meaning of “an” as opposed to “in”. Gently cooked meat [angebratenes Fleisch] is, in an imagistic sense, only superficially affected by the action which the verb expresses. The action has stopped at the surface without going *through* the meat.<sup>20</sup> (Felfe 2012: 164; bold type mine)

To illustrate how an action or event may be construed as having a “surface” consider the pervasive STATES ARE LOCATIONS metaphor: “We speak very naturally of ‘getting through a depression’ or having ‘sunk into a depression’ or getting ‘out of a depression’ or ‘going from one depression to the next’” (Lakoff and Turner 1989: 85). Such expressions make sense because the domains space and time share a common configurational structure (Talmy 2003a: 47ff). More specifically, one can “sink into” and “get out of” a depression because temporal boundedness can be understood in terms of spatial boundedness. If STATES ARE LOCATIONS, then the various stages of a process correspond to locations in one-dimensional space. Consider the following expressions and their image schematic representations (see figure 14):

- (116) I slept *through* the whole presentation.
- (117) I’m *in the middle* of a phone call.
- (118) *At the end* of the conversation we came to an agreement.
- (119) She came up with that *well into* the meeting.

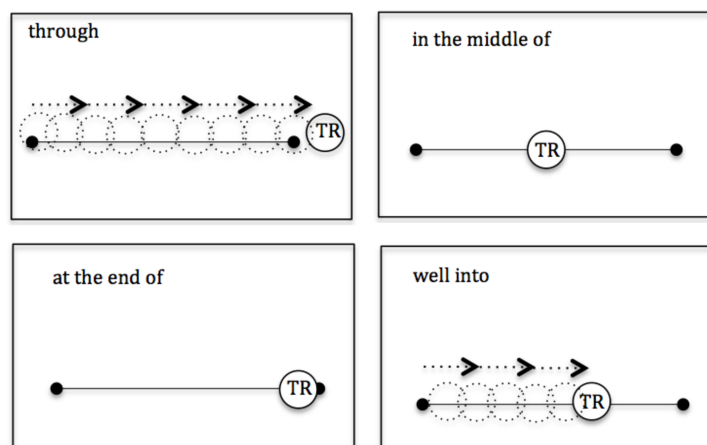


FIGURE 14

<sup>19</sup> As an example he cites the verb *anfangen* (begin) which originates from the High Old German verb for *touch/grab/grasp* (*anafáhan*). “[...] one who starts eating, puts one’s hand to the meal” (“[...] wer zu essen anfängt, faszt an die Speise”) he quotes a passage from Grimm’s dictionary (Felfe 2012: 159).

<sup>20</sup> The original passage reads: Andererseits darf angenommen werden, dass es sich beim Ausdruck von Partialität auch um Metaphorisierung des Merkmals „Oberfläche“ handelt. Dieses wird durch die Kontaktbedeutung von „an“ im Gegensatz zu „in“ impliziert. Angebratenes Fleisch ist im bildlichen Sinne von der Verbhandlung nur oberflächlich affiziert. Die Handlung brach an der Oberfläche ab und hat das Fleisch nicht *durchdrungen*.

It would be inappropriate to speak of a “surface” in one-dimensional space. We should rather say that, by default, processes have up to two external boundaries (depending on telicity) – a point of entry and a point of exit. As the name suggests, we come into CONTACT with the point of entry first, since we have no choice but to enter a process from the “front”. Now recall that the external boundaries of an object constitute the search domain of *an*. Viewed in this light the usage of *an* as inchoative marker is not surprising at all: The process (e.g. *braten*, cook) is reified as a one-dimensional object located in front of the TR. Consequently, the starting point of the process – which corresponds to the object’s frontal boundary – comprises the search domain of *an*. The mappings are:

(non-punctual) process	IS	one-dimensional object
starting point	→	frontal boundary
(duration	→	middle portion)
(end point	→	rearward boundary)
etc.		

On this view, inchoative *an-V* is a metaphorical extension of directional *an-V*. Both share the same image schematic topology, i.e. movement of the TR into the search domain specified by *an*. However, in case of inchoative *an-V* the LM of *an* is the process expressed by the simplex verb. To illustrate this, consider (111) from above:

- (111) Hans brät das Fleisch an. (anbraten)  
 Hans cooks the meat gently. (i.e., until it is rare/medium-rare)

The schematic LM of the prefix *an* is elaborated by the process *braten*. This is not to be confused with the LM of the compound *anbraten*, which is elaborated by the object nominal *das Fleisch*. The TR of both *an* and *anbraten* is elaborated by *Hans*. In summary, *an* in *anbraten* expresses that Hans establishes CONTACT with the “frontal boundary” of the process *braten*. Keep in mind that this schematic “boundary” is not a hard and fast line of demarcation. As search domain of *an* it merely serves as the relevant point of reference for entry into the process, and thus allows for superficial ingression.

But is the above account psychologically plausible? I would argue that it is, and that converging evidence comes in form of all kinds of charts that we naturally use to visualize planning and progress. Consider, for example, figure 15 which shows a popular type of project schedule known as “Gantt Chart”. The planned activities in this chart are visualized exactly as hypothesized above – as one-dimensional extents. Accordingly, the

chart equates the starting point of an activity with the frontal boundary of a one-dimensional extent.

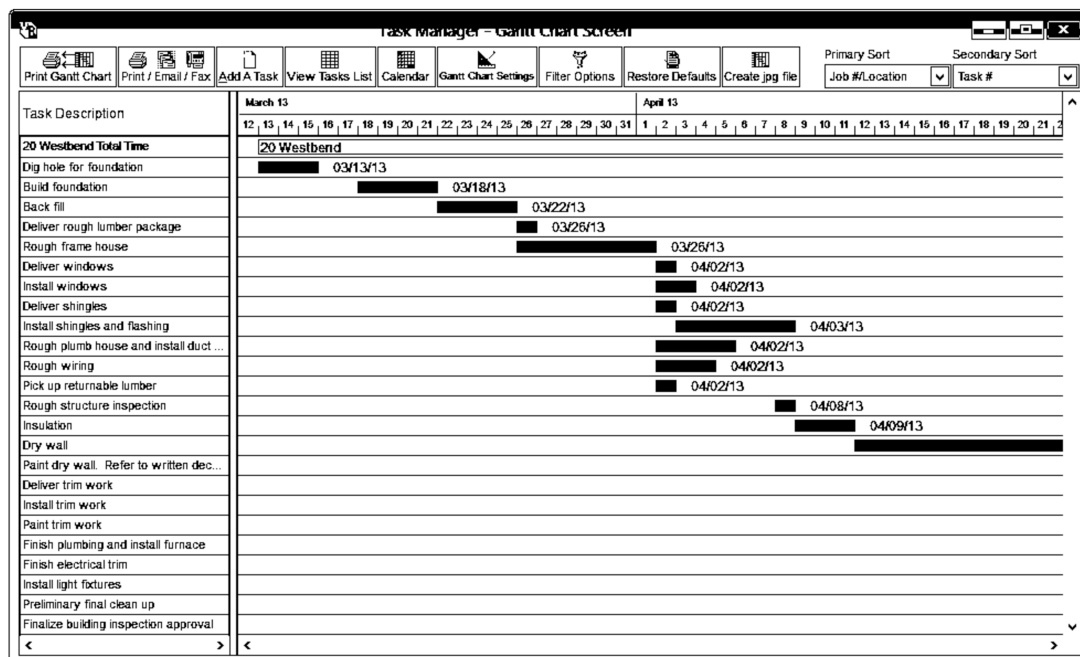


FIGURE 15: Gantt Chart<sup>21</sup>

Let us now take a look at inchoative V-KAKARU vis-a-vis inchoative *an-V*. As a rule of thumb, V-KAKARU typically indicates one of two things:

- The beginning of a durative process which is often prematurely aborted contrary to the agent's intentions (*shidôtai*, beginning)
- The point in time immediately before the realization of a (usually unfavorable) punctual event (*shôgentai*, emergence)

From this, inchoative *an-V* differs mainly in the following respects:

- The process expressed by the simplex may or may not be aborted
- Processes are aborted intentionally (if they are at all)
- No compatibility with punctual processes

To be sure, this is a very rough sketch, but since I am solely concerned with basic structural topology here, it fits the task at hand.<sup>22</sup> In fact, only the last point is relevant to image schematic structure.

<sup>21</sup> Adapted from: <https://virtualboss.net/screenshots/ganttchart.htm>, retrieved 25 Oct. 2016

<sup>22</sup> A more fine-grained discussion of the semantics of inchoative *an-V* from a construction grammar perspective can be found in Felfe (2012: 156ff.). See also Storch (1978: 146ff.), who reviews much of the German literature on the topic.

I will now demonstrate that everything which applies to the relation between directional and inchoative *an-V* applies to the relation between directional and inchoative V-KAKARU as well. Consider the case of *yomi-kakeru*:

- (120) *Tarô-ga hon-wo yomi-kake-ta tokoro-e denwa-ga nat-ta.*  
 Tarô-NOM book-ACC read-KAKERU-PAST moment-ALL phone call-NOM ring-PAST  
 ‘As Tarô began to read the book, the phone rang.’

For reasons I will elaborate on later (see 14.4.) the V2 *-kakeru* in inchoative *V-kakeru* is assumed to be intransitive. Recall from our previous discussion that KAKARU and *an* specify roughly the same search domain, i.e. the external boundaries of the LM. Recall further, that the image schematic topology of *kakaru* (and *an* with accusative) has been characterized as *movement of the TR into the SD of the LM*. In the above example the LM of *kaketa* is the process expressed by *yom(u)*, its TR is *Tarô* (again, applying the metaphorical view of durative processes as one-dimensional extents). Consequently, the interpretation of *kakeru* in (120) is analogous to that of *an* in *anbraten*: both indicate CONTACT with the frontal boundary of (and subsequently superficial ingression into) the process designated by the simplex verb. That is, in the above example *kaketa* indicates that the TR (*Tarô*) has come into CONTACT with (and moved slightly beyond) the frontal temporal boundary of *yom(u)* when the telephone rang.

But what of punctual processes expressed by verbs like *shinu*?

- (121) *Tarô-ga jiko-ni at-te, shini-kake-te i-ta.*  
 Tarô-NOM accident-DAT meet-TE die-KAKERU-RES-PAST  
 ‘Tarô got into an accident and was on the verge of dying.’

Here, too, a search domain analysis along with a metaphorical interpretation yields the correct results. If durative processes are one-dimensional extents then punctual processes are zero-dimensional objects. I.e., if *yomu* is conceived of as a line, *shinu* is conceived of as a point. Since there can be no superficial ingression into (or partial overlap with) zero-dimensional objects, the “start V-ing” interpretation is rendered impossible by image schematic topology. Instead – in keeping with the one-dimensional to zero-dimensional LM transformation – CONTACT with the frontal boundary of *shinu* can only correspond to immediate temporal adjacency of TR and process. Therefore, *kake-te i-ta* in (121) indicates that Tarô was confined to a state immediately adjacent to that of death.

In this way a metaphorical interpretation can easily accommodate both the *shidôtai* and the *shôgentai* readings via image schema transformation. Note, however, that examples like the following challenge the prototypical *shidôtai* = *durative* and *shôgentai* = *punctual* pairings (Himeno 1979: 52f.).

(122) *Kare-wa nanika-wo ii-kake-ta ga, futakoto-mikoto-de yame-ta.*  
 He-TOP something-ACC say-KAKERU-PAST CONJ, few words-INS quit-PAST  
 He was about to say something, but stopped after a few words.

(123) *Kare-wa nanika-wo ii-kake-ta ga, yahari kotoba-wo nonde-shimat-ta.*  
 He-TOP something-ACC say-KAKERU-PAST CONJ after words-ACC swallow-IRR-PAST  
 all ACC PAST  
 'He was about to say something, but (instead) kept silent after all.'

(124) *Hana-ga yuru-ku hiraki-kake-te iru.*  
 Flower-NOM slow-INF open-KAKERU-RES  
 'The flower has opened up slightly.'

Examples (122) and (123) show that durative processes are compatible with both *shidôtai* and *shôgentai* readings. According to Himeno (1979: 53) *shôgentai* focusses on the beginning of a process while *shidôtai* focusses on the beginning of the continuation of an interrupted process. The above search domain analysis suggests a different picture. Inchoative *-kakarū/-kakeru* specifies the vicinity of the V1's frontal boundary as its SD and is therefore slightly vague with respect to the exact location of the TR: If the TR is immediately in front of the boundary we get the *shôgentai* reading. If the TR is slightly past the boundary (superficial ingression) we end up with the *shidôtai* reading. This vagueness is usually resolved by the context, as in (122) and (123). Punctual processes, on the other hand, limit *V-kakeru* to the *shôgentai* reading, since they are incompatible with superficial ingression. However, as Himeno (1979: 53) notes, processes which are typically punctual can be construed as durative under certain circumstances. For example, the verb *hiraku* (open) is usually construed as a punctual event, but may be interpreted duratively when referring to slow, gradual processes as is the case in (124).

In conclusion, then, durative processes are compatible with both the *shidôtai* and the *shôgentai* reading (although the latter pairing is less common), while punctual processes force a *shôgentai* interpretation.<sup>23</sup> The possible pairings are illustrated in figure 16 below:

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<sup>23</sup> As for the question why inchoative *an-V* has no interpretation corresponding to the *shôgentai* reading: Since image schematic topology does not preclude such a reading, its absence is best regarded as a contingent phenomenon. I.e., not everything that is theoretically possible becomes a linguistic reality.

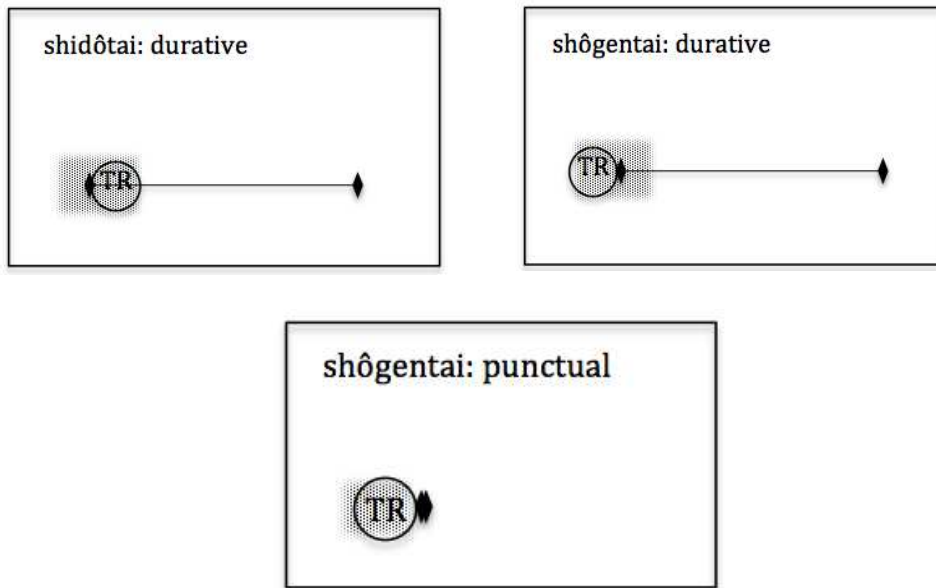


FIGURE 16: The hatched area indicates the search domain of the LM.

## 10. DERU and the EXIT Schema

The intransitive/transitive verb pair *deru/dasu* – at its most schematic level – is characterized by the following constructions.

(A)	X-ga X CAUSE	Y-wo Y MOVE OUT OF	Z-kara CONTAINER	dasu
(B)		Y-ga Y MOVE OUT OF	Z-kara/Z-wo CONTAINER	deru

That is, *deru* profiles a relation between some thing (the TR) and a CONTAINER (the LM), whereby the TR moves from the INTERIOR to the EXTERIOR of the LM. I shall refer to this image schematic configuration as EXIT. The transitive variant *dasu* introduces a third participant which causes the TR's movement.

I will use DERU (upper case) as an umbrella term for both (A) and (B).

### 10.1. The Senses of DERU

#### 10.1.1. Sense (I): Spatial EXIT (fig. 1)

As the following examples show, the semantics of DERU cover a wide variety of TR-LM configurations in the spatial domain. To illustrate this, I have chosen eight parameters in respect to which configurations might differ. These parameters are based on Talmy's work on configurational structure (e.g. Talmy 2006) and not meant to be exhaustive. Rather, the following is intended to give the reader an idea of the vast number of configurational possibilities, without spelling each one out individually. In fact, if we were to count each possible combination of parameter settings as a case of full-blown polysemy, we would end up with an intuitively questionable amount of senses. This is not to say, however, that spatial DERU exhibits no polysemy at all either. Since my main goal is to show how image schematic structure allows for meaning extension into abstract domains (and not to give an exhaustive inventory of senses for a given item), I will simply group all spatial configurations of DERU under the label "spatial EXIT" and remain agnostic in regards to the issue of polysemy vs vagueness (see 7.4.).

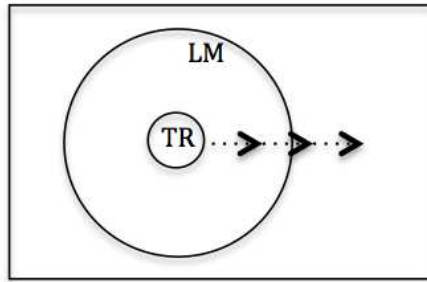


FIGURE 1: The schematic prototype for spatial exit

--Parameter 1: Dimensionality of the TR (and degree of enclosure)--

0D moving TR:

- (1) *Nezumi-ga ana-kara de-ta.*  
 Mouse-NOM hole-ABL DERU-PAST 'A mouse came out of the hole.'

1D static TR:

- (2) *Hana-kara ke-ga de-te iru.*  
 Nose-ABL hair-NOM DERU-RES 'A nose hair is sticking out.'

1D moving TR:

- (3) *Hari-ga ude-kara de-ta.*  
 Needle-NOM arm-ABL DERU-PAST 'The needle came out (was removed) from the arm.'

Note that (2) is available from (1) via the image schema transformation 0DMTR <-> 1DTR described by Lakoff (1990: 442), i.e. the construal of a one-dimensional TR by mentally connecting the positions occupied over time by a zero-dimensional moving TR.

- (4) She *went* to the top of the mountain. (0DMTR)  
 (5) The road *went* to the top of the mountain. (1DTR)

(Lakoff 1990: 442)

A third configuration involves a one-dimensional moving TR. Consider the following sentences, which are all supposed to feature a partially enclosed 1DTR:

- (6a) *Hana-kara ke-ga de-te iru.*  
 Nose-ABL hair-NOM DERU-RES 'A nose hair is sticking out.'
- (6b) *(??) Ude-kara hari-ga de-te iru.*  
 Arm-ABL needle-NOM DERU-RES (??) 'A needle is sticking out of the arm.'
- (6c) *Kabe-kara kugi-ga de-te iru.*  
 Wall-ABL nail-NOM DERU-RES 'A nail is sticking out of the wall.'

Here the questionable status of (6b) can only be understood in respect to the ideal default locations of the respective TRs. Nose hairs as well as nails are supposed to be



fully enclosed by their respective LMs (or almost fully in case of the nail). Therefore, partial enclosure will be construed as an instance of EXIT. A foreign object such as a needle, however, is not supposed to even partially enter the body. Therefore, in (6b) partial enclosure is construed as ENTRY, not as EXIT. In other words, whether partial enclosure of a 1DTR will be construed as EXIT or ENTRY seems to depend on the TR's ideal default location. As (6c) shows, depending on its function (and possibly other factors), a TR's ideal default location can be inside the LM, even though its initial location is completely outside the LM.

In summary: When partial enclosure is construed as EXIT, no movement is required and DERU takes a 1D static TR. By contrast, when partial enclosure is construed as ENTRY, then EXIT requires movement of the complete TR to the exterior of the LM – in which case DERU takes a 1D moving TR.

*--Parameter 2: Dimensionality of the LM--*

3DLM (volume):

- (7) *Tarô-ga heya-wo de-ta.*  
 Tarô-NOM room-ACC DERU-PAST 'Tarô left the room.'

2DLM (plane):

- (8) *Tarô-ga machi-wo de-ta.*  
 Tarô-NOM town-ACC DERU-PAST 'Tarô left the town.'

*--Parameter 3: Boundedness of the TR--*

Bounded TR:

- (09) *Entotsu-kara kômori-ga de-te ki-ta.*  
 chimney-ABL bat-NOM DERU-TE come-PAST 'A bat came out of the chimney.'

Unbounded TR:

- (10) *Entotsu-kara kemuri-ga de-ta.*  
 chimney-ABL smoke-NOM DERU-PAST 'Smoke came out of the chimney.'

*--Parameter 4: Nature of the LM's boundaries--*

Environmental boundaries:

- (11) *Shukudai-wo wasure-ta mono-wa kyôshitsu-wo de-nasai.*  
 homework-ACC forget-PAST persons-TOP classroom-ACC DERU-IMP  
 'Those who forgot their homework, leave the classroom!'

Mentally imposed boundaries:

- (12) *Shukudai-wo wasure-ta mono-wa mae-ni de-nasai.*  
 homework-ACC forget-PAST persons-TOP front-DAT DERU-IMP  
 'Those who forgot their homework, come to the front!'

--Parameter 5: LM's phase of matter--

Empty:

- (13) *Tarô-ga kissaten-wo de-ta.*  
Tarô-NOM cafe-ACC DERU-PAST 'Tarô left the cafe.'

Liquid:

- (14) *Mizu-no naka-kara awa-ga de-ta.*  
Water-LK interior-ABL bubbles-NOM DERU-PAST 'Bubbles surfaced from the water.'

Solid:

- (15) *Yubi-kara chi-ga de-ta.*  
Finger-ABL blood-NOM DERU-PAST 'Blood oozed from the finger.'

--Parameter 6: TR's phase of matter--

Empty:

- (16) *Taiya-kara kûki-ga de-ta.*  
Tire-ABL air-NOM DERU-PAST 'Air left the tire.'

Liquid:

- (17) *Jaguchi-kara mizu-ga de-ta.*  
faucet-ABL water-NOM DERU-PAST 'Water came out of the faucet.'

Solid:

- (18) *Hako-wo furu to hyakuen dama-ga de-te ki-ta.*  
Box-ACC shake when hundred yen coin-NOM DERU-TE come-PAST  
'When I shook the box, a hundred yen coin came out.'

--Parameter 7: Plexity of the LM--

Uniplex LM:

- (19) *Tarô-ga ie-kara de-ta.*  
Tarô-NOM house-ABL DERU-PAST 'Tarô left the house.'

Multiplex LM:

- (20) *Tarô-ga hito gomi-kara de-ta.*  
Tarô-NOM crowd-ABL DERU-PAST 'Tarô emerged from the crowd.'

--Parameter 8: Part-whole relation--

TR is not a part of the LM:

- (21) *Ushi-ga koya-kara de-ta.*  
Cow-NOM barn-ABL DERU-PAST 'The cow came out of the barn.'

TR is a sub-part of the LM:

- (22) *Ushi-ga mure-kara de-ta.*  
Cow-NOM herd-ABL DERU-PAST 'The cow emerged from the herd.'

### 10.1.2. Sense (II): Activity

- (23) *Tarô-ga niwa-ni de-ta.*  
Tarô-NOM garden-DAT DERU-PAST 'Tarô went to the garden.'
- (24) *Hanako-ga mise-ni de-ta.*  
Hanako-NOM store-DAT DERU-PAST 'Hanako went to the store.'
- (25) *Tarô-ga kaisha-ni de-ta.*  
Tarô-NOM office-DAT DERU-PAST 'Tarô went to the office.'
- (26) *Hanako-ga gakkô-ni de-ta.*  
Hanako-NOM school-DAT DERU-PAST 'Hanako went to school.'
- (27) *Tarô-ga shigoto-ni de-ta.*  
Tarô-NOM work-DAT DERU-PAST 'Tarô went to work.'

The activity sense is available via metonymic shift from spatial usages that profile a GOAL outside the LM. According to our encyclopedic knowledge of the world, places are usually associated with certain activities: Schools with learning and teaching, companies with working, and so on. Further, when we leave our homes in order to carry out some activity someplace else, we EXIT our private domain. Activities in the public domain are not just spatially outside our homes, but also likely to be of a more public nature. Compare, for example, knitting at home for leisure with knitting at a company for commercial purposes.

As the above sentences show, spatial EXIT and activity are best thought of as poles on a continuum with no clear cut line of demarcation. Take (23), for instance. Here the metonymic implicature *place --> activity at place* is rather weak and easily cancellable: I.e., (23) is consistent with an interpretation on which Tarô takes a leisurely stroll in his own backyard. In such a case, the change of location implies little activity, let alone public activity. In other words, (23) is a rather mediocre example for the activity sense. (24) is a better example, since *going to the store* is conventionally understood as involving either work (Hanako as employee scenario) or shopping (Hanako as shopper scenario), both of which are good examples for activities.

Generally, then, places that are not merely physical locations, but also instances of institutions, tend to invite the *place --> activity* reading most strongly. While companies and schools are represented by buildings that occupy physical locations, they are at the same time abstract purpose-bound entities in the social realm – and as such conventionally associated with prototypical activities such as learning, teaching or

working.<sup>1</sup> This is why in (25) and (26) the *activity* interpretation is harder to cancel than in (23). Finally, in (27), the activity lexically replaces the locus of action as GOAL argument. Although change of location is still implied, it is clearly backgrounded vis-a-vis the activity itself.

### 10.1.3. Sense (III): Incubation (fig. 2)

- (28) *Kono daigaku-kara yumei-na gakusha-ga takusan de-ta.*  
 This university-ABL famous-COP.ATT scholar-NOM many DERU-PAST  
 'This university brought forth many famous scholars.'
- (29) *Kono go-wa ratengo-kara de-te iru.*  
 This word-TOP Latin-ABL DERU-RES 'This word is derived from Latin.'
- (30) *Sono shûkan-wa ikyôto-no matsuri-kara de-te ki-ta.*  
 This custom-TOP heathen-LK festival-ABL DERU-TE come-PAST  
 'This custom developed out of a heathen festival.'

An important aspect of our experience with physical CONTAINERS is the knowledge that the INTERIOR is often qualitatively different from the EXTERIOR. Take the inside of a house, which is warm and sheltered from the elements. But then we step outside into the cold rain. Caves are dark, bodies of water are wet, the interior of refrigerators cold, and so forth. When more abstract entities are metaphorically construed as CONTAINERS, this difference in quality is frequently mapped onto the new domain. One such example is the case of social restriction and obligation (Lindner 1981: 104f.; Johnson 1990: 35). Entities like agreements and contracts are construed as bounded entities. Within their boundaries we are subject to social, legal, or moral forces. But once we *get out of* a contract or an agreement, we are free from these forces.

This notion of qualitative difference gives rise to the concept of *incubation*. If, over some period of time, something is subjected to and influenced by certain forces which obtain within a CONTAINER, then it will most likely emerge from the CONTAINER with characteristic features. Consider the case of baking: You put dough into an oven. The dough is subjected to the heat inside the oven. After a certain amount of time the dough emerges as bread. This concept of incubation is frequently applied to abstract CONTAINERS as well. Suppose someone grows up *in* a certain culture. That person will likely be shaped by that culture, even if they end up living in another culture *outside*

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<sup>1</sup> See also Radden (2000: 101): "The association between such man-designed spaces and the activities typically performed there is so tight that the mention of the place suffices to evoke the implicature of a special activity."

their own. Now consider (28). The implication here is that the academic forces within the institution shape students in such a way that they emerge as eminent scholars. The same reasoning applies to the remaining examples. A loanword is located outside the language it originated in, but still bears characteristics of that language (phonological, etc.), and so forth.

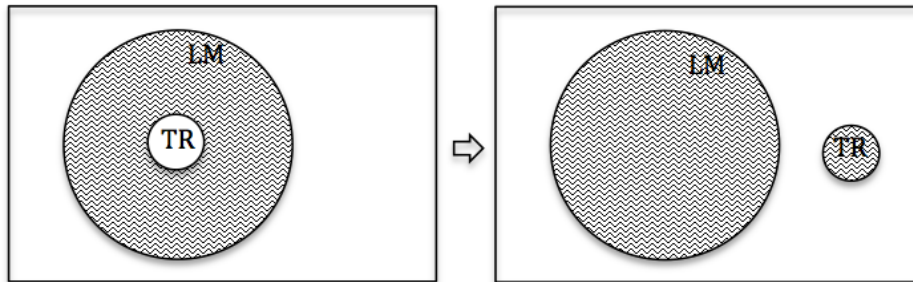


FIGURE 2

#### 10.1.4. Sense (IV): Transfer (fig. 3)

(31) *Kono ryô-wa asagohan to bangohan-ga deru.*  
 This dormitory-TOP breakfast and dinner-NOM DERU  
 'This dormitory offers breakfast and dinner.'

(32) *Kono sagyô-wa kyûryô-ga deru.*  
 This work-TOP payment-NOM DERU 'This is paid work.'

(33) *Shachô-kara kyoka-ga de-ta.*  
 CEO-ABL approval-NOM DERU-PAST 'The CEO gave his approval.'

(34) *Akutagawashô sakka-no hon-ga yo-ku deru.*  
 Akutagawa Prize authors-LK books-NOM good-INF DERU  
 'Books by Akutagawa Prize winners sell well.'

(35) *Gakuhi-wa kikin-ga dasu.*  
 Tuition-TOP foundation-NOM DASU 'Tuition is paid for by the foundation.'

In the above examples the TR is a concrete or abstract object undergoing change of ownership or control. As Lindner (1981: 105) notes, the LM in such cases "is construed as an abstract neighborhood around a person, a sort of sphere of influence, such that items owned are IN it and items transferred to someone else are OUT." This metaphorical construal of transfer in terms of the EXIT schema is hardly surprising, seeing how the concepts of ownership and control are experientially grounded in the sensation of spatial proximity. Prototypically, if A owns/controls B, then B is spatially

proximal to A. If B leaves the proximity of A and becomes proximal to some other individual C, then change of ownership/control of B from A to C is implied.<sup>2</sup>

In summary, what the scenes described in (31)-(35) have in common, is that the TR leaves the sphere of influence<sup>3</sup> of some entity and coincidentally enters the sphere of influence of another entity. Note that neither the old nor the new owner/controller of the TR needs to be mentioned explicitly. Often, as in (31), (32) and (34), both are only implied and remain schematic. In (31), for instance, the dormitory as an institution or the kitchen personnel concede ownership of/control over breakfast and dinner to the inhabitants, although none of these entities are linguistically realized.

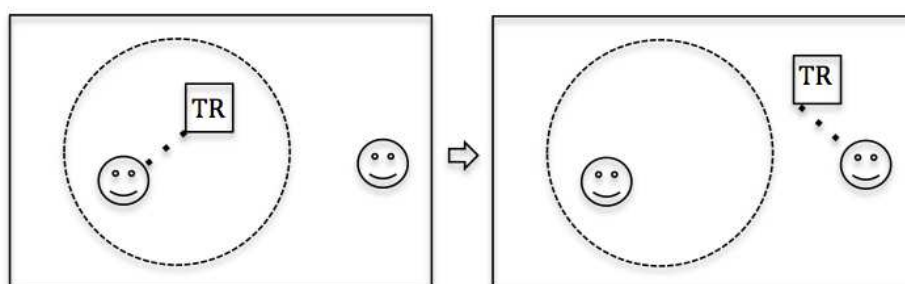


FIGURE 3

#### 10.1.5. Sense (V): Access (fig. 4)

(35) *Negi-no kaori-ga de-te ki-tara, shio-wo furi-ireru.*  
 Scallion-LK aroma-NOM DERU-TE come-when salt-ACC sprinkle  
 'Once the scallions become fragrant, add salt.'

(36) *Supiikâ-kara oto-ga de-nai.*  
 Speaker-ABL sound-NOM DERU-NEG 'No sound comes from the speaker.'

(37) *Kinô shiriai-ga terebi-ni de-ta.*  
 Yesterday acquaintance-NOM TV-DAT DERU-PAST  
 'Yesterday an acquaintance appeared on TV.'

(38) *Kono yashiki-ni yûrei-ga deru-rashii.*  
 This mansion-DAT ghosts-NOM DERU-EVI 'This mansion is said to be haunted by ghosts.'

(39) *Nakushi-ta saifu-ga de-te ki-ta.*  
 Lose-PAST wallet-NOM DERU-TE come-PAST '(My) lost wallet turned up.'

<sup>2</sup> See also Taylor (1996: 340), who suggests that proximity is an aspect of the "possession gestalt": "In order that the possessor can have easy access to the possessed, the possessed is typically located in the proximity of the possessor. In some cases the possessed may be a permanent, or at least regular accompaniment of the possessor." Note that ownership and control are specific *instances* of possession. For an overview of possession relations see e.g. Langacker (1991: 169).

<sup>3</sup> I have opted for Lindnder's (1981: 105) term "sphere of influence" over Langacker's (1991: 170) term "dominion" in this case to exclude possession relations where the possessor does neither own nor control the possessed (e.g. *The dog has fleas*). The *transfer* sense of DERU always entails ownership or control.

- (40) *Yo-ku kangae-tara kitto kotae-ga deru.*  
 Good-INF think-COND surely answer-NOM DERU  
 'If you think hard, the answer will surely come to you.'
- (41) *Rainen shingata pasokon-ga deru-rashii.*  
 Next year new model PC-NOM DERU-EVI  
 'Reportedly, a new PC model will release next year.'
- (42) *Mada honki-wo dashi-te i-nai dake da.*  
 Yet seriousness-ACC DASU-RES-NEG just COP 'I've just not gotten serious yet.'

Among our most fundamental experiences with CONTAINERS is the inaccessibility of their INTERIOR. One of the most prototypical concepts of inaccessibility, OCCLUSION, is acquired during early infancy: „Presumably infants are attracted to containment and occlusion events because the objects they are watching disappear from sight; people go out of the room, objects go into pans and cupboards. It may be these acts of disappearing that make containers the first objects we are sure that infants conceptualize (other than people and their eyes)“ (Mandler and Pagán Cánovas 2014: 6). Besides OCCLUSION, we experience acoustic and olfactoric inaccessibility, e.g. when a room holds in noises or smells. In other words, sensory inaccessibility is an essential aspect of our knowledge concerning CONTAINERS. Further, since knowledge is ultimately grounded in perception, sensory inaccessibility entails epistemic inaccessibility. (We understand metaphors such as KNOWING IS SEEING [*I see your point, He showed me the truth, etc.*] precisely because of this correlation between perception and knowledge.<sup>4</sup>)

Based on our experience with physical CONTAINERS, it makes sense, then, to metaphorically construe inaccessibility in terms of CONTAINMENT and – by image schematic entailment – the change to accessibility in terms of EXIT. The image schematic topology of the metaphor equates inaccessibility with being located inside and accessibility with being located outside of a CONTAINER. This explains cases like (39): Here, DERU indicates that the wallet, while remaining lost, was perceptually inaccessible to its owner – a state that changed by its being found. Likewise, the TRs in (40) and (41) become epistemically and economically accessible, respectively. Also note that sometimes various kinds of accessibility are conflated. Someone who appears on television can be seen and heard. A new computer becomes available for sale and use, etc. Finally, as (42) perhaps shows best, TRs exist as unrealized “potentials” (Lindner 1981: 109) for as long as they are located inside the CONTAINER.

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<sup>4</sup> See also Sweetser's (1991: 32ff.) study of English and Indo-European sense-perception verbs.

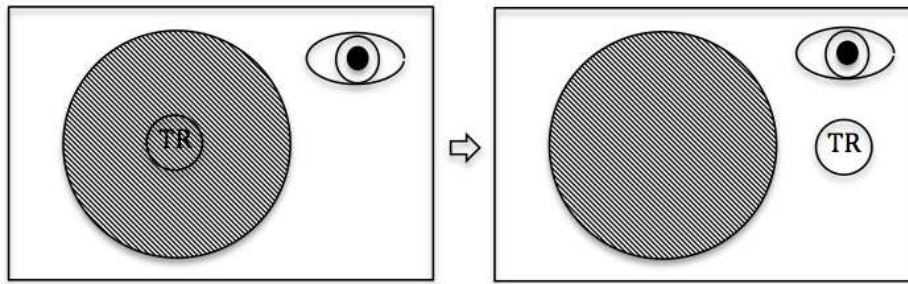


FIGURE 4

### 10.1.6. Sense (VI): Excess (fig. 5)

- (43) *Hiyô-wa sanmanen-wo de-nai.*  
 Expenses-TOP 30.000 yen deru-NEG 'The expenses don't exceed 30.000 yen.'
- (44) *Tarô-no ryôri-wa shirôto-no iki-wo de-te iru.*  
 Tarô-LK cooking-TOP amateur-LK level-ACC deru-RES  
 'Tarô's cooking is past the amateur level.'
- (45) *Hanako-wa rokujussai-wo de-te iru.*  
 Hanako-TOP sixty years-ACC deru-RES 'Hanako is over sixty.'

If STATES ARE LOCATIONS<sup>5</sup> and CONTAINERS (by their nature) are bounded regions, then normativity can be construed as a CONTAINER (or a SCALE, i.e. a 1D bounded region). In the construal of non-normativity there are two major image schematic variants: One with a uniplex TR and one with a mass TR. Consider the following examples from English:

- (46) His behavior lies outside the norm.  
 (47) Her skill exceeds the norm.

In (46) the TR *his behavior* is conceptualized as a zero-dimensional object (a point) which is located outside the boundaries of the LM *the norm*. Thus, there is no overlap at all between TR and LM. In contrast, the mass TR in (47) "spills across" the boundaries of a scalar LM. That is, the TR both occupies and exceeds the interior of the LM. It is this schema of EXCESS which is at work in (43)-(45). For example, in (45) Hanako's age is understood to occupy all locations on the age scale up to sixty, plus some amount exceeding the scale. Note that the EXCESS schema (an instance of EXIT) is firmly

<sup>5</sup> Recall our discussion of the event structure metaphor under 4.1.



grounded in our experience with the physical world, e.g. overflowing or bursting CONTAINERS, linear objects exceeding other objects in height or length, etc.<sup>6</sup>

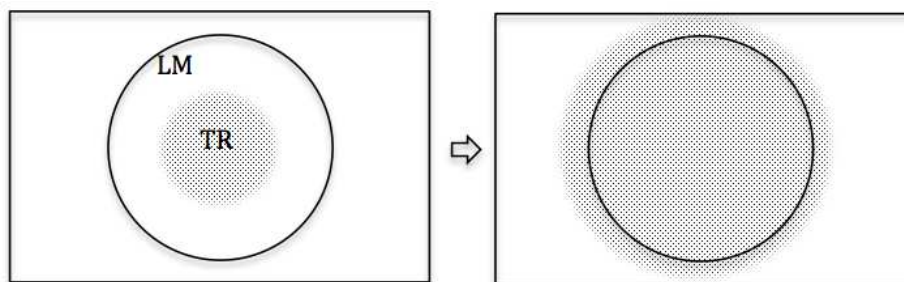


FIGURE 5

### 10.1.7 Relations Between Senses and Categorical Fringe Cases

From the above analysis it is plain that several examples fall somewhere “in between senses”. Since the senses themselves are related systematically, this is to be expected. Consider the following sentence:

- (48) *Senshu-ga shiai-ni de-ta.*  
 Athlete-NOM game-DAT DERU-PAST ‘The athlete appeared in (took part in) the game.’

This can be categorized as either *activity* or *access* or both. The reason is that *shiai* is a cluster model in Lakoff’s sense (1990: 74ff.), which means that the word can be understood in reference to more than one background frame or *idealized cognitive model* (ICM). In particular, what concerns us here is the conflation of the following two ICMs:

The work/profession ICM: Partaking in sporting contests is the athlete’s job. It is an activity which earns him money and a social obligation.

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<sup>6</sup> At this point it is interesting to note in passing that the semantics of DERU as outlined above show considerable overlap with the semantics of “out” in English verb particle constructions. In fact, many of the senses we have encountered above are familiar from Lindner’s (1981) seminal analysis of “out”. These include: LM as *abstract neighborhood of possession*, LM as *privacy*, and change from *hiddenness to accessibility*. DERU and “out” are far from synonymous, however, and differ in important respects. For example, while the particle “out” can indicate change from inaccessibility to accessibility (*find out the truth*) as well as change from accessibility to inaccessibility (*rule out a possibility*), DERU is unidirectional. While DERU can indicate scalar excess (i.e. exceed a certain amount of quantity), English uses *over* rather than *out* in such cases, etc.

Of course, overlap is to be expected considering the universal nature of the embodied schema EXIT. But at the same time conceptualization is flexible and we are, in the vast majority of cases, not forced to construe a certain concept in terms of one and only one corresponding schema.

The spectator sports ICM: In Japanese culture sporting events are a popular form of public entertainment. That is, baseball and soccer are “spectator sports”.

What to make of this? Note that the above ICMs are (a) intrinsically related while (b) presupposing different viewing arrangements. In the discussion of the *activity* sense I have already mentioned that activity implies some degree of publicness. Now, publicness in turn implies accessibility. To engage in a sporting contest, an athlete moves out of the private domain and thereby becomes publicly accessible to a spectator crowd. But note that “moving out of the private domain” is tied to the athlete’s internal perspective, whereas “becoming publicly accessible” is tied to the external perspective of the spectator. I.e., there is a cline from activity to publicness to accessibility, accompanied by a shift from internal to external perspective. Consequently, whether we categorize a particular use of DERU (such as 48) as *activity* or *access* will often depend on whether we adopt an internal or an external viewing arrangement where human activity is concerned.<sup>7</sup> In fact, if one were to employ a “god’s eye view” the *activity* sense could be subsumed under the *access* sense, since human activity usually implies (some degree of) public access, whereas not all kinds of access imply human activity. However, since the *access* sense presupposes an external viewing arrangement, instances of *activity* which employ an internal viewing arrangement should not be subsumed under *access*.

Much of the same could be reiterated for the *transfer* sense. If we define transfer as change of ownership/control and accept Taylor’s view that possession typically implies “easy access” (1996: 340), then it follows that transfer implies access. Recall the following examples from above:

(31) *Kono ryô-wa asagohan to bangohan-ga deru.*  
This dormitory breakfast and dinner-NOM DERU  
‘This dormitory offers breakfast and dinner.’

(34) *Akutagawashô sakka-no hon-ga yo-ku deru.*  
Akutagawa Prize authors-LK book-NOM good-INF DERU  
‘Books by Akutagawa Prize winners sell well.’

As these sentences show, change of ownership/control coincides with change from inaccessibility to accessibility from the perspective of the new owner/controller (and

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<sup>7</sup> Note that the grammatical “first person” is not necessarily an indicator of an internal viewing arrangement. As Dewell (1997: 24) observes, the utterer of the sentence *We look like a bunch of idiots sitting here* nevertheless adopts an external viewing arrangement.

loss of accessibility from the perspective of the former owner/controller). The nature of the TR determines what kind of access is involved: *eating* in case of meals, *reading* in case of books, and so forth. Again, note that (31) and (34) presuppose different perspectives. (31) employs an external viewing arrangement, while (34) employs an internal viewing arrangement (see fig. 6.1. and 6.2.) . Therefore, (31) can reasonably be thought of as an instance of both *transfer* and *access*. The internal viewing arrangement of (34), however, clashes with the external viewing arrangement required by the *access* sense – although, here too, access is certainly *implied* (if we switch perspectives).

Finally, *incubation* shows traces of *access* as well. Here, the TR is typically inaccessible from the exterior for as long as it remains in incubation.

In summary, then, three points can be made:

- With the exception of *excess*, all senses of DERU in the abstract domain are somehow linked to the concept of access.
- Perspective can have an impact on category structure, because some concepts presuppose a certain viewing arrangement.
- Change of viewing arrangement can be relevant to meaning extension.

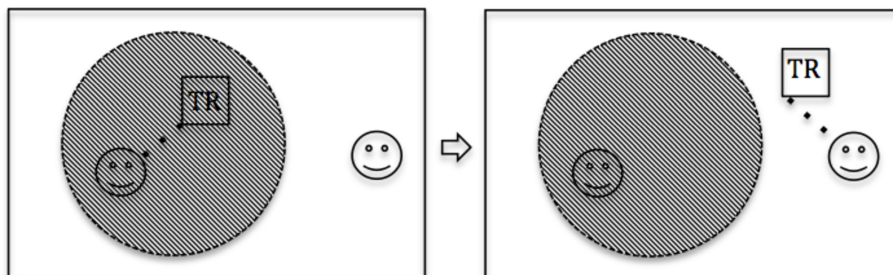


FIGURE 6.1.: external viewing arrangement

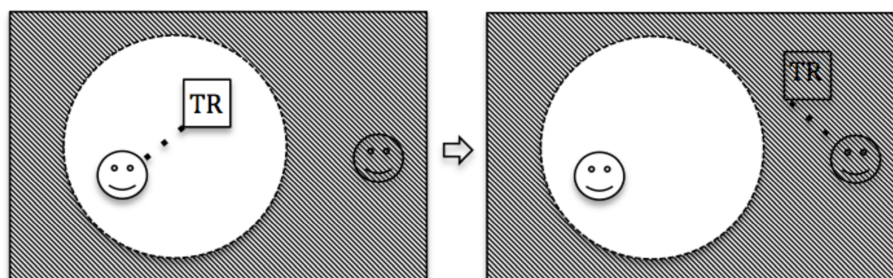


FIGURE 6.2.: internal viewing arrangement

#### 10.1.8. On the Choice of *kara* vs *wo*

The LM of *deru*, if overtly realized, is either marked by *kara* or by *wo*. In general, *kara* functions as a SOURCE-marker, *wo* as a PATH-marker:

- (49) *Tarô-ga Shinjuku-kara Shinagawa-made arui-ta.*  
 Tarô-NOM Shinjuku-ABL Shinagawa-ALL walk-PAST  
 ‘Tarô walked from Shinjuku to Shinagawa.’
- (50a) *Tarô-ga Shinjuku-wo arui-ta.*  
 Tarô-NOM Shinjuku-ACC walk-PAST ‘Tarô walked through (wandered about) Shinjuku.’
- (50b) *Tarô-ga chûô dôri-wo arui-ta.*  
 Tarô-NOM central street-ACC walk-PAST ‘Tarô walked down the central street.’

While (49) construes the LM as a zero-dimensional point of departure, (50) construes the LM as a planar (50a) or linear (50b) traversable extent.

In this section I will attempt to give an explanation of the principles governing the felicitous use of *kara* and *wo* in tandem with *deru*. Let us start with the observation that the particles cannot always be used interchangeably:

- (51a) *Kemuri-ga entotsu-kara de-ta.*  
 Smoke-NOM chimney-ABL DERU-PAST ‘Smoke came out of the chimney.’  
 ‘Smoke came out of the chimney.’
- (51b) (??) *Kemuri-ga entotsu-wo de-ta.*  
 Smoke-NOM chimney-ACC DERU-PAST
- (52a) *Nezumi-ga ana-kara de-ta.*  
 Mouse-NOM hole-ABL DERU-PAST ‘The mouse came out of the hole.’
- (52b) (??) *Nezumi-ga ana-wo de-ta.*  
 Mouse-NOM hole-ACC DERU-PAST.
- (53a) *Tarô-ga ie-kara de-ta.*  
 Tarô-NOM house-ABL DERU-PAST ‘Tarô left the house.’
- (53b) *Tarô-ga ie-wo de-ta.*  
 Tarô-NOM house-ACC DERU-PAST ‘Tarô left the house.’

Himeno (1977: 76) has suggested that *wo* requires the TR of *deru* to be animate. The questionable felicity of sentences such as (52b) and the successful substitution in (53b) seems to indicate that the TR need not only be animate but also human (or at least anthropomorphic). I will argue that indeed human TRs have the best compatibility with *wo*. However, this does not entail that animacy is the central issue here. Moreover, we should be able to give an account of the difference between (53a) and (53b). In summary, we must ask two questions:

- Why are humans the best candidates for TR of *deru* in tandem with *wo*?
- In cases where [*N-kara deru*] and [*N-wo deru*] can be used interchangeably, what is the semantic difference?

Again, consider the difference between external and internal viewing arrangement discussed in the previous section. If we assume – based on our experiences with houses, caves, boxes, etc. – that non-transparency is a prototypical feature of CONTAINERS, then the change from external to internal viewpoint (and vice versa) is quite drastic. Imagine a house from an external viewpoint. As Dewell (1997: 24) puts it, the house will be “like a black box” hiding everything inside it. By contrast, imagine an interior path going through it:

A LM such as a house contains a heterogenous collection of distinct objects or parts, including structurally inherent rooms and hallways and doors, a variety of pieces of furniture, inhabitants, etc. A path through such as space [...] is naturally defined as a continuous progression from one such visible component to another, for example from a door through a hallway past another door and disappearing at another door. (Dewell 1997: 26)

Apply this to (53b). This sentence is most felicitously uttered by someone located *inside* the house at the time of Tarô’s leaving. As a comment from someone on the outside who saw Tarô emerging from, say, the front door into the streets (53b) would sound rather odd. In the case of (53a), the exact opposite applies.

In other words, *wo* in tandem with *deru* construes the LM as an internal PATH. In an *wo*-construal we trace the TR’s PATH through the interior of the CONTAINER. The tracing stops as the TR exits the CONTAINER and the world on the outside is beyond the scope of the conceptualizer’s view. A *kara*-construal, on the other hand, implies that the conceptualizer is located outside the CONTAINER. This is the “black box” perspective with no knowledge of the LM’s internal structure. Instead, all attention is focussed on the point of emergence, from which the TR will make its appearance. The difference in construal is illustrated in figure 7:

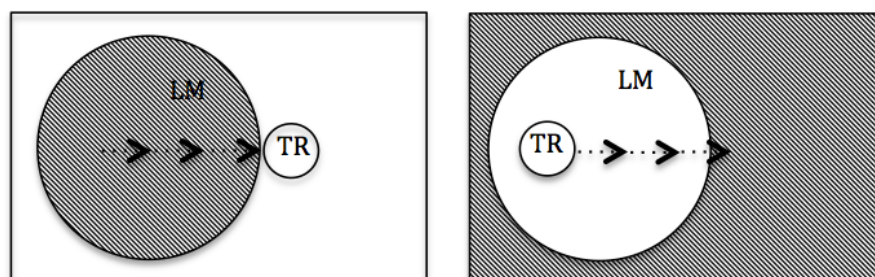


FIGURE 7: *kara*-construal (left) vs *wo*-construal (right)

The view that [N-*wo deru*] presupposes an internal viewing arrangement is also supported by the incompatibility of *wo* with the somewhat lexicalized variant *de-te kuru* ('come out'):

(54) *Tarô-ga ie-kara de-te ki-ta.*  
 Tarô-NOM house-ABL DERU-TE come-PAST 'Tarô emerged from the house.'

(55) (??) *Tarô-ga ie-wo de-te ki-ta.*  
 Tarô-NOM house-ACC DERU-TE come-PAST

The construction [*V-te kuru*] indicates a deictic path towards the conceptualizer. I.e., *de-te kuru* requires the TR to exit a CONTAINER and subsequently move towards the conceptualizer – which is impossible if the conceptualizer is located inside that CONTAINER.<sup>8</sup>

Note that a perspective-based explanation can account for the selection of *kara* vs *wo* in the abstract domain as well. Consider the following sentence pairs:

(56a) *Kono daigaku-kara yumei-na gakusha-ga takusan de-ta.*  
 This university-ABL famous-COP.ATT scholars-NOM many DERU-PAST  
 'This university brought forth many famous scholars.'

(56b) (??) *Kono daigaku-wo yumei-na gakusha-ga takusan de-ta.*  
 This university-ACC famous-COP.ATT scholars-NOM many DERU-PAST

(57a) *Tarô-ga kyonen daigaku-wo de-ta.*  
 Tarô-NOM last year university-ACC DERU-PAST  
 'Tarô graduated from university last year.'

(57b) (??) *Tarô-ga kyonen daigaku-kara de-ta.*  
 Tarô-NOM last year university-ABL DERU-PAST

(56a) emphasizes the quality (*famous*) of the TR and implies a link between this quality and some quality of the LM. It is suggested that the TR has quality F because it emerged from the LM, which has some quality G. It is this causal link – the LM as the SOURCE of and the TR as the bearer of famousness – which is emphasized here, not the process by which the TR acquired said quality. In other words, (56a) construes the LM as the SOURCE of some output (*famous scholars*), while backgrounding the interior PATH taken by the TR (i.e. how the scholars make their way through the institution). Since no such “causal frame” is evoked by (57a), the sentence is interpreted against a default

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<sup>8</sup> Granted, this is a slight oversimplification for illustrative purposes. To be sure, one can assume an internal perspective without actually being located inside a CONTAINER. The point is that one cannot at the same time assume both the external perspective presupposed by [*V-te kuru*] and the internal perspective presupposed by [*N-wo deru*]. Hence the infelicity of (55).

“graduation frame” which foregrounds the internal structure of the LM. For example, we know that graduation is the final component of an academic program which consists of ca. four years, with each year consisting of several semesters. The semesters, in turn, consist of courses. Courses require course work and exams for which credit points are awarded, etc. The default “graduation frame”, then, causes us to trace the students interior path through an academic program.

So far we have accounted for the difference between *kara* and *wo* in terms of external vs internal viewing arrangement. But why does the internal variant [*N-wo deru*] seem to favor a human TR? The answer is quite straightforward: An internal perspective typically requires a CONTAINER-internal conceptualizer – and conceptualizers are human. For a human conceptualizer and a non-human TR to be both located CONTAINER-internally is simply a very rare state of affairs.<sup>9</sup> The following examples illustrate this:

- (58) (??) *Kanjûsu-ga jidô hanbaiki-wo de-ta.*  
 Can of juice-NOM vending machine-ACC DERU-PAST  
 Intended meaning: ‘A can of juice came out of the vending machine.’
- (59) (??) *Kemuri-ga entotsu-wo de-ta.*  
 Smoke-NOM chimney-ACC DERU-PAST Intended meaning: ‘Smoke rose from the chimney.’
- (60) (??) *Nezumi-ga kabe-no ana-wo de-ta.*  
 Mouse-NOM wall-LK hole-ACC DERU-PAST  
 Intended meaning: ‘A mouse came out of the hole.’
- (61) (??) *Kuma-ga dôkutsu-wo de-ta.*  
 Bear-NOM cave-ACC DERU-PAST Intended meaning: ‘A bear came out of the cave.’
- (62) (??) *Namida-ga me-wo de-ta.*  
 Tears-NOM eyes-ACC DERU-PAST Intended meaning: ‘Tears came out of (his/her) eyes.’

The problem with all of these sentences is that it would be extremely odd for a human conceptualizer to have a CONTAINER-internal perspective. Humans are usually located outside of vending machines, chimneys, animal habitats, and so on. Of course, specialists

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<sup>9</sup> Note however, that this constellation is not impossible. For example, (61) might be felicitously uttered by a spelunker. Furthermore, a quick search on the internet brought up the following example:

*Kyôgaku-no kyû-byô!* Heya-wo deta inu-ga ikinari kaidan-wo ...  
 Nine seconds of astonishment! Dog leaves room and (dashes down) the stairs ...  
 (<http://petfilm.biz/?p=5760>, retrieved 22 Apr. 2015)

Since the keeping of pets constitutes one of the rare cases in which humans and animals share a habitat, usage of [*N-wo deru*] is unproblematic here.

may have an “internal perspective” as far as some of these CONTAINERS are concerned. But such highly atypical construal has little impact on the entrenchment of linguistic constructions in general usage.

## 10.2. The Senses of V-DERU

The semantics of V-DERU follow straightforwardly from the semantics of the simplex. I will briefly touch upon the corresponding senses of -DERU before discussing inchoative *-dasu* in some more detail. The question why the transitive variant *-dasu* is often attached to intransitive verbs will be addressed in a later chapter (see 14.4.).

### 10.2.1. Spatial V-DERU

- (63) *Chi-ga shatsu-kara nijimi-de-ta.*  
 Blood-NOM shirt-ABL ooze-DERU-PAST ‘Blood oozed from the shirt.’
- (64) *Me-kara Namida-ga kobore-de-ta.*  
 Eye-ABL Tears-NOM drop-DERU-PAST ‘Tears dropped from (his/her) eyes.’
- (65) *Tamago-ga su-kara korogari-de-ta.*  
 Egg-NOM nest-ABL roll-DERU-PAST ‘The egg rolled out of the nest.’
- (66) *Tarô-ga heya-wo tobi-de-ta.*  
 Tarô-NOM room-ACC dash-DERU-PAST ‘Tarô dashed out of the room.’

As Himeno (1977: 75) notes, -DERU can be attached to both path verbs (63 and 64) and motion verbs (65 and 66). While the former include the EXIT schema as part of their meaning, the latter express a path-neutral manner of motion. Therefore *-deru* in (63) and (64) is best understood as additional emphasis of the EXIT schema, whereas in (65) and (66) *-deru* serves as a kind of framing satellite.<sup>10</sup>

### 10.2.2. Activity

- (67) *Hanako-ga Tarô-ni shien-wo môshi-de-ta.*  
 Hanako-NOM Tarô-DAT support-ACC speak.HUM-DERU-PAST  
 ‘Hanako asked Tarô for support.’
- (68) *Jirô-ga kaisha-ni jishoku-wo negai-de-ta.*  
 Jirô-NOM company-DAT resignation-ACC wish-DERU-PAST.  
 ‘Jirô submitted his resignation to the company.’

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<sup>10</sup> According to Talmy (2003b: 221f.), languages tend to either express motion paths via the main verb or via a satellite (e.g. a particle such as *out* in *move out*), i.e. languages are either *verb-framed* or *satellite framed*. While he counts Japanese among the verb-framed kind, examples like the above serve as a reminder that the distinction is not absolute.



In sentences like the above the TR leaves the private domain for communicative purposes. Since the TR thereby makes itself accessible, it is a matter of perspective whether to categorize these compounds as instances of *activity* or *access* (see discussion above). As a rule of thumb, if the compound is primarily associated with an internal viewing arrangement, it should be categorized under *activity*.

### 10.2.3. Incubation

- (69) *Tarô-ga ii hôhô-wo kangae-dashi-ta.*  
 Tarô-NOM good method-ACC think-DASU-PAST ‘Tarô came up with a good method.’
- (70) *Kaihatsubu-ga shinseihin-wo tsukuri-dashi-ta.*  
 Development department-NOM new product-ACC create-DASU-PAST  
 ‘The development department created a new product.’

Note that the direct objects in these sentences are understood as having existed as unrealized potentials within the mental domain of the TR from which they are then “released unto the world”. These entities exist “inside the minds” of their creators for an incubation period before they emerge with characteristic features (e.g., Tarô’s idea will be shaped by Tarô’s way of thinking). Again, this usage type is conflated with the *access* sense.

### 10.2.4. Transfer

- (71) *Tarô-ga Hanako-ate-ni tegami-wo okuri-dashi-ta.*  
 Tarô-NOM Hanako-aim-DAT letter-ACC send-DASU-PAST  
 ‘Tarô sent a letter addressed to Hanako.’

Here *-dasu* can be understood as emphasizing the change of control/ownership encoded by the V1. There are hardly any instances of *transfer* apart from *okuri-dasu*.

### 10.2.5. Access

- (72) *Hanako-ga Tarô-wo kissaten-ni yobi-dashi-ta.*  
 Hanako-NOM Tarô-ACC cafe-DAT call-DASU-PAST ‘Hanako called Tarô to the cafe.’
- (73) *Keiji-ga hannin-no dôki-wo saguri-dashita.*  
 Detective-NOM criminal-LK motive-ACC search-DASU-PAST  
 ‘The detective sought out the criminal’s motive.’
- (74) *Tarô-ga tsuri-ni ik-ô to ii-dashi-ta.*  
 Tarô-NOM fishing-DAT go-VOL QT say-DASU-PAST ‘Tarô suggested to go fishing.’
- (75) *Akari-ga otoko-no kao-wo terashi-dashi-ta.*

Lamplight-NOM man-LK face-ACC illuminate-DASU-PAST  
 'The lamplight illuminated the man's face.'

- (76) *Hanako-ga kami-ni namae-wo kaki-dashi-ta.*  
 Hanako-NOM paper-DAT name-ACC write-DASU-PAST  
 'Hanako wrote her name on the paper.'

Among the abstract senses of V-DERU *access* is by far the most productive one. In terms of image schematic structure, everything that applies to the *access* sense of the simplex applies here as well. The *access* sense of *-dasu* is represented by the following constructional schema:

X- <i>ga</i>	Y- <i>wo/to</i>	V- <i>dasu</i>
X CAUSE	Y BECOME ACCESSIBLE	BY (X's) DOING V

As mentioned above, it is not uncommon for a lexical item to belong to more than one category. For example, (69) can be thought of as instantiating both *incubation* and *access*.

### 10.2.6 Inchoative V-*dasu* (fig. 8)

- (77) *Hanako-ga Tarô-no fukusô-wo mi-te, warai-dashi-ta.*  
 Hanako-NOM Tarô-LK clothes-ACC see-TE laugh-DASU-PAST  
 'Hanako saw Tarô's outfit and burst into laughter.'

- (78) *Tarô-ga shiken-no kekka-wo shit-ta totan, watto naki-dashi-ta.*  
 Tarô-NOM test-LK results-ACC learn-PAST moment suddenly cry-DASU-PAST  
 'The moment Tarô learned of his test results he burst into tears.'

- (79) *Enjin-no oto-ga nari, kuruma-ga ugoki-dashi-ta.*  
 Motor-LK sound-NOM make sound.CONJ car-NOM move-DASU-PAST  
 'The engine roared and the car started to move.'

- (80) *Kyû-ni ame-ga furi-dashi-ta.*  
 Suddenly rain-NOM fall-DASU-PAST 'Suddenly, it began to rain.'

In this section I will argue that inchoative V-*dasu* is an extension of the *access* sense. There are two main arguments to consider in support in this view.

#### (i) The argument from perceptibility

Note that there is a good amount of experiential correlation between *access* and *inchoativity*. The beginning of a process often coincides with a perceptible change of state. Obviously, this is the case when someone begins to laugh, cry, move, etc. In other words, the process described by the V1s in (77)-(80) becomes externally accessible. However, many processes lack this kind of perceptible change, e.g. mental or attentional

activities such as *thinking* or *listening*. In light of this, the collocational behavior of inchoative *-dasu* is quite telling. Consider the findings of two recent corpus studies by Yamaguchi (2009) and Ishikawa (2010). The most frequent collocational V1s of inchoative *-dasu* from both studies are listed below:

collocational V1s of inchoative *-dasu* (total frequency, descending order)

Yamaguchi (2009)

Corpus used:

43 novels written by Japanese native speakers and released between 1898 and 2009

*ugoku* (move)  
*aruku* (walk)  
*naku* (cry)  
*suru* (do)  
*okoru* (become angry)  
*hanasu* (speak)  
*warau* (laugh)  
*utau* (sing)  
*naru* (sound)  
*odoru* (dance)

Ishikawa (2010)

Corpus used:

Balanced Corpus of Contemporary Written Japanese (2009)<sup>11</sup>

*iu* (say)  
*aruku* (walk)  
*warau* (laugh)  
*hashiru* (run)  
*naku* (cry)  
*kakeru* (run)  
*ugoku* (move)  
*furu* (rain)  
*hanasu* (speak)  
*naru* (sound)

Considering that different corpora have been used, both studies yield fairly similar results. As Ishikawa (2010: 26) observes, inchoative *-dasu* has a strong tendency to occur with V1s that profile a “clear-cut physical action” (*hakkiri shita butsuriteki dôsa*). He notes that inchoative *-dasu* prefers those V1s that imply a stark contrast between the poles of inactivity and activity. For example, as far as verbs of verbal expression are concerned, *-dasu* shows strong collocational ties with *hanasu* (speak) and *kataru* (talk, narrate), but never attaches to *sasayaku* (whisper) or *tsubuyaku* (murmur) (Ishikawa 2010: 27). Further, Himeno (1977: 90) points out that inchoative *-dasu* frequently co-occurs with expressions indicating sudden and abrupt change, such as *fui ni* (unexpectedly) and *kyû ni* (suddenly). In fact, she suggests that inchoative *-dasu* is best understood as a spontaneous outburst of internal energy and therefore as an extension of the central sense of outwards movement (Himeno 1977: 89).

Although I am in general agreement with Himeno’s assessment, my view differs in one respect: Inchoative *-dasu* is not a direct extension of the spatial sense but rather

<sup>11</sup> [http://pj.ninjal.ac.jp/corpus\\_center/bccwj/](http://pj.ninjal.ac.jp/corpus_center/bccwj/), link retrieved 24 Apr. 2015

mitigated via the *access* sense. What the most frequent V1s from the above corpus studies have in common is their external accessibility: When someone begins to speak, dance, laugh, cry, etc., there is an immediate an externally perceptible change of state, i.e. others have sensory access to the state of speaking, dancing, laughing, and so on. And the more sudden and abrupt the change of state is, the higher the chance of external sensory access becomes. Contrast this with the above verbs of “low key” verbal expression (whisper, murmur) or verbs denoting internal processes. It can be hard to tell when someone starts whispering, because the change from silence to non-silence is gradual and subtle. Whispering by its very nature poses a challenge to perception. Or consider an internal process such as listening: How can one be sure when exactly someone starts listening to a radio program (token reading)? The cues to pick up on are limited and subtle. Consider an example:

- (81) *Rajio kôza-wo kiki-dashi-ta.*  
 Radio lectures-ACC listen-DASU-PAST

As Suk (2004: 159) notes, the default interpretation of (81) is a habitual reading along the lines of *(One day) she started listening to radio lectures* or *(One day) she started listening to (some particular series of) radio lecture*. On the view that inchoative *-dasu* is conceptually linked to the *access* sense we can easily explain why we end up with this interpretation: The beginning of a particular listening event is difficult to discern, whereas a change in habit is often plainly noticeable to one’s surroundings (e.g. when someone who never showed an interest in radio lectures becomes an ardent follower).

*(ii) The argument from non-intentionality*

It has often been pointed out (e.g. Himeno 1977; Morita 1991) that inchoative *-dasu* seems to be incompatible with the expression of intentionality:

- (82) (??) *Ronbun-wo kaki-dashi-tai.*  
 Thesis-ACC write-DASU-DES Intended meaning: ‘I want to start writing the thesis.’
- (83) (??) *Ronbun-wo kaki-das-ô.*  
 Thesis-ACC write-DASU-VOL Intended meaning: ‘Let’s start writing the thesis.’
- (84) (??) *Ronbun-wo kaki-das-e.*  
 Thesis-ACC write-DASU-IMP Intended meaning: ‘Start writing the thesis!’

Such expressions require the TR of the V1 to be in a mental state that is about the process profiled by the V1, prior to that process’ realization. For example, wanting to

write something entails thinking about writing before actually doing it. Now recall the conceptual metaphor(s) underlying the *access* sense of DERU: OUT IS ACCESSIBLE/IN IS INACCESSIBLE. According to the “logic” of this metaphor, *access* is inevitably tied to an external viewpoint. Applied to inchoative *-dasu* this means: Realized processes, insofar as they are accessible by our sensory faculties, are OUT. Unrealized processes (i.e. processes that exist only as intentional objects “in the mind”, as possibilities or in some other non-actual state) are inaccessible by our sensory faculties and therefore IN. If this is so, we can easily account for the infelicity of (82)-(84): Intentionality presupposes an internal viewpoint and entails access to unrealized processes (i.e. in the form of intentional objects), but according to the above mappings unrealized processes are IN – and therefore inaccessible. In other words, the metaphorical structure which underlies the meaning of inchoative *-dasu* is at odds with the concept of intentionality.

In summary, then, both the fact that inchoative *-dasu* entails perceptible change as well as its incompatibility with expressions of intentionality are straightforwardly accounted for if we treat this sense as an extension of the *access* sense.

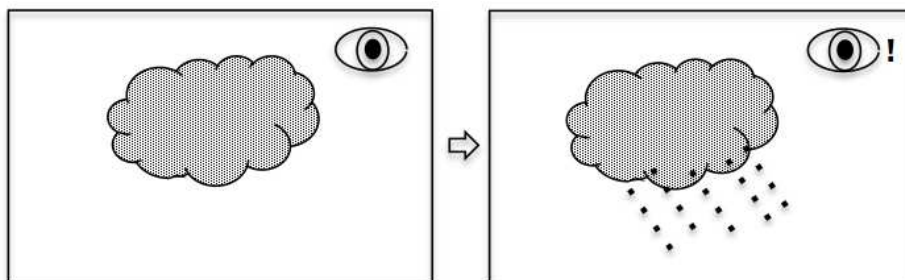


FIGURE 8.1.: *furi-dasu* (begin to rain)

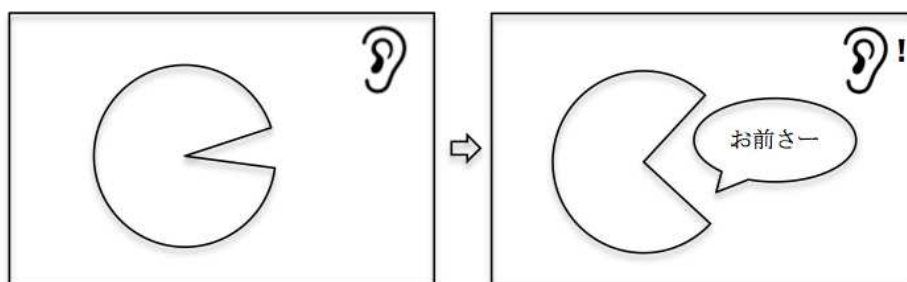


FIGURE 8.2.: *hanashi-dasu* (begin to speak)

## 11. *Kiru* and the SPLIT Schema

For the majority of its senses the verb *kiru* can be schematically characterized as follows:

X-ga	Y-wo	kiru
X CAUSE	Y SPLIT	

### 11.1. The senses of *kiru*

#### 11.1.1. Sense (Ia): Physical Discontinuity - LM is a Solid Extent of Matter (fig. 1)

- (1) *Tarô-ga niwa-no ki-wo kit-ta.*  
 Tarô-NOM garden-LK tree-ACC KIRU-PAST 'Tarô cut the tree in the garden.'
- (2) *Hanako-ga tsume-wo kit-ta.*  
 Hanako-NOM fingernails-ACC KIRU-PAST 'Hanako cut her fingernails.'
- (3) *Kêki-wa yottsu-ni kit-te kudasai.*  
 Cake-TOP four pieces-DAT KIRU-IMP please 'Please cut the cake into four pieces.'

This sense features a spatially extended solid LM which is segmented into numerically distinct parts as a result of the TR's action.

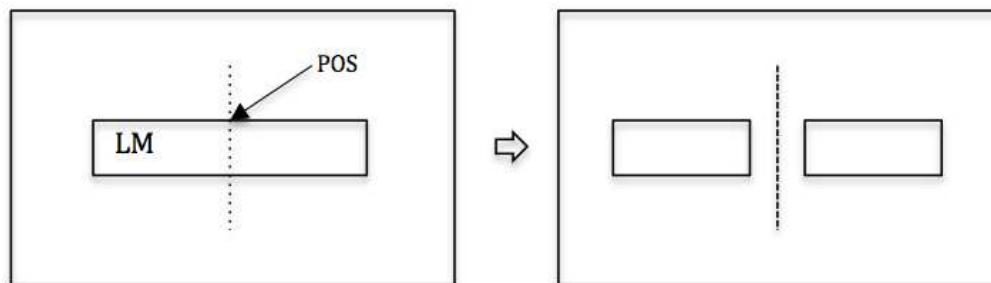


FIGURE 1 (POS stands for *point of segmentation*)

#### 11.1.2. Sense (Ib): Unintentional Self-injury - No Segmentation (fig. 2)

- (4) *Hanako-ga naifu-de yubi-wo kit-te shimat-ta.*  
 Hanako-NOM knife-INS finger-ACC kiru-IRR-PAST 'Hanako cut her finger with a knife.'
- (5) *Tarô-ga kamisori-de kao-wo kit-te shimat-ta.*  
 Tarô-NOM razor-INS face-ACC kiru-IRR-PAST 'Tarô cut his face with a razor.'

(Ib) is related to (Ia) in that, here too, the structure of the LM is altered by a cutting instrument. Apart from this, (Ib) is much more narrow in its application due to the following constraints:

- The LM must be a body part.
- The cutting of the body part must be unintentional.
- The cutting does not result in segmentation.

Although this sense is related to (Ia) via family resemblance, it does not qualify as an instance of the SPLIT schema due to the third constraint. Note that the *no segmentation* reading is not available for non-animate LMs in the physical domain:

- (6) (??) *Hanako-ga kēki-wo kit-te shima-ta.*  
 Hanako-NOM cake-ACC KIRU-IRR-PAST

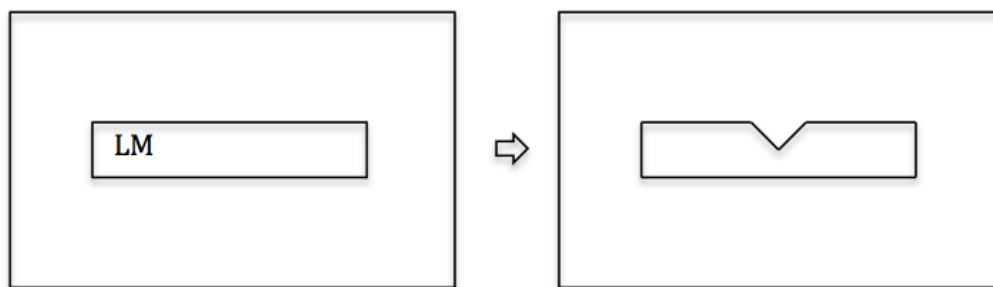


FIGURE 2

### 11.1.3. Sense (Ic): Opening - LM is a CONTAINER (fig. 3)

- (7) *Ryōrinin-ga futa-wo kit-ta.*  
 Cook-NOM lid-ACC KIRU-PAST ‘The cook lifted the lid.’

- (8) *Shachō-ga kaigi-de kuchi-wo kit-ta.*  
 CEO-NOM meeting-LOC mouth-ACC KIRU-PAST ‘The CEO broke the silence at the meeting.’

Splitting a CONTAINER entails opening it. The examples above involve metonymic shifts. (7) is a case of part-whole metonymy, whereby part of the LM stands for the LM. The lid stands for the whole of the CONTAINER (the pot-lid structure), because it is the substructure of the CONTAINER the TR directly interacts with in causing the SPLIT. In Langackerian terms, the lid is the *active zone* of the LM (Langacker 1987: 271). Note that (7) is somewhat uncommon in that the active zone takes linguistic precedence (i.e., is overtly realized as an argument) over the super-structure. In the majority of active zone phenomena the super-structure is deemed more salient than the substructure/facet:

- (9) We all heard the trumpet. (instrument for sound)  
 (10) I finally blinked. (person for eyelid)

(from Langacker 1987: 271)

The idiomatic expression in (8) – *kuchi-wo kiru* – exploits the metonymy ONE ACTION STANDS FOR ANOTHER ACTION. That is, the act of opening one’s mouth stands for the act of speaking. This presupposes metaphorical construal of the mouth as a CONTAINER for words. Splitting the lips apart causes the CONTAINER to open and allows the words to flow out.

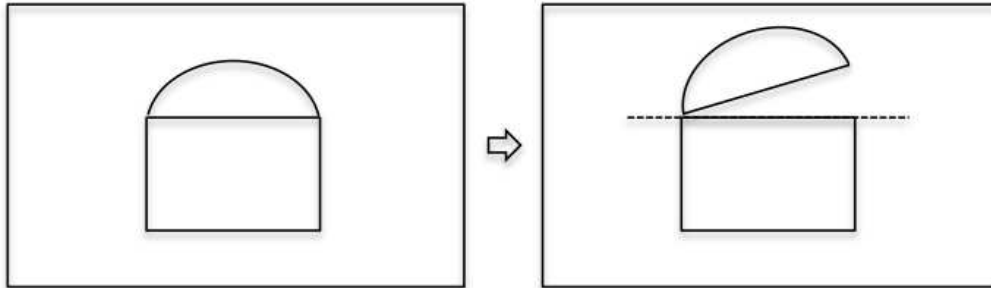


FIGURE 3: schematic depiction of *futa-wo kiru*

#### 11.1.4. Sense (Id): Traversal of Non-solid, Unbounded LM (fig. 4)

- (11) *Jûdan-ga kaze-wo kit-ta.*  
 Bullet-NOM wind-ACC KIRU-PAST ‘The bullet cut through the air.’
- (12) *Fune-ga kanâru-no mizu-wo kit-te susun-da.*  
 Ship-NOM canal-LK water-ACC KIRU-TE proceed-PAST  
 ‘Cutting through the water the ship advanced though the canal.’

This sense is available from (1a) but differs in respect to phase of matter and boundedness. Here the LM is an unbounded extent of empty or liquid matter through which the TR moves along a linear path, resulting in the LM’s spatial segmentation. This construal of segmentation exploits the image schema transformation moving 0DTR --> static 1DTR, as described by Lakoff (1990: 442). I.e., the path taken by the TR constitutes a dividing line through the LM (although no permanent segmentation is achieved).

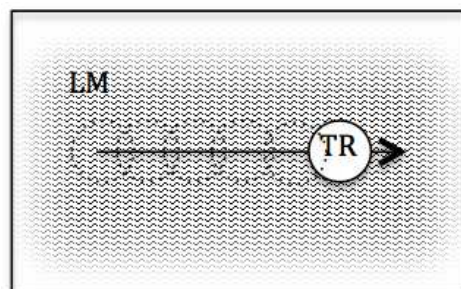


FIGURE 4



### 11.1.5. Sense (Ie): Disconnection - LM is an Assembly of Functional Parts (fig. 5)

- (13) *Tarô-ga enjin-wo kit-ta.*  
 Tarô-NOM engine-ACC KIRU-PAST 'Tarô turned off the engine.'
- (14) *Hanako-ga terebi-wo kit-ta.*  
 Hanako-NOM TV-ACC KIRU-PAST 'Hanako turned off the TV.'
- (15) *Tarô-ga dengen-wo kit-ta.*  
 Tarô-NOM power supply-ACC KIRU-PAST 'Tarô cut the power supply.'

This sense is closely associated with the “turning off” of electrical appliances. Such appliances rely on the CONTACT of certain components and an uninterrupted flow of electricity to function properly. Therefore, (Ie) can be understood as the counterpart of the *elicited effect* sense of KAKARU discussed earlier (see 9.1.7.). Consider the following pair:

- (16a) *Enjin-ga kakaru*  
 Engine-NOM KAKARU 'The Engine catches (on).'
- (16b) *Enjin-wo kiru*  
 Engine-ACC KIRU 'To turn off the engine.'

Where KAKARU codes the connection of functional parts via the CONTACT schema, *kiru* codes their disconnection via the SPLIT schema. Like the *elicited effect* sense of KAKARU, (Ie) is an extension via the metonymic shift ACTION FOR EFFECT OF ACTION (i.e., the disconnection of functional parts stands for disabling the appliance).

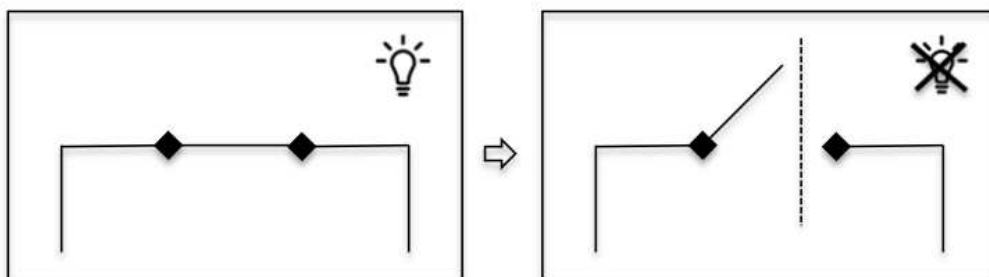


FIGURE 5

### 11.1.6. Sense (If): Disconnection - LM is an Abstract Relation (fig. 6)

- (17) *Hanako-ga Tarô-to-no kankei-wo kit-ta.*  
 Hanako-NOM Tarô-COM-LK ties-ACC KIRU-PAST 'Hanako severed ties with Tarô.'
- (18) *Tarô-ga mae-no jinsei-to en-wo kit-ta.*  
 Tarô-NOM former-LK life-COM relationship-ACC KIRU-PAST  
 'Tarô put his former life behind.'

Similar to (Ie), this sense presupposes the LINK schema and then applies the SPLIT schema to it. However, (If) is arrived at via a metaphorical extension, which construes the target domain of abstract relations in terms of physical connection. As Johnson (1990: 117) observes, “physical linking is never the full story of humanity, which requires a certain nonphysical linking to our parents, our siblings, and our society as a whole.” This is evidenced by many metaphorical expressions exploiting the LINK/SPLIT schemas, such as *I severed ties with him*, *She burned all bridges to her past*, *I cut him loose*, etc.

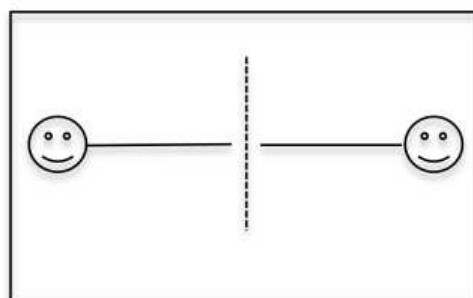


FIGURE 6

#### 11.1.7. Sense (Ig): Temporal Discontinuity - LM is an Activity (fig. 7)

- (19) *Sore-wa hitei deki-nai ga...* to *Hanako-wa ii-kake-te, kotoba-wo kit-ta.*  
 That- TOP denial can- NEG CONJ QT Hanako- TOP say-KAKERU- TE words- ACC KIRU- PAST  
 ‘Well, that can’t be denied...’ said Hanako and paused.’
- (20) *Toriaezu kono hen-de shigoto-wo kit-te, ashita tsuzuki-mash-ô.*  
 First around here-LOC work-ACC KIRU-TE tomorrow continue-POL-VOL  
 ‘Let’s call it a day and continue tomorrow.’

Due to the homologous structure of the categories space and time (see Talmy 2003a: 47ff.), temporal entities are frequently construed in terms of spatial entities. For instance, both action and matter are quantifiable amounts. (Ig), in particular, is an extension via the high-level ontological metaphor *ACTIVITY IS A ONE-DIMENSIONAL SPATIAL EXTENT*. In other words, the discontinuation of an activity is analogous to the segmentation of a physical object (see [Ia]). It is worthy of mention that (Ig) may include expected but unrealized activity. In (19), for example, Hanako might not continue to speak at all. In this case, the application of the SPLIT schema still makes sense, because it is our general understanding that Hanako was expected to utter more than she actually did. (For the same reason it is felicitous to say *You interrupted me in the middle of the sentence*, even if the sentence has not been completely uttered.)

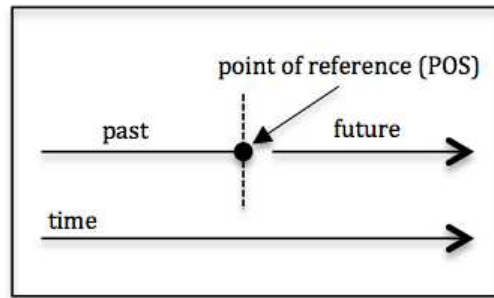


FIGURE 7

### 11.1.8. Sense (Ih): Reduction - LM is an Abstract Scalar Extent (fig. 8)

- (21) *Tarô-ga kyôôsô-de jûbyô-wo kit-ta.*  
 Tarô-NOM race-LOC ten seconds-ACC KIRU-PAST  
 'At the race, Tarô shaved ten seconds off the record.'
- (22) *Sekai-no kiga jinkô-ga hachiokunin-wo kit-ta.*  
 World-LK hunger population-NOM 800 million people-ACC KIRU-PAST  
 'The hungering world population dropped below 800 million.'
- (23) *Kono shôhin-no nedan-ga ichimanen-wo kit-ta.*  
 This product-LK price-NOM 10.000 yen-ACC KIRU-PAST  
 'The price of this product dropped below 10.000 yen.'

In (Ie), (If), and (Ig) we have seen semantic extensions that emphasize the aspect of discontinuity or disconnectivity. This is especially plain in (If) and (Ig), where the SPLIT schema is imposed on the LINK schema.

(Ih), like (If) and (Ig), is the result of metaphorical extension. But here, SPLIT is imposed on the SCALE schema rather than the LINK schema. What makes the SCALE schema compatible with the SPLIT schema is its one-dimensionality. This follows from what Johnson (1990: 122) calls the “fixed directionality” of SCALES. I.e., the amount, number, degree, etc. measured by a SCALE is always organized along a single salient dimension. Examples of this are the vertical UP-DOWN axis underlying the MORE IS UP metaphor (Johnson 1990: 121f.) and the horizontal LEFT-RIGHT axis used to express political alignment.

Given the above, it follows that the SPLIT schema can be imposed on SCALES to metaphorically express the reduction of an abstract extent (such as an amount or degree). Since SCALES are construed as one-dimensional – and since a one-dimensional object split in multiples yields several one-dimensional objects of lesser length than the original – a split SCALE will yield at least two parts of lesser length. By way of illustration, consider (21). The LM here is *jûbyô* (10 seconds), a scalar extent with the

value 0 at one pole and the value 10 at the other. A new record, let us say at 9.8 seconds, will SPLIT this SCALE into two parts. The portion from 0 to 9.8 replaces the old SCALE as the new standard for record attempts, while the portion from 9.8 to 10 becomes obsolete for that purpose.

In summary, then, the SPLIT in (21) – and (1h) in general – divides the LM into two qualitatively distinct parts, one relevant and one obsolete. By implication, reduction of the LM is achieved by getting rid of the obsolete part.

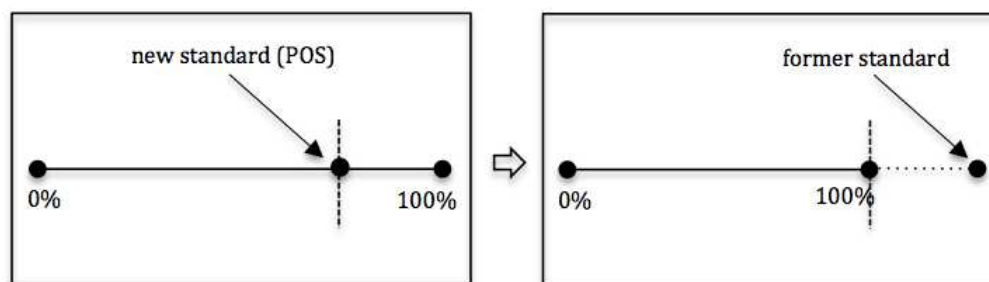


FIGURE 8

#### 11.1.9. Sense (II): Focus on Obsolete Portion of LM (fig. 9)

(24) *Hanako-ga mikan-no kusat-ta bubun-wo kit-ta.*  
 Hanako-NOM mandarine orange-LK rot-PAST part-ACC KIRU-TE  
 'Hanako cut the rotten part from the mandarine orange.'

(25) *Seijika-ga tōnai-no hantaiha-wo kir-ô to shi-ta.*  
 Politician-NOM party internal-LK opposition-ACC KIRU-INT-PAST  
 'The politician tried to get rid of the party-internal opposition.'

It is part of our encyclopedic knowledge that objects are often divided for the purpose of getting rid of (or otherwise singling out) some specific portion. As shown above, (1h) heavily relies on this implication. In English and German, this *cutting off* sense is expressed by verb particle constructions such as *V-off* and *ab-V*:

(26) The wound festered, so his foot had to be cut off.

(27) Sie hat sich von dem Brotlaib ein Stück abgeschnitten.  
 She cut off some bread from the loaf (for herself).

Similarly, in Japanese, focus shift from the *object which is split* to the *object which is split off* is usually achieved by attaching one of several V2s:

(28) *Zentai-kara 10cm-wo kiri-hanasu*  
 Whole-ABL 10cm-ACC KIRU-set apart 'To cut 10cm off from the whole'

(29) *Sentan-wo kiri-toru*  
 Tip-ACC KIRU-take 'To cut the tip off'

However, since *splitting* and *splitting off* are closely related aspects of the same semantic frame, the latter can – in cases such as (24) and (25) – also be coded by the simplex verb. Linguistically this metonymic shift in focus is represented by the promotion of the LM’s obsolete portion to the grammatical role of direct OBJ.

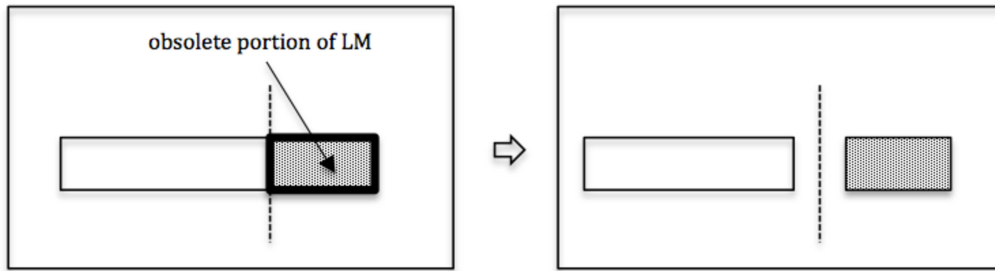


FIGURE 9

11.1.10. Sense (III): Focus on Point of Segmentation (fig. 10)

- (30) *Kigen-wo kira-nai to teishutsubutsu-wa itsumademo sorowa-nai.*  
 Deadline-ACC KIRU-NEG COND documents-TOP forever become complete-NEG  
 ‘If we don’t decide on a deadline, we’ll never get ahold of all the documents.’
- (31) *Taikai-no ninzû-wo kiri-mash-ô.*  
 Convention-LK number of people KIRU-POL-VOL  
 ‘Let’s set the number of participants for the convention.’

A prominent frame element within the splitting frame can be identified as the “point of segmentation” (POS). The POS marks the point at which the SPLIT of the LM occurs. The less arbitrary the location of the POS, the more salient it becomes as a frame element. In (Ih) and (II) the location of the POS is non-arbitrary because it serves to divide two qualitatively different parts of the LM. In (25), for example, the POS “draws the line” between supporters and opposition. It follows that the POS is raised to a particularly high level of salience when consciously setting limits (which involves a scalar LM). Examples of limit-setting include decisions on deadlines, the exact number of participants for an event, and so on.

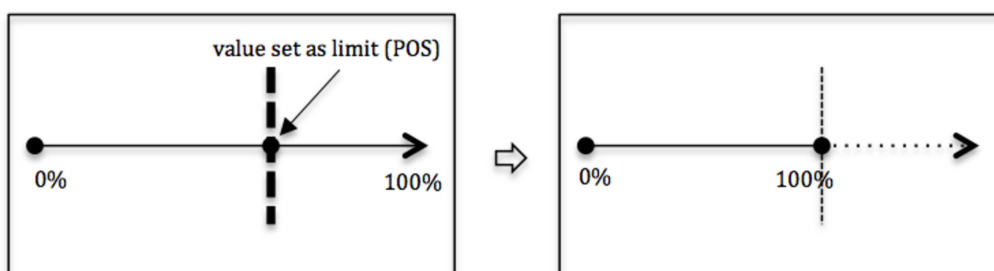


FIGURE 10

### 11.1.11. Sense (IV): Focus on Manner

- (32) *Tarô-ga handoru-wo migi-ni kit-ta.*  
Tarô-NOM steering wheel right-DAT KIRU-PAST  
'Tarô turned the steering wheel to the right.'
- (33) *Hanako-ga bôru-wo kit-te, tsuyoi kaiten-wo kake-ta.*  
Hanako-NOM ball-ACC KIRU-TE strong spin-ACC KAKERU-PAST  
'Hanako hit the ball in a slice, putting a strong spin on it.'
- (34) *Shinpu-ga jûjika-wo kit-ta.*  
Priest-NOM cross-ACC KIRU-PAST 'The priest made the sign of the cross.'

Like (II) and (III), this sense is an extension via metonymic shift. None of the above objects are actually split into multiples. (IV) is not even an instance of the SPLIT schema. It is connected to the other senses merely by experiential correlation, i.e. the knowledge that the splitting of objects usually involves a certain type of “cutting” motion. Here, this latter aspect completely replaces the former aspect within the frame, giving rise to the new schema [X affects Y via a cutting motion].

In summary, then, our analysis of *kiru* yields four sense clusters associated with the SPLIT schema, based on their respective focus properties: (I) focus on the LM as a whole, (II) focus on the obsolete part of the LM, (III) focus on the POS, and (IV) focus on the manner in which the TR affects the LM. With this in mind let us now turn to the senses of *V-kiru*.

## **11.2. The Senses of V-kiru**

### 11.2.1. Previous Suggestions

Over the past decades linguists have made several suggestions on how to classify the senses of *V-kiru*. The following is a short breakdown of the categorization attempts based on Sugimura (2008: 64ff.).<sup>1</sup>

*Morita* [1977](1989)

- The physical cutting sense: The V1 expresses a manner of cutting a physical object in multiples.
- The perfective sense (*kanryô*): *-kiru* expresses that the action profiled by the V1 is carried out completely and properly.
- The augmentative sense: *-kiru* expresses that the action profiled by the V1 is carried out with sufficient confidence and intensity, precluding any need

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<sup>1</sup> For example sentences see the discussion in the next section.

for further action.

- The limit sense: *-kiru* expresses the maxing out of a scalar process.

#### *Himeno (1980)*

- The physical cutting sense (*setsudan*): See Morita (1989) above.
- The conclusion sense (*shûketsu*): *-kiru* expresses determination and goal-orientedness on the agent's part; corresponds to Morita's (1989) augmentative sense.
- The accomplishment sense (*kansui*): *-kiru* expresses not only the completion of an action, but its completion to the satisfaction of its agent.
- The limit sense (*kyokudo*): Roughly corresponds to Morita (1989) above.

#### *Lee (1997)*

- The physical cutting sense (*mono no setsudan*): See Morita (1989) above.
- The accomplishment sense (*kansui*): See Himeno (1980) above.
- The limit sense (*kyokugen*): See Himeno (1980) above.
- The "full of confidence" sense (*jishin manman*): Roughly corresponds to Morita's (1989) augmentative sense.
- Lexicalized senses (*goika*): Instances of *V-kiru* that are not easily analyzable

#### *Sugimura (2008)*

Senses that preserve the severance (*setsudan*) meaning of the simplex verb:

- The physical cutting sense (*setsudan*): See Morita (1989) above.
- The conclusion sense (*shûketsu*): A state of affairs (*jîtai*) is discontinued by the action corresponding to the V1.

Senses that do not seem to preserve the severance meaning of the simplex verb; *-kiru* functions as a grammatical suffix:

- The accomplishment sense (*kôï no kansui*): *-kiru* expresses that the action profiled by the V1 has been carried out completely.
- The completion of change sense (*henka no tassei*): *-kiru* expresses that the process of change profiled by the V1 has reached its final state (i.e. non-F to max-F).
- The limit sense (*kyokugen jôtai*): *-kiru* expresses the maxing out of an already ongoing scalar process (i.e. F to max-F).

#### 11.2.2. Discussion

Although the above classifications are not entirely in agreement with one another, we can nevertheless distill roughly three senses of *V-kiru* from them – plus several "odd"

items that seem somewhat difficult to categorize. (The following are only preliminary sketches, amalgams based on the above classifications – not my final suggestions.)

*The physical cutting sense (mono no setsudan)*

- (35) *Nezumi-ga dengen kôdo-wo kami-kit-ta.*  
 Mouse-NOM power cord-ACC bite-KIRU-PAST ‘The mouse chewed through the power cord.’
- (36) *Tarô-ga rôpu-wo tachi-kit-ta.*  
 Tarô-NOM rope-ACC cut-KIRU-PAST ‘Tarô cut the rope.’
- (37) *Hanako-ga niku-wo tataki-kit-ta.*  
 Hanako-NOM meat-ACC hit-KIRU-PAST ‘Hanako chopped the meat.’

The V1 profiles a way of segmenting a physical entity.

*The limit sense (genkai, kyokudo, kyokugen jôtai):*

- (38) *Kuchi-ga kawaki-kit-te iru.*  
 Mouth-NOM dry-KIRU-RES ‘(My) mouth is all dried up.’
- (39) *Sora-ga sumi-kit-te iru.*  
 Sky-NOM become clear-KIRU-RES ‘The sky is cloudless.’
- (40) *Tarô-ga tsukare-kit-te iru.*  
 Tarô-NOM tire-KIRU-RES ‘Tarô is completely exhausted.’

The V1 is typically intransitive and telic (i.e. goal-oriented). The subject is typically either non-human or human but non-intentional.

As Himeno (1980: 29) notes, the V1 often belongs to the domains of natural phenomena, physiological, emotional, or psychological change. In case of a human subject, there is a rather strong tendency for the process to be non-intentional and beyond the subject’s control.

Sugimura (2008: 74-76) further distinguishes between processes of “limit reaching” (*kyokugen jôtai*) and those that indicate “completion of change” (*henka no tassei*). An example of the former would be *hieru* (become cold): Something can be described using the resultative *hie-te iru* (cool/cold) even when the inherent telicity scale of the process is not maxed out (i.e., when it could still get colder). In contrast, one cannot describe something as *naot-te iru* unless the scale of *naoru* (heal) is maxed out. That is, a wound can gradually heal, but it can only be described as *naot-te iru* when there is no further room for betterment. Although this is an interesting observation, one should note that both variants have their inherently telic nature in common.



*The accomplishment sense (kansui):*

- (41) *Tarô-ga gyûdon-no tokumori-wo hitori-de tabe-kit-ta.*  
Tarô-NOM gyûdon-LK extra large serving-ACC alone eat-KIRU-PAST  
'Tarô ate (up) an extra large serving of *gyûdon* all by himself.'
- (42) *Hanako-ga senpêji-no chôhen shôsetsu-wo yomi-kit-ta.*  
Hanako-NOM thousand pages-LK full-length novel-ACC read-KIRU-PAST  
'Hanako read a full-length novel of a thousand pages (to the end).'
- (43) *Tarô-ga sanjûkiro-no kyori-wo hashiri-kit-ta.*  
Tarô-NOM 30km-LK distance-ACC run-KIRU-PAST 'Tarô ran the (whole) 30km distance.'

The V1 is typically transitive and atelic, the subject an intentional human agent. There is most likely a scalar modifier – either overt or implicit – that imposes telicity on the atelic V1. For example, *senpêji-no chôhen-shôsetsu* serves as a telic modifier for *yomu*, which by itself is a non-goal-oriented, potentially open-ended process.

As Himeno (1980: 27) notes, the agent usually feels some kind of satisfaction for having successfully handled a quantifiable “workload” (*sagyôryô*).

#### 11.2.2.1. Some Remarks on *Limit vs Accomplishment*

While it might be practical to distinguish between a “limit” and “accomplishment” sense, the two are best thought of as poles on a continuum rather than as having clear-cut boundaries. For example, Omata (2007: 213) points out that *tsukai-kiru* is hardly ever accompanied by a feeling of achievement on part of the agent. Consider (44):

- (44) *Tarô-ga okane-wo tsukai-kit-ta.*  
Tarô-NOM money-ACC use-KIRU-PAST 'Tarô used up all of his money.'

In a similar vein, *shinji-kiru* requires an intentional human agent but can often carry a negative connotation, as in:

- (45) *Hanako-ga uso-wo shinji-kit-te iru.*  
Hanako-NOM lie-ACC believe-KIRU-RES 'Hanako is utterly convinced of a lie.'

While the agent in such scenes could be described as intentional, one might argue that the degree of control exercised in acts of resource usage or belief is typically lower than in other types of activities, such as running, reading, etc.

Furthermore, Himeno (1980) places *moe-kiru* in the accomplishment (*kansui*) category, stating that the accomplishment sense expresses “not only the end of an action,

but that the action has been carried out completely (in both quantity and quality) in accordance with the agent's expectations" (1980: 27). This seems a bit odd considering the following sentences:

- (46) *Tarô-ga yonjûnikiro-no furumarason-wo hashiri-kit-ta.*  
 Tarô-NOM 42km-LK full marathon-ACC run-KIRU-PAST  
 'Tarô ran a full marathon of 42km.'
- (47) *Hanako-ga saigo-made tatakai-kit-ta.*  
 Hanako-NOM end-ALL fight-KIRU-PAST 'Hanako fought to the end.'
- (48) *Rôsoku-ga moe-kit-ta.*  
 Candle-NOM burn-KIRU-PAST 'The candle burned out.'

According to Himeno, all three of the above are accomplishment verbs. However, in the case of *moe-kiru*, agency, intentionality, and sense of achievement seem to be much lower than in the other two examples. In fact, *moeru* – denoting a natural phenomenon – seems more akin to limit verbs such as *hieru* (become cold) or *kawaku* (become dry). And while it can be argued that *moeru*, unlike these verbs, is not inherently telic, it is typically understood as being temporally bounded. In other words, something might burn indeterminately long (say, a ceremonial fire that must not go out) – but typically there is a limited burning substance involved that will burn down after a certain amount of time has passed.

The upshot is that cases like *shinji-kiru*, *tsukai-kiru* and *moe-kiru* are peripheral examples located somewhere between the limit and the accomplishment sense.

Although the limit vs accomplishment distinction has its merits, I believe that – for the purpose of this study – one can make a more useful distinction based on the V1's ontological specifications. In his study on the historical development of *V-kiru*, Aoki (2004) makes an interesting observation in this respect. He points out that inherently telic verbs (*genkai dôshi*) do not appear as V1 until the late middle ages (*chûsei kôki*) and non-telic verbs (*higenkai dôshi*) not until early modern times (*kinsei ikô*). In order of historical emergence Aoki (2004: 39) lists the following senses:

A physical segmentation (*mono-no setsudan*)  
 Some action verbs (*ichibu-no dôsa dôshi*)  
 (*i-kiru, tachi-kiru, kaki-kiru, ...*)

A' spatial partitioning (*kûkan-no shadan*)  
 Some action verbs

(*shi-kiru, tate-kiru, seki-kiru, ...*)

B closure – emphasis (*shûketsu – kyôchô*)

Verbs of thought and speech (*hatsuwa-, shikô dôshi*)

(*ii-kiru, omoi-kiru, furi-kiru, ...*)

C extreme state/limit (*kyokudo-no jôtai*)

Verbs of change, telic verbs (*henka dôshi, genkai dôshi*)

(*sumi-kiru, shizumari-kiru, kawaki-kiru, ...*)

D accomplishment (*dôsa-no kansui*)

Action verbs, atelic verbs (*dôsa dôshi, higenkai dôshi*)

As we can see, this classification is not much of a divergence from the rest of the literature. A is the physical cutting sense. A' is an extension of A from solid matter to empty matter. C and D correspond to the limit and accomplishment senses, respectively (indeed, they are labeled as such). However, Aoki makes the important observation that the limit sense involves a telic V1 whereas the accomplishment sense involves a non-telic V1. His distinction is therefore not only historically sound but also grounded in the V1s configurational structure. And since configurational (i.e. schematic) structure is what mainly concerns us, we can from here on dismiss the *limit vs accomplishment* distinction in lieu of the *telic vs atelic* distinction.

#### 11.2.2.2. 'Odd' Cases

What to make of Aoki's category B though? This is the class of "odd cases" I have mentioned earlier. Aoki calls this sense closure (*shûketsu*) and emphasis (*kyôchô*). Himeno, too, uses the term *shûketsu* to describe *ii-kiru* (assert). Morita (1989) and Lee (1997), however, place *ii-kiru* in a class of "confidence" verbs (*jishin, jishin manman*). As for *furi-kiru* (shake off, decline) and *omoi-kiru* (give up), Lee (1997) categorizes these into their own class of "lexicalized" verbs (*goika*).

In conclusion, there seems to be a group of verbs – variously termed "closure", "emphasis", "confidence" or "lexicalized" – which fit neither the cutting, limit or accomplishment categories. Historically, these verbs follow the cutting sense and precede the limit and achievement senses.

To summarize, we have identified three major senses of *V-kiru*:

- Sense 1: The V1 profiles a way of physical segmentation.
- Sense 2: The V1 profiles an inherently goal-oriented process.

- Sense 3: The V1 profiles a non-goal-oriented process. The LM of the V1 functions as a telic modifier.

Additionally, we will need to address several “odd” cases which seem to fit neither of the above very well. These include: *omoi-kiru*, *ii-kiru*, *furi-kiru*, etc.

I will now proceed to analyze the topological structure of these senses.

### 11.2.3. Revisiting V-kiru: A Categorization Based on Schematic Topology

#### 11.2.3.1. Sense (I): The V1 Profiles a Way of Physical Segmentation

(see examples 35-37)

This is the physical cutting sense which has already been adequately characterized in the literature. The LM is an extended quantity of matter. It is split into multiples by the TR in the manner profiled by the V1.

#### 11.2.3.2. Sense (IIa): The V1 Profiles an Inherently Goal-oriented Process (“Limit” Sense) (fig. 11)

(see examples 38-40)

Recall from our discussion of the simplex verb the various implications of the SPLIT schema, i.e. consider our encyclopedic knowledge about splitting things. Specifically, recall the cases where the location of the POS is non-arbitrary, because it marks the division between qualitatively distinct parts of the LM. For example, we might cut stalks of asparagus along a tender/non-tender divide, then use the tender part for cooking and throw away the non-tender part. Similarly, when setting a deadline (see example [30]) we divide the timeline into two qualitatively distinct parts – with the POS marking the division between timely and too late.

Now consider *V-kiru* in a sentence like (38):

- (38) *Kuchi-ga kawaki-kit-te iru.*  
 Mouth-NOM dry-KIRU-RES ‘(My) mouth is all dried up.’

The qualitative SPLIT is quite obvious. The V1 *kawaku* profiles a goal-oriented process. Let us say 0 is not dry at all, 5 somewhat dry, and 10 is devoid of any liquid. It is worth emphasizing that the V1s participating in (IIa) do not represent open scales but closed ones. That is, if something is completely devoid of liquid, it is impossible for it to get drier. The same is true for *tsukareru* (become exhausted), *sumu* (become clear), and so

forth. It is easy to see how the end point of a such a scale functions as a natural POS, since it marks the temporal division between a goal-oriented process and the state of having reached that goal.<sup>2</sup> This leaves us with the following specifications:

LM specifications for (IIa): The LM is a timeline (an unbounded extent of time). The V1 has the structure of a closed temporal SCALE (a bounded axial extent of time), which is imposed on a portion of this timeline. The end-point of the SCALE (i.e. the GOAL of a SOURCE-PATH-GOAL schema) functions as the POS. The LM is thus segmented into a pre-GOAL and a post-GOAL portion. The pre-GOAL portion is dynamic: it is a bounded extent of time during which change occurs. The post-GOAL portion is static: it is an unbounded extent of time during which no change occurs.

In other words, the end-point of the scalar process profiled by the V1 divides the timeline into a dynamic segment and a steady-state segment.

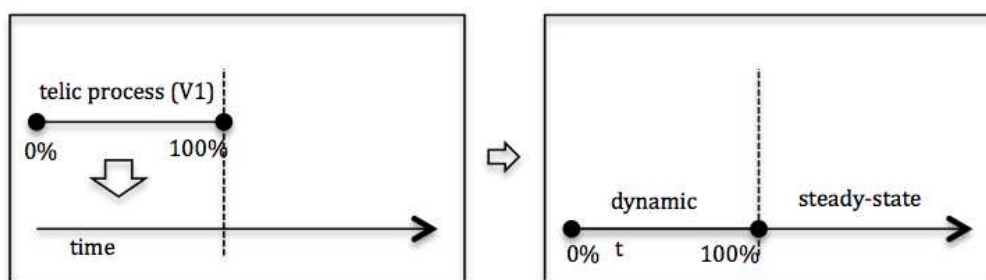


FIGURE 11

### 11.2.3.3. Sense (IIb): The V1 Profiles a Non-goal-oriented Process; The LM of the V1 Functions as a Telic Modifier (“Accomplishment” Sense) (fig. 12)

By now it should be obvious that – in terms of image schematic topology – this sense is merely a variant of (IIa). While the V1s participating in (IIa) are inherently goal-oriented, the V1s participating in (IIb) are potentially open-ended. However, by taking a LM with closed scale structure, open-ended processes become goal-oriented.

LM specifications for (IIb): The LM is a timeline (an unbounded extent of time). The V1 profiles an activity (an unbounded temporal quantity). A telic modifier (either explicit or implicit) imposes a SOURCE-PATH-GOAL structure on this activity, yielding a closed temporal SCALE (a bounded axial extent of time). This temporal scale is imposed on a

<sup>2</sup> This view is consistent with Nakashima’s (2006: 43ff) suggestion that the grammatical senses of *V-kiru* are the result of a semantic extension via the concept of discontinuity (*hirenzokusei*).

portion of the timeline. The end-point of the SCALE (i.e. the GOAL of a SOURCE-PATH-GOAL schema) functions as the POS. The LM is thus segmented into a pre-GOAL and a post-GOAL portion. The pre-GOAL portion is dynamic: it is a bounded extent of time during which change occurs. The post-GOAL portion is static: it is an unbounded extent of time during which no change occurs. Again, the end-point of the scalar process profiled by the V1 divides the timeline into a dynamic segment and a steady-state segment.

Example: Consider (41) from above.

- (41) *Tarô-ga gyûdon-no tokumori-wo hitori-de tabe-kit-ta.*  
 Tarô-NOM gyûdon-LK extra large serving-ACC alone eat-KIRU-PAST  
 'Tarô ate (up) an extra large serving of gyûdon all by himself.'

In this sentence we have an activity *tabe(ru)* and a telic modifier *gyûdon no tokumori*. The latter imposes the scalar structure of *0% depletion – 100% depletion* on the process of eating. I.e., at the SOURCE point of the process there is 0% depletion of the quantity profiled by *gyûdon no tokumori*, while at the GOAL point there is 100% depletion. Consequently, the GOAL functions as POS, dividing the timeline into a dynamic segment during which depletion occurs and a steady-state segment during which no more depletion occurs.

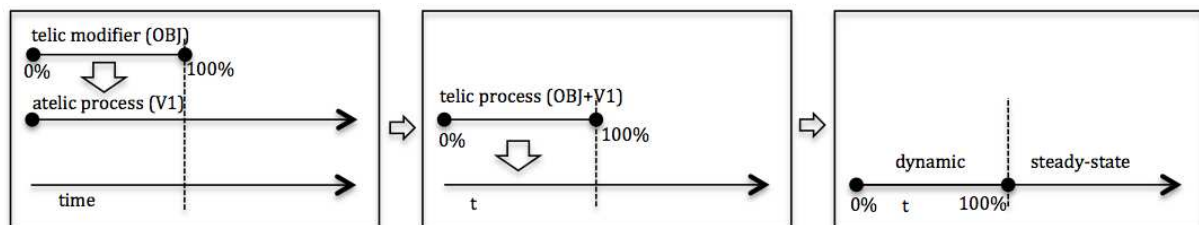


FIGURE 12

#### 11.2.3.4. Other Senses

What about the aforementioned “odd” cases? It turns out that many of these are simply lexicalized metaphorical extensions of the physical cutting sense. Take the following uses of *furi-kiru*, for example:

- (42) *Hanako-ga Tarô-no te-wo furi-kit-te nige-ta.*  
 Hanako-NOM Tarô-LK hand-ACC shake-KIRU-TE run-PAST  
 'Hanako shook off Tarô's grasp and ran away.'

- (43) *Hanako-ga Tarô-no tanomi-wo furi-kit-ta.*  
 Hanako-NOM Tarô-LK request-ACC shake-KIRU-PAST  
 'Hanako declined Tarô's request.'

Earlier in this chapter, in our discussion of (If), we have already come across the conceptual metaphor ABSTRACT RELATIONS ARE PHYSICAL CONNECTIONS. In a similar manner, the metaphorical use of *furi-kiru* construes social forces (43) in terms of physical forces (42). By denying a request etc. we “free ourselves from the grasp“ of social forces. It can reasonably be suggested that such force dynamic metaphors underly other cases as well:

*hari-kiru* (stretch out – KIRU) --> work hard, be vigorous  
*oshi-kiru* (push – KIRU) --> force one’s way through sth.  
*fumi-kiru* (tread on – KIRU) --> make up one’s mind, take measures towards sth.

The compounds *ii-kiru* and *omoi-kiru* are highly lexicalized and therefore not straightforwardly analyzable. Nonetheless we can try to give a tentative account in terms of the LM specifications of *-kiru*:

(44) *Tarô-ga ‘machigai ari-masen!’ to ii-kit-ta.*  
 Tarô-NOM mistake-TOP exist-POL.NEG QT say-KIRU-PAST  
 ‘I am absolutely positive!’ Tarô said with confidence.’

LM specifications for *ii-kiru*: The LM is a stretch of discourse (covering an extent of time). An utterance (a punctual event) functions as POS. The segment of discourse preceding the utterance is characterized by uncertainty or dispute regarding the utterance’s content or the speaker’s belief. The segment of discourse succeeding the utterance is supposed to be free from any such uncertainty.

(45) *Hanako-ga shôsetsuka-no yume-wo omoi-kit-ta.*  
 Hanako-NOM novelist-LK dream-ACC think-KIRU-PAST  
 ‘Hanako gave up her dream of becoming a novelist.’

LM specifications for *omoi-kiru*: The LM is the cognitive subject’s mental state (covering an extent of time). A punctual mental event functions as POS. The mental state preceding the event is characterized by *being about* a certain entity. The mental state succeeding the event is characterized by *not being about* this entity.

Thus, *ii-kiru* and *omoi-kiru* are instances of the SPLIT schema, in which the POS divides the LM into qualitatively distinct parts.

### 11.3. Related Constructions

Before concluding this chapter, let us briefly consider some related constructions and see how they fit in with the above analyses.

#### 11.3.1. *V-kiri/V-ta kiri (da)* (fig. 13)

- (46) *Tarô-ga byôki-de ne-ta kiri da.*  
Tarô-NOM illness-INS sleep-PAST KIRI COP 'Tarô is bedridden with an illness.'
- (47) *Hanako-ga 'shira-nai' to it-te, damari-kiri dat-ta.*  
Hanako-NOM know-NEG QT say-TE be silent-KIRI COP-PAST  
'Hanako said 'I don't know' and then remained silent.'
- (48) *Tarô-ga tabi-ni de-ta kiri kaera-nai.*  
Tarô-NOM journey-DAT leave-PAST KIRI return-NEG  
'Tarô went on a journey, never to return.'
- (49) *'Mata kake-naosu' to iw-are-ta kiri renraku-ga ko-nai.*  
Again call-repeat QT say-PASS-PAST KIRI contact-NOM come-NEG  
'I'll call again' I was told but never heard back (from him/her).'

What is important to note here, is that our knowledge about the world equips us with certain expectations or mental "scripts" of how things will normally play out (see e.g. Schank and Abelson 1977). For example, if you lie down (because you are exhausted etc.), you will eventually get up again. A conversation is characterized by a steady flow of utterances. Someone who goes on a journey eventually returns. Someone makes a promise and then keeps it, and so on.

In the case of *V-ta kiri*, however, these scripts are disrupted. This is why *V-ta kiri* often appears as part of the larger construction *V-ta kiri ... V-nai*, where the second verb profiles the default continuation of a given mental script (48, 49).

LM specifications for *V-ta kiri (da)*: The LM is a timeline (an unbounded extent of time). The V1 either profiles an act (a punctual event) or an activity (an extended event). The POS is either the punctual event or the starting point of the activity. The segment of time preceding the POS is characterized by conforming to the expectations of the conceptualizer. The segment of time succeeding the POS is characterized by defying the expectations of the conceptualizer.



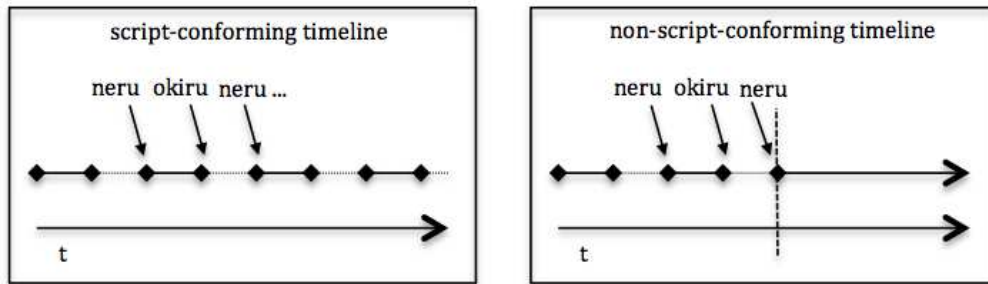


FIGURE 13

### 11.3.2. Numeral Classifier + *kiri*

- (50) *Shinrai dekiru no-wa nijūroku-nin-no uchi tatta shichi-nin kiri da.*  
 Trust can NMLZ-TOP 26-persons-LK among just seven-persons KIRI COP  
 'Out of the 26 persons a mere seven can be trusted.'
- (51) *DVD media-wa ik-kai kiri-no kaki-komi da.*  
 DVD media-TOP one-time KIRI-LK data writing COP  
 'You can only burn data to a DVD once.'
- (52) *Machi-ni dekake-ta no-wa ni-do kiri da.*  
 Town go out-PAST NMLZ-TOP two-times KIRI COP  
 'I only went to the town twice (and never again since).'

LM specifications for numerical classifier + *kiri*: The LM is a numerical ray (an open SCALE). The POS is a point on this ray. On the segment up to and including the POS all numerical instances are realized. On the segment succeeding the POS no instances are realized.

### 11.3.3. *kiri-ga nai* (fig. 14)

- (53) *Sonna koto-wo ki ni shi-te i-tara, kiri-ga nai.*  
 Such as that things-ACC worry-PROG-COND KIRI-NOM exist.NEG  
 'If you worry about such things, there will be no end to it.'
- (54) *Itsumade mat-te mo kiri-ga nai.*  
 Forever wait-even if KIRI-NOM exist.NEG 'It's no use waiting (here) forever.'
- (55) *jirei-wo kazoe-ageru to kiri-ga nai.*  
 examples-ACC count-raise (enumerate) COND KIRI-NOM exist.NEG  
 '(I) could go on listing examples forever.'

This construction constitutes another "script violation". *Kiri-ga nai* usually occurs within the scope of a conditional or counterfactual (e.g. *V-tara*, *V-eba*, *V to*, *V-te mo*) and marks the utterance it appears in as a warning: Once carried out the action profiled by V will – to the dismay of the conceptualizer – continue or re-occur *ad nauseam*.

In a “script-conforming” timeline V-ing would be followed by non-V-ing. For example, someone would count, finish counting, and then be done counting. That is, the end of V-ing would divide the timeline into qualitatively distinct parts. However, in the scenario described by *kiri-ga nai*, V is conceptualized as infinite and no such segmentation can occur.

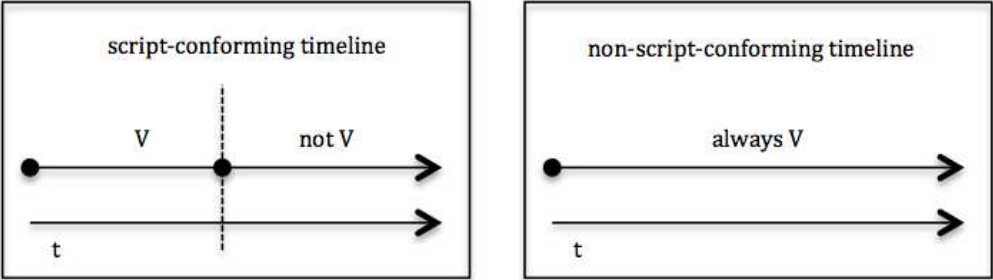


FIGURE 14

## 12. AGARU and the UP Schema

The intransitive/transitive pair *agaru/ageru* can be schematically characterized as follows:

(A)	X-ga X CAUSE	Y-wo Y MOVE UP	ageru
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(B)		Y-ga Y MOVE UP	agaru
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AGARU prototypically codes the TR's movement along the vertical axis. However, as we will see, some senses have abandoned the verticality aspect in favor of direction-neutral GOAL-oriented movement.

### 12.1. The Senses of AGARU

#### 12.1.1. Sense (Ia): Spatial Ascension of a Zero-dimensional TR (fig. 1)

- (1) *Taiyô-ga higashi-kara agaru.*  
Sun-NOM east-ABL AGARU 'The sun rises from the east.'
- (2) *Hikôki-ga sorataka-ku agat-ta.*  
Plane-NOM sky-high-INF AGARU-PAST 'The plane took to the sky.'
- (3) *Tarô-ga yane-no ue-ni agat-ta.*  
Tarô-NOM roof-LK top-DAT AGARU-PAST 'Tarô climbed onto the roof.'
- (4) *Manshon-no erebêtâ-ga yonkai-made agaru.*  
Mansion-LK elevator-NOM fourth floor-ALL AGARU  
'The mansion's elevator goes up to the fourth floor.'
- (5) *Seijika-ga endan-ni agat-ta.*  
Politician-NOM podium-DAT AGARU-PAST 'The politician assumed the podium.'

This sense corresponds to a punctual (zero-dimensional) TR's vertical motion in space. The TR's motion is either GOAL-directed or not. In configurations like (1) and (2), there is no entity in profile which could serve as GOAL of the TR's motion. Rather, the LM here is implicit and best thought of as "the projection on the vertical axis of the ordered series of spatial points that the trajector occupies, often successively through time" (Lindner 1981: 148). Sentences (3)-(5), on the other hand, profile a LM – marked by *ni* or *made* – towards which the TR's path of motion is directed, i.e. a GOAL. Note that AGARU is neutral in respect to the TR's manner (float, jump, etc.) and path of motion (zig-zag, swerve, etc.) – although a straight vertical line is arguably the most prototypical PATH.

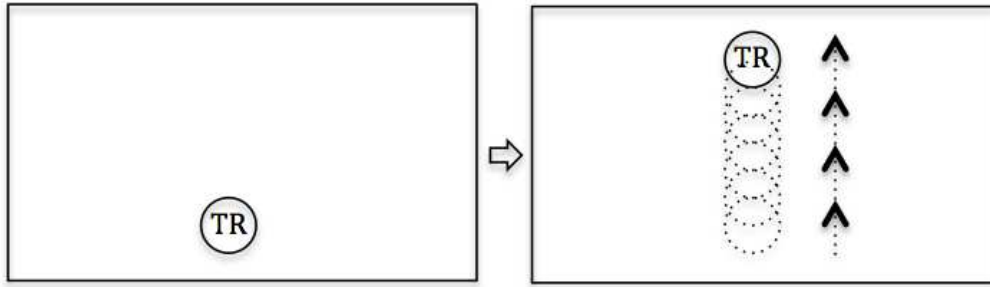


FIGURE 1

### 12.1.2. Sense (Ib): Abstract Ascension of Zero-dimensional TR (Social Ascension)

- (6) *Hanako-ga kotoshi-no shiken-de jûban agat-ta.*  
 Hanako-NOM this year-LK test-INS ten places AGARU-PAST  
 'Hanako went up ten places in this year's exam.'
- (7) *Kono jôhō-ga shachō-ni-made agat-ta.*  
 This information-NOM CEO-DAT-ALL AGARU-PAST  
 'This information made its way up to the CEO.'
- (8) *Tarô-ga shusse shi-te, takai chii-ni agat-ta.*  
 Tarô-NOM success do-TE high position-DAT AGARU-PAST  
 'Tarô has reached a high position in his career.'
- (9) *Hanako-ga kodomo-wo ii gakkô-ni ageru to kesshin shi-ta.*  
 Hanako-NOM children-ACC good school-DAT AGERU QT determination do-PAST  
 'Hanako is determined to send her children to a good school.'

This is an extension of (Ia) which maps rise in the social domain onto vertical motion in space, while preserving the zero-dimensional nature of the TR. I.e., *Hanako, jôhō*, etc. are all conceived of as punctual entities. Again, there is a GOAL-directed (7,8,9) and a non-GOAL-directed variant (6).

### 12.1.3. Sense (IIa): Spatial Extension along the Vertical Axis (fig. 2)

- (10) *Entotsu-kara kemuri-ga agat-ta.*  
 Chimney-ABL smoke-NOM AGARU-PAST 'Smoke rose from the chimney.'
- (11) *Shio-ga hiza-made agat-te ki-ta.*  
 Tide-NOM knee-ALL AGARU-TE come-PAST 'The tide has risen knee-high.'

In contrast to (Ia) and (Ib), this sense does not involve a change of location of the TR in its entirety, but rather the TR's extension along the vertical axis. In other words, the TR successively comes to occupy additional points along the vertical axis without abandoning the ones it is already occupying. Although verticality is certainly the most

salient dimension here it would seem odd to speak of a “one-dimensional” TR (e.g., the TR in [11] is clearly horizontally extended as well).

The connection between this sense and (Ia) becomes obvious once we consider the concept of *active zones*:

“Entities are often multifaceted, only certain facets being able to interact with a particular domain or play a direct role in a particular relationship. Those facets of an entity capable of interacting directly with a given domain or relation are referred to as the **active zone** of the entity with respect to the domain or relation in question.” (Langacker 1987: 272-73)

I.e., in (10) and (11) it is only a facet (a substructure) of the TR that actually undergoes a change of location. Consequently, if we focus our attention only on the top portion of the respective TRs (e.g. just the surface instead of the whole body of water in [11]), we end up with sense (Ia). However, the water and the smoke as a whole are more salient than their respective active zones – presumably because they are more coherent *gestalts*. Thus, the larger structures are elevated to the level of TR, resulting in an image schema transformation of the type *punctual TR --> extended TR*.

Like the previous senses, (IIa) varies with respect to GOAL-orientation.

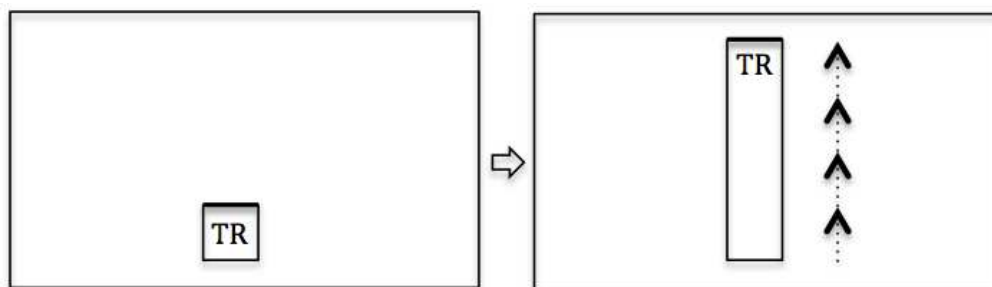


FIGURE 2

#### 12.1.4. Sense (IIb): Abstract Extension along the Vertical Axis

- (12) *Kion-ga 37-do-made agat-ta.*  
 Temperature-NOM 37 degrees-ALL AGARU-PAST. ‘The temperature has risen to 37 degrees.’
- (13) *Kono terebi dorama-no ninki-ga agat-te, fan-mo fue-ta.*  
 This TV series-LK popularity-NOM AGARU-TE fans-also increase-PAST  
 ‘This TV series has risen in popularity and garnered more fans.’
- (14) *Tarô-ga kodomo-no seiseki-wo ageru tame-ni katei kyôshi-wo yatot-ta.*  
 Tarô-NOM children-LK grades-ACC AGERU sake-DAT private teacher hire-PAST  
 ‘Tarô hired a private teacher in order to improve his children’s grades.’
- (15) *Iraira suru to, ketsuatsu-ga agat-te shimau.*  
 Get irritated COND blood pressure AGARU-IRR  
 ‘If you get irritated, your blood pressure will go up.’

This sense is an extension from (IIa) via the conceptual metaphor MORE IS UP. As Lakoff and Turner (1989: 83) have pointed out, verticality and quantitative increase are experientially correlated, since “we constantly encounter cases where an increase in substance (e.g., pouring more water in a glass) increases the height of the substance (e.g., the level of the water in the glass).” For image schematic topology, this means that the abstract TR (temperature, blood pressure, etc.) is conceived of as an object successively extending along the vertical dimension. Quantitative increase is therefore incompatible with a zero-dimensional TR (obviously a 0DTR lacks height).

#### 12.1.5. Sense (III): Subtractive Completion (fig. 3)

- (16) *Ame-ga agat-tara, soto-ni de-yô.*  
 Rain-NOM AGARU-when outside-DAT go out-VOL ‘Let’s go outside once the rain has ceased.’
- (17) *Kuruma-no batterii-ga agat-te shimat-ta.*  
 Car-LK battery-NOM AGARU-IRR-PAST ‘The car battery is drained.’
- (18) *Kono shigoto-ga kotoshi inai-ni agaru to ii nâ.*  
 This work-NOM this year within-DAT AGARU COND good EMPH  
 ‘I sure hope we can finish this work within the year.’

In the above sentences *agaru* expresses completion. We find a similar extension from vertical motion to completion in English and German verb particle constructions (*V up* and *auf-V*, respectively). As Lindner (1981) has pointed out in her discussion of the *V up* construction, vertical motion is often GOAL-directed: “[...] most extensions from vertical UP incorporate with increased salience a final, bounding location or state [...] The more saliently the final location or state figures in the meaning of UP, the more this location or state may be thought of as directing or defining the path” (Lindner 1981: 180). This applies to AGARU as well. As we have seen, senses (I) and (II) may involve GOALS (marked by *ni* or *made*) which indicate the final location of the TR or the end point of the TR’s extension. She further notes that “[a]s UP extends into abstract domains, literal verticality becomes less salient” (Lindner 1981: 180). Here, too, we see a parallel. While the vertical dimension of AGARU is preserved throughout the mappings in the non-spatial senses (Ib) and (IIb), its salience is certainly lowered. For example, although we tend to think of a “rise” in temperature in terms of extension along the vertical axis, it is not impossible to conceptualize such quantitative increases in terms of horizontal extension as well (e.g. from left to right). In contrast, the take-off of a plane etc. necessarily involves the vertical dimension. We can therefore conclude that verticality

gradually “bleaches out” as AGARU extends into abstract domains. (III) seems to mark the end point of this development: The vertical dimension simply plays no role in (16)-(18).

In summary, then, we can attribute the extension of AGARU from vertical motion to completion to two major salience shifts:

- The heightened salience of GOAL-directedness
- The lowered salience of the vertical dimension

Let us now examine what kind of completive process AGARU expresses. Lindner (1981: 194) recognizes “at least two ways a process can reach a goal – by acting on the entire substance of its object and by effecting a sufficiently salient state change in its object.” To illustrate, consider the following sentences (based on Lindner 1981):

- (19) John ate up the sandwich. (congruence between process and processed region)  
(20) Sally tightened up the screw. (achievement of goal state)

The major difference between (19) and (20) lies in how the process expressed by the simplex verb acts on its object. As Lindner (1981: 204) points out, processes such as *eating* are special in that they “measure completeness against the amount of the object affected; UP codes the gradual spreading out of the abstract processed region as it reaches its goal, which is the capacity or boundary or limits of the object affected.” In other words, one can measure the progress of eating by tracking the state of whatever is being eaten. The same observation underlies Dowty’s notion of *incremental theme*:

[...] if I tell my son to mow the lawn (right now) and then look at the lawn an hour later, I will be able to conclude something about the “aspect” of the event of his mowing the lawn from the state of the lawn, viz., that the event is either not yet begun, partly done but not finished, or completed, according to whether the grass on the lawn is all tall, partly short or all short. On the other hand I will not necessarily be able to inspect the state of my son and conclude anything at all about his completion of his mowing the lawn. In this event, my son is the Agent and the lawn is the Theme, in fact the Incremental Theme. (Dowty 1991: 567)

In contrast, *the screw* in (20) is not an incremental theme in the above sense, since there is no portion of the screw which is gradually consumed or encroached upon by the process of tightening.

Returning to *agaru* (note, by the way, that there is no transitive variant of [III]), we can now see that the relevant entities in (16)-(18) – *rain*, *battery*, and *work* – are similar in their behavior to incremental themes. Take (18) for example: Here, we have a

quantifiable amount of a certain (abstract) substance, i.e. *work*. This substance is implicitly assumed to be bounded, its boundaries constituting the LM of *agaru*. Consequently, *agaru* profiles what Lindner (1981: 194) calls a “subtractive process”, i.e. a process which gradually encroaches upon a substance towards its intrinsic boundaries – the TR of *agaru* being the processed region. In other words, as we are working, the “substance of work” gradually depletes until the depleted region finally coincides with the initial workload. The same topology is easily applicable to the depletion of a battery, so (17) is straightforwardly accounted for. But what about (16)? To be sure, *rain* seems to be lacking in incrementality, since the corresponding process is not inherently telic, i.e. goal-oriented like the draining of a battery. By inspecting how much rain has fallen we cannot (at least not reliably) tell how much rain “is left”. However, telicity, where not inherent, is usually supplied by our knowledge that potentially open-ended processes (like working or raining) are not actually endless. Therefore, considering our encyclopedic knowledge, the schematic topology of *agaru* is perfectly coherent in cases like (16): Since rain does not continue endlessly, it makes sense to imagine that there is some limited amount of rain (although we do not know how much), which gradually depletes until the depleted amount coincides with the initial amount (however much that may be). Viewed in this light, the question of telicity becomes an epistemic one.

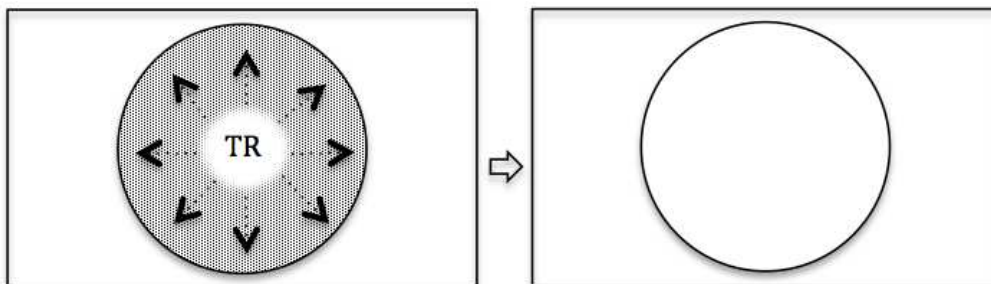


FIGURE 3: The hatched area marks the unprocessed region of the LM.

#### 12.1.6. Sense (IV): Access (fig. 4)

- (21) *Konkai-no torihiki-de hyakumanen-no rieki-ga agat-ta.*  
 Last-LK deal-INS 1.000.000 yen-LK profit-NOM AGARU-PAST  
 ‘The last deal yielded a profit of 1.000.000 yen.’
- (22) *Gutaiteki-na shôko-ga agaru-made matsu shika nai.*  
 Concrete-COP.ATT evidence-NOM AGARU-ALL wait no choice but  
 ‘We have no choice but to wait until some concrete evidence emerges.’
- (23) *Kôhosa toshite kare-no namae-ga agat-te iru.*  
 Candidate as he-LK name-NOM AGARU-RES  
 ‘His name popped up for the candidacy.’



- (24) *Betsu-no rei-wo age-te kudasai.*  
 Different-LK example-ACC AGERU-IMP please 'Please give a different example.'

We have access to the world through our perceptive faculties – our sense of vision being of paramount importance. However, the structure of our bodies (assuming a prototypical upright pose) limits the scope of our visual field. What is on the ground, below the waist, etc. is outside the field of vision (again, assuming a prototypical pose) and cannot be accessed unless we either look down or the entity in question is elevated to the line of visual access.<sup>1</sup> Therefore, if we want someone to consider something, we need to “bring it up“. This construal of access in terms of vertical elevation subtly differs from the alternate construal in terms of CONTAINMENT which I have discussed in the study of DERU: In the case of AGARU there is no particular obstacle (e.g. a CONTAINER) which is blocking the TR from being accessed. In this respect, the difference between DERU and AGARU corresponds to the difference between *out* and *up* in English verb particle constructions. As Lindner puts it:

OUT profiles as its LM its trajector’s original private or concealed state, whereas UP codes its trajector’s coming into view with no salient previous history or source. Compare *100 people turned out for the party* to *100 people turned up for the party*. The former has a feeling that the people came from the privacy of their homes into the domain of possible interaction with others. The latter suggests that they simply appeared, with the feeling that they may have come spontaneously off the street. (Lindner 1982: 319)

Consider the following pairs:

- (25a) *Tarô-ga shôko-wo dashi-ta.*  
 Tarô-NOM evidence-ACC DASU-PAST

- (25b) *Tarô-ga shôko-wo age-ta.*  
 Tarô-NOM evidence-ACC AGERU-PAST

‘Tarô gave evidence.’

- (26a) *Tarô-ga jirei-wo dashi-ta.*  
 Tarô-NOM example-ACC DASU-PAST

- (26b) *Tarô-ga jirei-wo age-ta.*  
 Tarô-NOM example-ACC AGERU-PAST

‘Tarô gave an example.’

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<sup>1</sup> See Lindner (1981: 163): “From our experience, we know that when an object is low, it often is among other objects which obscure it from view; when it is prone, we are likely to overlook it. An object that is high appears larger, is unobstructed and easier to see.”

Both (a) and (b) have in common that Tarô makes the TR accessible, but differ in how this is achieved. In the (a) versions the evidence and the example are construed as being brought out of an initially concealed state. In contrast, the (b) versions construe these entities as “public”. In these cases they are made accessible merely by pointing them out, i.e. by directing someone else’s attention towards what is already in the public domain.

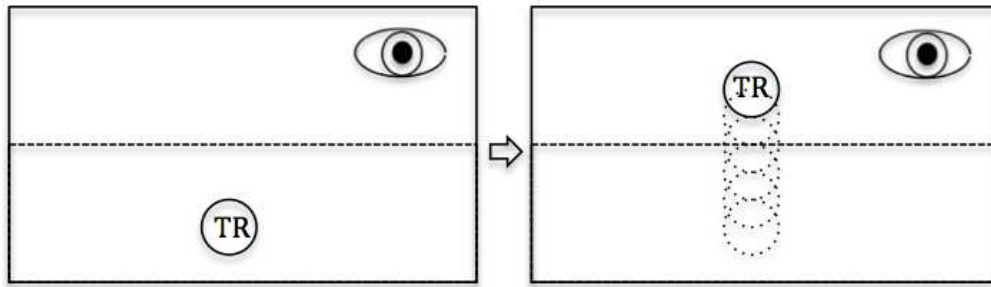


FIGURE 4

## 12.2. The Senses of V-AGARU

### 12.2.1. Spatial Ascension of a Zero-dimensional TR

- (27) *Sore-wo kiku to Tarô-ga tobi-agat-te, yorokon-da.*  
 That-ACC hear when Tarô-NOM jump-AGARU-TE rejoice-PAST  
 ‘When Tarô heard that, he jumped for joy.’
- (28) *Hanako-ga jûwaki-wo tori-age-ta.*  
 Hanako-NOM receiver-ACC take-AGERU-PAST ‘Hanako took up the receiver.’
- (29) *Tarô-ga bôru-wo taka-ku keri-age-ta.*  
 Tarô-NOM ball-ACC high-INF kick-AGERU-PAST ‘Tarô kicked the ball high.’

This usage corresponds to sense (1a) of the simplex verb. The V1 expresses the manner or cause of the TR’s ascension. Analogous senses of the *V-up* and German *auf-V* constructions are given below:

- (30) John picked up the receiver.  
 (31) The rocket shot up into the air.  
 (32) Mary climbed up the wall.
- (33) Hans hob den Ball vom Boden auf. (aufheben)  
 Hans picked up the ball from the floor.
- (34) Die Rakete schoss in den Himmel auf. (aufschießen)  
 The rocket shot up into the sky.
- (35) Anna scheuchte die Tauben auf. (aufscheuchen)  
 Anna scared up the pigeons

Note that the metaphor ELEVATION TO HANDLEVEL IS AVAILABILITY FOR USE/ACTION (Lindner 1981: 161) applies cross-linguistically:

(36) *linkai-ga kaiin-no teian-wo tori-age-ta.*  
 Committee-NOM member-LK proposal-ACC take-AGERU-PAST  
 'The committee took up the member's proposal.'

(37) John took up tennis as a hobby.

(38) Der Physiker hat seine alte Theorie wieder aufgegriffen. (aufgreifen)  
 'The physicist took up his former theory again.'

As Himeno (1976: 101) points out, some uses of *V-ageru* do not involve the ascension of a concrete object but rather indicate the vertical direction of the process itself:

(39) *Tarô-ga sora-wo mi-age-ta.*  
 Tarô-NOM sky-ACC look-AGERU-PAST 'Tarô gazed at the sky.'

The TR in (39) is Tarô's gaze itself, reified as the vector of his line of vision. Since a line is obviously one-dimensional, it seems counterintuitive to speak of a zero-dimensional TR in this case. However, the relevant motion is not extension along the vertical axis but ascension of the individual points (zero-dimensional entities) which together make up his line of vision. In terms of schematic topology, this is similar to the case of *flip up the lever*, where the end of the lever serves as active zone for *up* (Lindner 1981: 153). The difference between a lever and a line of sight is, of course, that the line of sight is unbounded (i.e., there is no single point corresponding to the end of the lever). Consequently, the role of active zone is assumed by the entirety of points on the line of sight, rather than one salient point in particular (although one could single out a particular point at random).

As far as argument structure is concerned, note that (39) can roughly be paraphrased as:

(40) *Tarô-ga shisen-wo age-te, sora-wo mita.*  
 Tarô-NOM gaze-ACC ageru-TE sky-ACC look 'Tarô directed his gaze upwards to the sky.'

In contrast to (27)-(29), the entity which undergoes ascension in (39) is quite abstract and therefore not salient enough to be realized as an overt nominal. This explains the infelicity of *\*Tarô-ga sora-wo age-ta*.

### 12.2.2. Abstract Ascension of a Zero-dimensional TR (Social Ascension)

- (41) *Fuka-ku o-rei-wo môshi-age-masu.*  
Deep-INF HON-thank-ACC speak.HUM-AGERU-POL 'I thank you deeply.'
- (42) *Seifu-ga nômin-kara kome-wo kai-age-ta.*  
Government-NOM farmers-ABL rice-ACC buy-AGERU-PAST  
'The government bought rice from the farmers.'
- (43) *Shachô-ga hikui mibun-kara nari-agat-ta.*  
CEO-NOM low status-ABL become-AGARU-PAST  
'The CEO made his way up from a modest background.'

This sense is analogous to sense (Ib) of the simplex verb in that it maps vertical motion in space onto the social domain. To be sure, entities such as *kome* (rice) are not zero-dimensional per se (i.e., rice is an unbounded mass). However, *kau* (buy) evokes a commercial frame in which bounded quantities are exchanged. Secondly, on a more general note, AGARU in the above sentences entails change of place in the social domain – which in turn requires that the TR be construed as a bounded moving entity with no salient dimensions. Therefore “ascension of 0DTR” is to be understood as follows: Although the TR may have more than zero dimensions, none of them are *salient* in terms of image schematic topology. Therein lies the contrast to spatial extension, which requires precisely one salient dimension.

Since structuring the social domain along the vertical axis is cross-culturally widespread (although I would not venture to say “universal”), it is hardly surprising to find parallel constructions in English and German:

- (44) John climbed up the ladder to vice president.
- (45) Hans ist bis zum Vizepräsidenten aufgestiegen. (aufsteigen)  
Hans made it to vice president.

### 12.2.3. GOAL-oriented Spatial Movement (Bleached Verticality) (fig. 5)

- (46) *Nibanme-no uma-ga kyûsoku-ni oi-age-te ki-ta.*  
Second-LK horse-NOM rapidly chase-AGERU-TE come-past  
'The horse in second place caught up rapidly.'

Recall from (III) above that heightened salience of GOAL-directedness can eventually “bleach out” the *verticality* aspect of AGARU. This appears to be the case in (46), where *oi-ageru* profiles GOAL-directed motion along the horizontal axis. Note that the

phenomenon of bleached verticality applies to English and German particle verbs as well:

- (47) A man walked up to me and asked for a cigarette.
- (48) John met up with his sister in a coffee shop.
- (49) Der Läufer hat wieder zur Gruppe aufgeschlossen. (aufschließen)  
The runner caught up with the field again.
- (50) Der Lastwagenfahrer ist zu dicht aufgefahren. (auffahren)  
The truck driver drove to close to the car in front.

Although at first glance the vertical dimension seems to play no role in any of the above scenes, Lindner (1981: 181) suggests that GOAL-directedness may be rooted in verticality after all, pointing out that entities subjectively increase along the vertical axis as distance from the conceptualizer decreases. Consider the following sentence pair:

- (51) Mary walked up to me.
- (52) Mary walked up to John.

In (51) the TR of *walked up* (Mary) moves closer towards the observer, thereby occupying more space in the visual field – with the most salient increase in size being the one along the vertical axis. As GOAL of Mary’s PATH, the observer perceives an increased height in the TR. In (52), on the other hand, no such increase is perceived by the observer directly. Here the experience of increased height can only be obtained “virtually”, i.e. by the observer mentally putting himself in John’s place. Naturally, then, this experience of vertical increase becomes less and less salient where GOAL and conceptualizer do not coincide.

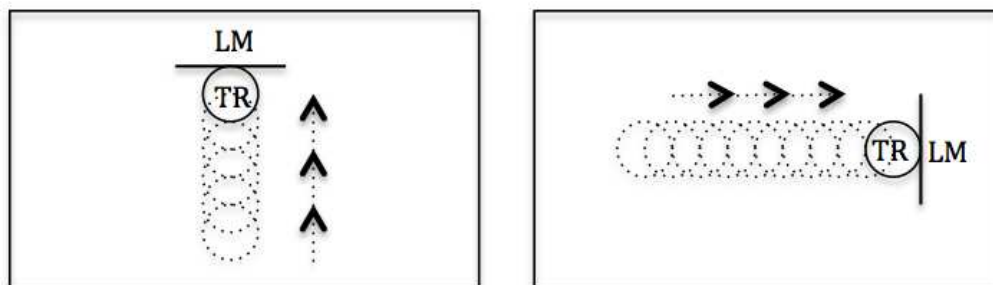


FIGURE 5

However, returning to (46), it is worth noting that *oi-ageru* seems to be the only instance of V-AGARU indicating non-vertical GOAL-oriented motion in physical space. Furthermore, *oi-ageru* has a second use different from the one in (46):

- (53) *Inu-ga hitsuji-wo oka-no ue-ni oi-age-ta.*  
 Dog-NOM sheep-ACC hill-LK top-DAT chase-AGERU-PAST  
 'The dog chased the sheep up the hill.'

In the above sentence *oi-ageru* indicates caused motion into an upwards direction. The *verticality* aspect is fully intact here. Considering this, it is possible that the usage in (46) has developed by invited inferencing from the one in (53), i.e. from *chase XY into an upwards direction* to simply *catch up to XY*. In other words, the meaning extension could be more contextual than conceptual in nature. In fact, this seems to be the most plausible account, since it would also explain why the transitive form *-ageru* is used instead of *-agaru*.

Nevertheless it was worth pointing out the connection between increase in height and GOAL-oriented motion – firstly, for the sake of cross-linguistic comparison and secondly, because it may partly explain the following sense of V-AGARU.

#### 12.2.4. GOAL-oriented Non-spatial Movement (Bleached Verticality) (fig. 7)

- (54) *Tarô-ga yotei-wo isshûkan kuri-age-ta.*  
 Tarô-NOM plans-ACC one week reel in-AGERU-PAST 'Tarô moved up his plans by a week.'

The verb *kuru* in its original spatial sense profiles caused motion of a thin, linear object towards the conceptualizer:

- (55) *Ito-wo kuru*  
 Thread-ACC coil up 'To coil up a thread'

While such motion prototypically involves elevation to handlevel, it will also affect the shape of an object, i.e. a thread of wool will take the shape of ball, a line will take the shape of a coil, and so forth. In these cases GOAL-directed motion (towards the conceptualizer) coincides with an increase along the salient vertical axis (see fig. 6). Both aspects are preserved throughout the metaphorical mapping:

- The entity is “elevated to handlevel” and therefore moved into the domain of action and actuality (cf. *They moved up the grand opening to January*).
- The entity “increases in size”, and therefore importance, as it becomes less distant from the conceptualizer.

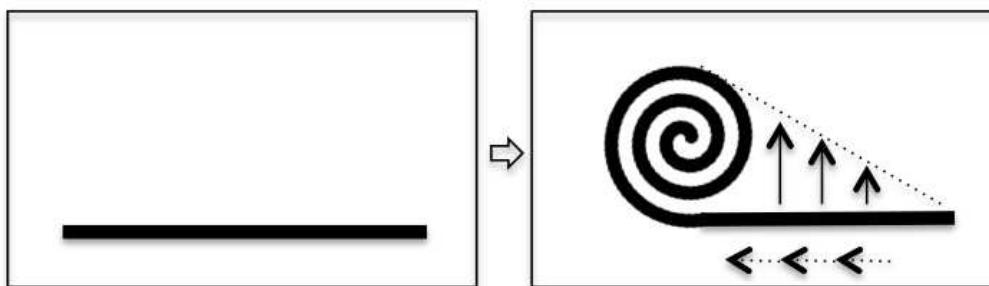


FIGURE 6: schematic depiction of *ito-wo kuru*

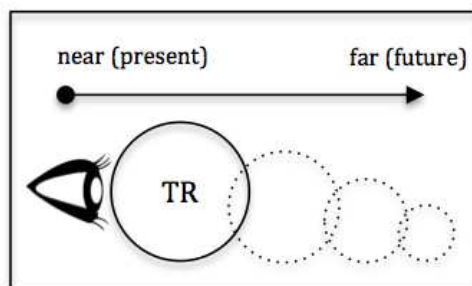


FIGURE 7: schematic depiction of *yotei-wo kuri-ageru*

### 12.2.5. Spatial Extension along the Vertical Axis

- (56) *Tarô-ga hako-wo tsumi-age-ta.*  
 Tarô-NOM boxes-ACC pile-AGERU-PAST ‘Tarô piled up the boxes.’
- (57) *Hanako-ga nobi-agat-te, hon-wo tor-ô to shi-ta.*  
 Hanako-NOM stretch-AGARU-TE book-ACC take-INT-PAST  
 ‘Hanako stretched and tried to take the book.’
- (58) *Tarô-ga isu-kara tachi-agat-ta.*  
 Tarô-NOM chair-ABL stand-AGARU-PAST ‘Tarô stood up from the chair.’

This sense corresponds to (IIa) of the simplex verb. Here, -AGARU encodes various ways in which an entity may extend along the vertical axis without undergoing a complete change of location. In (56), for instance, several uniplex entities (discrete boxes) are piled onto one another, resulting in the vertical extension of a multiplex entity (the pile). (57) and (58), on the other hand, encode vertical extension of the TR into an upright position.

Note that canonical standing posture is commonly associated with readiness for activity, giving rise to the metaphor *READY IS UP*:

- (59) *Tarô-ga chôsen-ni tachi-agat-ta.*  
 Tarô-NOM challenge-DAT stand-AGARU-PAST ‘Tarô stood up to the challenge.’

- (60) *Pasokon-ga tachi-agat-ta.*  
 PC-NOM stand-AGARU-PAST 'The PC booted up.'

It is thus unsurprising that we should find similar expressions in English and German:

- (61) Is anyone up for some ice cream?  
 (62) Seine Freunde haben ihn wieder aufgerichtet. (aufrichten)  
 His friends lifted his spirits again.

### 12.2.6. Abstract Extension along the Vertical Axis

- (63) *Korekutâ-tachi-ga ôkushon-de kaiga-no nedan-wo seri-age-ta.*  
 Collector-PL-NOM auction-INS painting-LK price-ACC make bid-AGERU-PAST  
 'The collectors bid up the painting's price at the auction.'

This corresponds to sense (IIb) of the simplex verb. I.e., the abstract TR is conceived of as an object successively extending along the vertical dimension.

### 12.2.7. Multidimensional Spatial Extension (fig. 8)

- (64) *Ashi-ga hari-agat-te iru.*  
 Foot-NOM swell-AGARU-RES 'The foot is swollen up.'  
 (65) *Zenshin-no kekkan-ga fukure-agari, hageshi-ku myaku-wo ut-ta.*  
 Whole body blood vessel swell-AGARU.CONJ intense-INF pulse-ACC beat-PAST  
 'The blood vessels in his/her body swelled up and the heart beat intensely.'

As pointed out by Lindner (1981: 152), vertical extension is sometimes accompanied by a simultaneous extension into other dimensions. Put in another way, when an object grows in size, its increase along the vertical dimension is typically the most salient change. Consequently, vertical extension can stand metonymically for overall growth:

- (66) My foot is all swollen up.  
 (67) Die Kröte hat sich aufgebläht. (aufblähen)  
 The toad blew itself up into a bloated state.

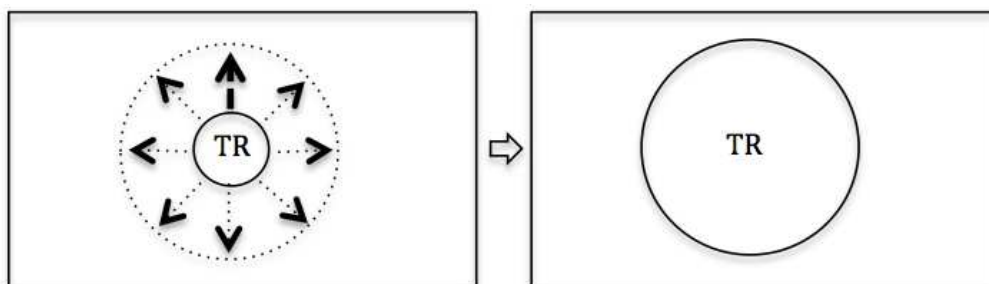


FIGURE 8



### 12.2.8. Vertical Encroachment (fig. 9)

(68) *Hanako-ga Tarô-no kami-wo kari-age-ta.*  
Hanako-NOM Tarô-LK hair-ACC trim-AGERU-PAST  
'Hanako cropped the hair at the back of Tarô's head.'

(69) *Atama-ga hage-agat-te iru node, fuke-te mieru.*  
Head-NOM bald-AGARU-RES because grow old-TE look  
'Because his hair has receded, he looks old.'

We have already discussed some similar processes under (III). The above examples (68) and (69) feature a region made up of some substance (in this case hair), which is then subsequently encroached upon along the vertical dimension by the process encoded by the V1. As such, this sense bears a strong family resemblance to what I have called *subtractive completion*. However, it differs from the latter in that it actually involves the vertical dimension in physical space.

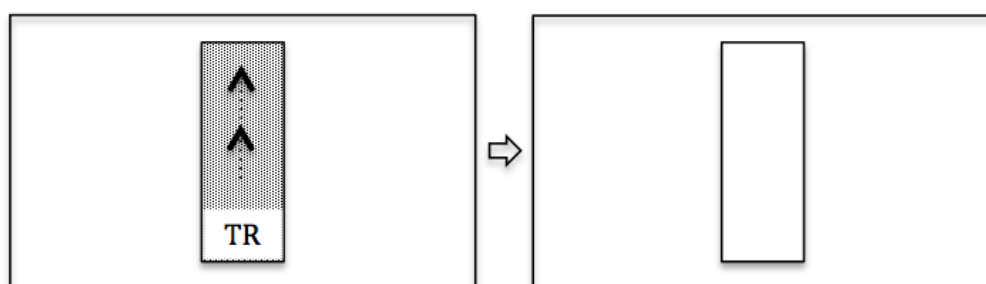


FIGURE 9: The hatched area marks the unprocessed region of the LM.

### 12.2.9. Completion 1: Subtractive Completion

(70) *Arubamu-wa hyakumanmai-wo uri-age-ta.*  
Album-TOP 1.000.000 units-ACC sell-AGERU-PAST 'The album sold 1.000.000 units.'

(71) *Tarô-ga issshûkan kake-te, hon-wo yomi-age-ta.*  
Tarô-NOM one week spend-TE book-ACC read-AGERU-PAST  
'Tarô finished the book within a week.'

(72) *Hanako-ga Tarô-no kettan-wo kazoe-age-ta.*  
Hanako-NOM Tarô-LK shortcomings-ACC count-AGERU-PAST  
'Hanako enumerated Tarô's shortcomings.'

This sense is analogous to sense (III) of the simplex verb. Here, too, we have some abstract region which is gradually being processed until the processed region completely coincides with the initial unprocessed region. Recall from our discussion of (III) that the exact capacity of the initial region is not always known from the onset of the process. For example, (70) does not necessarily entail that the album sold out completely. What it means is that one million units make up the final sales figure, a fixed

amount which is then (i.e. after the fact) construed as the capacity of the initial unprocessed region. In other cases, such as (71), it is natural to assume that the region's capacity is known before its being processed (i.e., it is easy for Tarô to know how many pages his book consists of and to track his reading progress vis-a-vis the book's thickness).

As for the topic of incrementality: The entities in (70)-(72) behave like incremental themes insofar as progress is measured against how much of the entity's region has been processed. On the other hand, we are not necessarily able to tell the processed amount by inspecting the entity. I.e., if there is no bookmark in Tarô's book we will not be able to deduce his reading progress, since reading does not cause any perceptible change of state in the affected object (unlike *mowing* or *eating*).

Below are some corresponding examples from English and German:

- (73a) He ate up the whole pizza.
- (73b) Er hat die ganze Pizza aufgegessen. (aufessen)  
(same as 73a)
- (74a) She used up all her money.
- (74b) Sie hat ihr ganzes Geld aufgebraucht. (aufbrauchen)  
(same as 73a)
- (75) Hans hat das Gedicht aufgesagt. (aufsagen)  
Hans recited the poem (completely).
- (76) Helga hat alle Präsidenten aufgezählt. (aufzählen)  
Helga recited (the names of ) all the presidents.

It is interesting to note that the German verbs in (75) and (76) not only imply completive aspect but at the same time public accessibility. I.e., there seems to be a conflation of the *completive* and *access* senses, both rooted in the spatial meaning of the preposition *auf*.

On a related sidenote, all German examples exhibit some leniency in respect to completive aspect:

- (77) Hans hat die Pizza nur zur Hälfte/halb aufgegessen.  
Hans ate only half the pizza.
- (78) Helga hat das Gedicht nur zu einem Drittel aufgesagt.  
Helga only recited a third of the poem.

In contrast, the following strike us as very odd, if not outright infelicitous:

(79) (??) John ate up only half of the pizza.

(80) \**Tarô-ga hon-wo tochû-made yomi-age-ta.*  
Tarô-NOM book-ACC halfway read-AGERU-PAST

It seems that sentence (77) construes the complete consumption of the pizza as part of the non-actual domain and its partial consumption as part of the real world. Sentence (79), on the other hand, construes both complete consumption and partial consumption as actual, resulting in a paradoxical state of affairs. The same applies *mutatis mutandis* to (78) and (80), respectively. The exact reason for this is unclear. We might suspect the semantics of *auf-* or *zur Hälfte/halb* or some combination thereof to be responsible for this phenomenon.

#### 12.2.10. Completion 2: Achievement of Sufficient State (fig. 10)

(81) *Men-ga yude-agat-tara, utsuwa-ni moru.*  
Noodles-NOM cook-AGARU-when bowl-DAT pile.  
'Once the noodles are cooked, put them into a bowl.'

(82) *Tarô-ga karada-wo kitae-age-ta.*  
Tarô-NOM body-ACC train-AGERU-PAST 'Tarô built up his body.'

(83) *Isha-ga kanja-no jôtai-wo tetteiteki-ni shirabe-age-ta.*  
Doctor-NOM patient-LK condition-ACC thoroughly examine-AGERU-PAST  
'The doctor examined the patient's condition thoroughly.'

This sense is related to the preceding one in that V-AGARU codes a GOAL-directed process. Here, however, progress is not achieved in a manner of encroaching consumption. Instead, the GOAL is defined as some salient state on a value scale. In (81) this is the state of being sufficiently cooked<sup>2</sup>, in (82) presumably the state of being sufficiently fit, and in (83) the state of being sufficiently certain. As implied by Lindner, it is plausible to think of the *sufficient state* sense as an extension via the metaphor MORE IS UP: „Scalar organization immediately calls to mind an extension of vertical UP-1 – the brighter something is, the higher its state is on the scale of brightness. By virtue of this extension of verticality, UP will code any increase in degree, that is, any positive increment along a given scale“ (Lindner 1981: 204). Note that the GOAL state is not necessarily absolute – what is deemed “sufficient“ may vary according to personal taste, needs, or from situation to situation (e.g., some like their noodles more *al dente* than others; see [81]). In contrast, the *subtractive completion* sense will not admit to the

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<sup>2</sup> As the data in Himeno (1976) shows, verbs of food preparation are prototypical for this sense.

setting of *ad hoc* GOALS (e.g., it is non-debatable at which point a book is read completely).

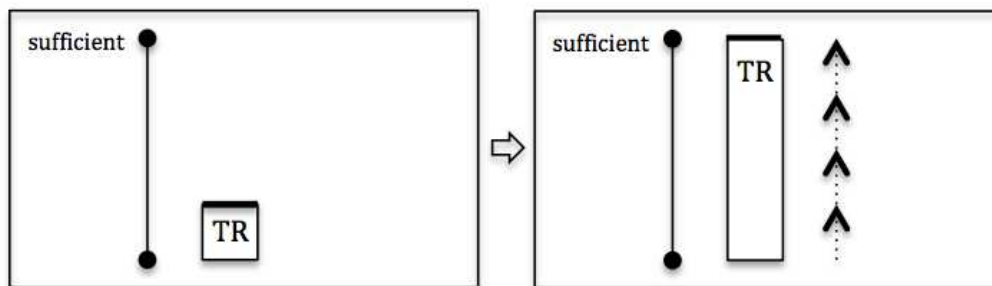


FIGURE 10

We find an interesting subtype of the *sufficient state* sense in German, where *auf-* codes the restoration of an entity to its former desirable state (see Güler 1986: 96):

(84) Er hat die Suppe aufgewärmt. (aufwärmen)  
He reheated the soup.

(85) Sie hat das Sofa aufgepolstert. (aufpolstern)  
She reupholstered the sofa.

(86) Ich muss die Batterie aufladen.  
I have to recharge the battery.

Now recall (17) from above:

(87) *Kuruma-no batterii-ga agat-te shimat-ta.*  
Car-LK battery-NOM AGARU-IRR-PAST 'The car's battery is drained.'

Since the two *completion* senses may code GOAL-directed processes into opposite directions, sentences like the following are easily accounted for:

(88) Die Batterie ist *aufgebraucht* und muss wieder *aufgeladen* werden.  
The battery is used up and needs to be charged up again.

Here *aufbrauchen* codes the battery's depletion process in terms of subtractive completion, while *aufladen* codes its restoration to full capacity in terms of the sufficient state sense.

### 12.2.11. Some Notes on Reflexive TRs

As Lakoff (1990b: 430) has pointed out, Lindner's 1981 study is renowned for the discovery of reflexive trajectors. Since the above analysis has shown that the senses of Japanese V-AGARU and English *V up* (as well as German *auf-V*) are often similarly

motivated in terms of image schematic topology, we might expect to find instances of reflexive -AGARU. Are there any?

Consider the following examples of reflexive *up* and *auf*-:

- (89) Mary rolled up the carpet.  
 (90) Marie hat den Teppich aufgerollt. (aufrollen)  
 (same as 89)

Reflexive TRs are special in that “the trajector and LM are identified with each other, that is, the trajectory of the object is defined relative to the object itself” (Lindner 1981: 186). I.e., in the above examples “each subpart serves as both trajector and LM to other subparts, which amounts to a change in the object’s shape. When each of an object’s subparts has other subparts as its goal of approach, the object becomes compact, its subparts more tightly integrated” (Lindner 1981: 186).

Interestingly, Himeno (see 1976: 103) lists some instances of V-AGARU that appear to code a similar change of shape, namely a “reduction in form” (*katachi no shukushô*):

- (91) *Tarô-ga rôrukâten-wo maki-age-ta.*  
 Tarô-NOM roller shade-ACC roll-AGERU-PAST ‘Tarô rolled up the roller shade.’  
 (92) *Hanko-ga sode-wo makuri-age-ta.*  
 Hanako-NOM sleeve-ACC roll-AGERU-PAST ‘Hanako rolled up her sleeve.’  
 (93) *Tarô-ga kami-wo ori-age-ta.*  
 Tarô-NOM paper-ACC fold-AGERU-PAST ‘Tarô folded up the paper.’

Although the entities in all of these scenes do become more compact as a result of the process coded by -AGARU, I would hesitate to call them “true” reflexive TRs in Lindner’s sense. That is, in (91)-(93) the LM seems to be the general vertical PATH taken by the entity’s active zone rather than the entity itself. In (91), for example, there is a salient subpart – the lower end of the curtain – which moves into an upward direction. In cases like (92), where the active zone is salient enough to assume the role of grammatical object, this metonymic shift is even more obvious:

- (92a) *Hanko-ga sode-wo makuri-age-ta.*  
 Hanako-NOM sleeve-ACC roll-AGERU-PAST ‘Hanako rolled up her sleeve.’  
 (92b) *Hanko-ga sode-no suso-wo makuri-age-ta.*  
 Hanako-NOM sleeve-LK cuff-ACC roll-AGERU-PAST  
 ‘Hanako rolled up the cuff of her sleeve.’

I therefore suggest to categorize (91)-(93) as cases of *spatial ascension*, exhibiting a *part* --> *whole* metonymic shift.

### 13. TÔRU and the PATH TRAVERSAL Schema

The intransitive/transitive pair *tôru/tôsu* can be schematically characterized as follows:

(A)	X-ga	Y-wo	Z-ni	tôsu
	X CAUSE	Y TRAVERSE	Z (PATH)	

(B)		Y-ga	Z-wo	tôru
		Y TRAVERSE	Z (PATH)	

TRAVERSAL is the relation between a moving entity and its PATH, leading from a SOURCE to a GOAL. In other words, the conceptual content of TÔRU is roughly equivalent with the notion of movement along a terminal PATH. Note that TRAVERSAL is less specific than the PENETRATION image schema, which characterizes semantically related prepositions such as English *through* and German *durch*. For instance, the TRAVERSAL of a flat, 2-dimensional “floor” surface – compatible with TÔRU, but not with *through* or *durch* – is not an instance of PENETRATION. This will be discussed in more detail below.

#### 13.1. The Senses of TÔRU

##### 13.1.1. Sense (Ia): LM is a Volume in Physical Space (fig.1)

- (1) *Tarô-ga rôka-wo tôt-ta.*  
Tarô-NOM corridor-ACC TÔRU-PAST ‘Tarô went through the corridor.’
- (2) *Hanako-ga shatsu-no sode-ni te-wo tôshi-ta.*  
Hanako-NOM shirt-LK sleeve-DAT hand-ACC TÔSU-PAST  
‘Hanako put her hand through the shirt sleeve.’
- (3) *Tankensha-ga fukai mori-ya numa-wo tôt-ta.*  
Explorer-NOM deep forests-and swamps-ACC TÔRU-PAST  
‘The explorer made his way through deep forests and swamps.’
- (4) *Kaibô-de dangan-ga kanzô-wo tôt-ta koto-ga wakat-ta.*  
Autopsy-INS bullet-NOM liver-ACC TÔRU-PAST NMLZ-NOM understand-PAST  
‘The autopsy revealed that the bullet pierced the liver.’
- (5) *Tarô-ga nohara-wo tôt-te, machi-e mukat-ta.*  
Tarô-NOM field-ACC TÔRU-TE town-ALL head for-PAST  
‘Tarô crossed the field and headed for the town.’

This sense profiles the PATH of the TR through a three-dimensional volume in the spatial domain. Note the gradual differences along the parameters of enclosure and

phase of matter. The tube-like LMs in (1) and (2) are vertically bounded and constitute prototypical cases of three-dimensional PATHs. The LM in (3) is unbounded at the top and therefore lacks full enclosure. However, the active zone actually being traversed still encompasses the TR along all three dimensions, since the trees exceed the TR in height. This is not the case in (5): While the LM is not exactly a flat two-dimensional surface – we can imagine the ground covered by shrubs and grasses of varying sizes – a human TR will typically exceed it in height. It is worth pointing out that this ratio of height between LM and TR constitutes a cut-off point for the categories described by English *through* and German *durch*, which partially overlap with TÔRU.

- (6) Anna ran through the forest.
- (7) Anna ran through/??over the cornfield.
- (8) Anna ran over/\*through the lawn.
  
- (9) Anna lief durch den Wald.
- (10) Anna lief durch/??über das Kornfeld.
- (11) Anna lief über/\*durch den Rasen.

(based on Kaufmann 1993:227)

As these examples show, *through/durch* in the domain of three-dimensional space requires the LM to be of sufficient height vis-a-vis the TR. As Kaufmann (1993: 227) puts it, “a two-dimensional object such as a lawn cannot include a three-dimensional one.” What constitutes “sufficient height” is, of course, a matter of degree. In regards to the similar case of *in(to)* vs *on(to)* Hawkins (1988: 254) observes fuzzy cases such as the following:

- (12) She placed Mary Jane’s drink securely *in its coaster*

“When confronted with this particular example, one native speaker of English (not myself!) noted that the preposition *in* is appropriate only if the coaster has a perceivable ‘lip’. [...] Without such a lip, the appropriate preposition would be *on*” (Hawkins 1988: 254). We will see in the next section, however, that the height criterion is not crucial in the case of TÔRU, i.e. that TÔRU cross-cuts the categories *through/durch* and *over/über*.

Another salient parameter is *phase of matter*, which refers to the consistency of the LM, ranging from completely empty to completely solid. For instance, while the LM in (1) is empty, the forest and swamp in (3) are interspersed with solid objects or of a higher overall density, thereby posing impediments to PATH traversal. Thus, *phase of matter* often features prominently in the target domain of metaphorical mappings, e.g.



when someone has to *hack their way through* a “*thicket of regulations*” to obtain a business license.

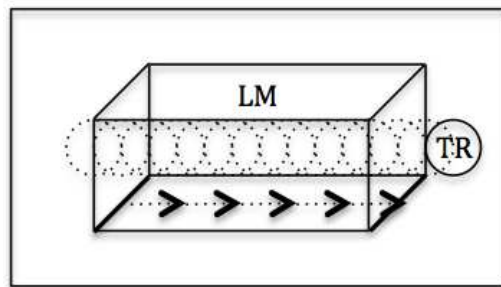


FIGURE 1

### 13.1.2. Sense (Ib): LM is a “Floor” Surface in Physical Space (fig. 3)

- (13) *Tarô-ga hashi-wo tôt-ta.*  
 Tarô-NOM bridge-ACC TÔRU-PAST ‘Tarô crossed the bridge.’
- (14) *Kuruma-ga kôdô-wo tôt-ta.*  
 Car-NOM highway-ACC TÔRU-PAST ‘The car drove down the highway.’
- (15) *Kyûkyûsha-ga basu yûsen rên-wo tôt-ta.*  
 Ambulance-NOM bus priority lane-ACC TÔRU-PAST  
 ‘The ambulance drove on the bus priority lane.’

As mentioned above, the LMs in (13)-(15) are incompatible with *through* or *durch*. One cannot go *through* a bridge or lane in English, since these objects lack vertical extension. It might be argued that this is not true if, for example, the bridge has handrails on each side. However, such handrails would not be part of the bridge’s active zone, i.e. it is the flat surface of the bridge that is being traversed, not the rails. That is, if we imagine a prototypical 3D-volume as a cube, then a 2D-surface corresponds to the cube’s underside or “floor” (see fig. 2). In this way the *volume* and *surface* senses of TÔRU are connected via a 3D-cube --> 2D-square image schema transformation.

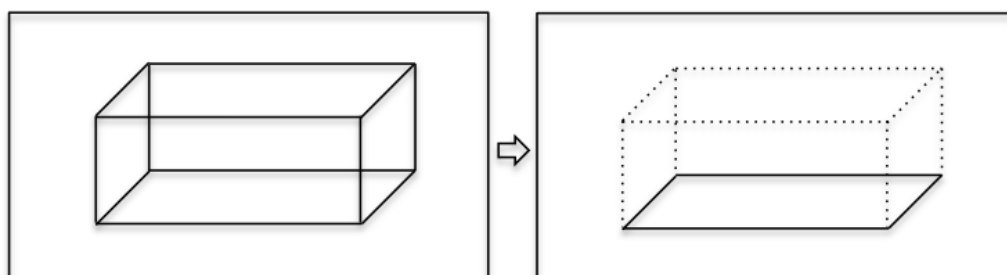


FIGURE 2: volume to “floor” transformation

Still, it is worth noting that the scenes in (13)-(15) include the possibility of the TR facing some sort of resistance or challenge on its PATH. For example, it is dangerous to cross a shaky bridge spanning a river, even with no physical obstacle in the way. As mentioned in the preceding section, this concept of resistance or challenge is often metaphorically expressed in terms of dense phase of matter in the physical realm. This is not to say that any of the sentences in (13)-(15) are actually metaphorical. I merely suggest that there are conceptual parallels between the traversal of a dense volume and facing resistance/challenge – which by association may allow for the construal of the above LMs as somewhat “abstractly 3-dimensional”.

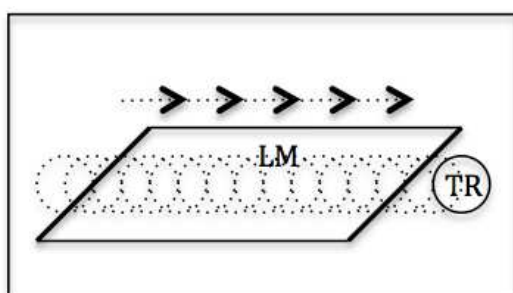


FIGURE 3

### 13.1.3. Sense (Ic): LM is a “Wall” Surface in Physical Space (fig. 6)

(16) *Hanako-ga tera-no mon-wo tô-t-ta.*  
 Hanako-NOM temple-LK gate-ACC TÔRU-PAST ‘Hanako passed through the temple gate.’

(17) *Tarô-ga hari-ni ito-wo tôshi-ta.*  
 Tarô-NOM needle-DAT thread-ACC TÔSU-PAST ‘Tarô threaded the needle.’

(18) *Kono kappa-ga ame-wo tôsa-nai.*  
 This raincoat-NOM rain-ACC TÔSU-NEG. ‘This raincoat is waterproof.’

Again, if we visualize a prototypical volume as a cube, the cube’s boundary preceding the GOAL corresponds to a 2D “wall” (see fig. 4). This is another variant of the 3D-cube --> 2D-square image transformation postulated in the section above. The term “wall” is somewhat inadequate (and therefore put in quotation marks) because the 2D surface LM can be solid (18) as well as empty (17).<sup>1</sup> Conversely, if one zooms in on a 2D-“wall” one ends up with a 3D-volume. Thus, the image-schema transformation works in both ways. If granularity is sufficiently increased (via a magnifying glass, a microscope, etc.), even a “2D” LM of one millimeter can be construed as a 3D-volume (see fig. 5).

<sup>1</sup> Whether the LM in (16) is construed as solid or empty depends on the existence or absence of a closed door.

It should be noted that the decisive parameter setting the “floor” and “wall” senses apart is not *horizontal vs vertical* orientation, but *no penetration vs penetration* of the two-dimensional LM. The waterproof nature of the raincoat in (18), for instance, is not a matter of spatial orientation. Here the crucial factor is that *tôsu* codes the penetration of its two-dimensional fabric (which is prevented by the raincoat’s surface properties – hence the negative verb form). Nonetheless, “floor” construal is predominantly associated with horizontal orientation due to gravitational constraints. That is, the default way for humans, animals, etc. to traverse flat surfaces is horizontally, not vertically. Likewise, the default configuration for “wall” construal is a vertically oriented LM penetrated<sup>2</sup> by a horizontally moving TR.

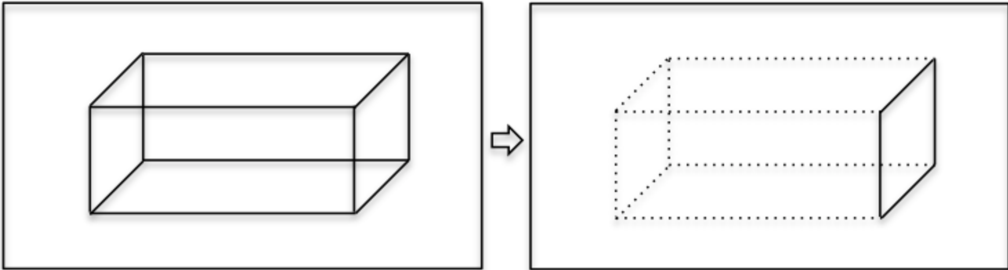


FIGURE 4: volume to “wall” transformation

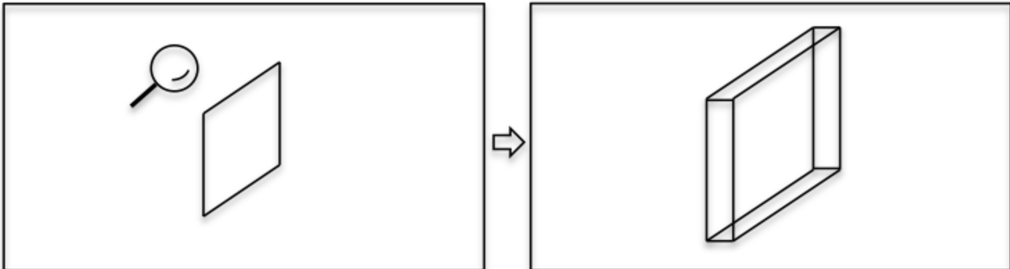


FIGURE 5: “wall” to volume transformation via increased granularity

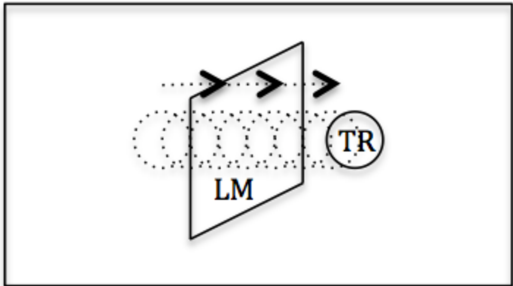


FIGURE 6

<sup>2</sup> “Penetration” as understood here includes passing through an empty-matter LM like an open door, etc.

#### 13.1.4. Sense (Id) LM is a Mass of Unspecified Dimensionality in Physical Space

- (19) *Kinzoku-ga denki-wo tōsu.*  
 Metal-NOM electricity-ACC TÔSU 'Metal conducts electricity.'

As examples like these show, the LM does not necessarily need to be specified along the dimensionality parameter. Though, as our encyclopedic knowledge tells us, electrical conductivity involves a PATH and therefore an at least one-dimensional LM. From the fact that TÔRU is inherently dependent on a PATH, we can conclude the verb's incompatibility with zero-dimensional point-like LMs.

#### 13.1.5. Sense (II): LM is a Temporal Expanse (fig. 7)

- (20) *Hitotsu-no kimono-de natsu fuyu tōsu hito-ga iru.*  
 One-LK garment-INS summer winter TÔSU people-NOM exist  
 'There are people who wear the same garment through summer and winter.'

- (21) *Tarô-ga sanjikan tōshi-te hon-wo yon-da.*  
 Tarô-NOM three hours TÔSU-TE books-ACC read-PAST  
 'Tarô read books for three hours straight.'

- (22) *Hanako-ga hiru-mo yoru-mo tōshi-te hatarai-ta.*  
 Hanako-NOM day-also night-also TÔSU-TE work-PAST 'Hanako worked day and night.'

In this metaphorically derived usage type the TR follows a linear PATH through time rather than space. Although in the above sentences the temporal LM can be construed as a one-dimensional SOURCE-PATH-GOAL structure (i.e. a horizontal line), it should be mentioned that the parameter *phase of matter* – which normally only applies to 3D-volumes – can be of some relevance in the temporal domain. A *hard winter* and an *easy youth* are obviously very different in respect to how much resistance a TR encounters on its way through them. However, this is an observation of a more general nature and is not necessarily relevant to the specific examples above.

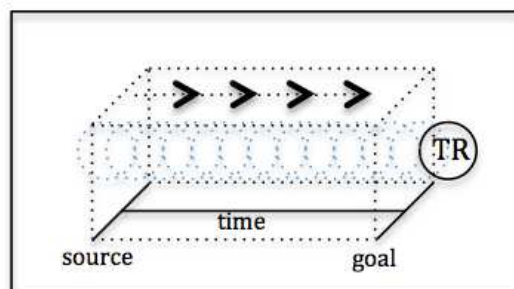


FIGURE 7

Note further that this sense is incompatible with *tôru* and instead requires a somewhat grammaticalized form of *tôsu*. A similar grammaticalized variant, the complex postposition *wo tôshite*, will be discussed further below.

### 13.1.6. Sense (III) LM is a Non-spatial, Non-temporal Expanse

(23) *Hôan-ga teikô-ni at-ta ga, kekkyoku gikai-wo tôshi-ta.*  
 Bill-NOM resistance-DAT meet-PAST CONJ eventually congress-ACC TÔSU-PAST  
 ‘The bill met with resistance but eventually passed congress.’

(24) *Hanako-ga ganko-ni jibun-no iken-wo tôshi-ta.*  
 Hanako-NOM stubbornly self-LK opinion-ACC TÔSU-PAST  
 ‘Hanako stubbornly pushed through her opinion.’

(25) *Kono sakka-ga ‘kitsune udon’ to iu pen nêmu-de tôte iru.*  
 This author-NOM ‘Kitsune Udon’ QT call pen name-INS TÔRU-PROG  
 ‘This author is known by the pen name ‘Kitsune Udon.’’

(26) *Tarô-ga shinbun kiji-ni me-wo tôshi-ta.*  
 Tarô-NOM newspaper article-DAT eyes-ACC TÔSU-PAST  
 ‘Tarô skimmed through the newspaper article.’

In this sense the SOURCE-PATH-GOAL structure of TÔRU is mapped onto other abstract domains. As shown by (23), the *phase of matter* parameter may play a significant role. Here *gikai* (parliament) plainly denotes a political institution, not simply a locus in physical space. Nevertheless, the TR encounters resistance on its PATH. Resistance in physical space typically entails a LM of some density or an empty LM interspersed with solid obstacles. In (23) this notion is mapped onto the target domain, giving rise to the concept of resistance in the social realm. Such agonist – antagonist constellations can be observed with respect to *through/durch* in English and German as well:

(27) The president pushed the bill *through* parliament.

(28) Die Regierung peitschte das neue Gesetz *durch* den Bundestag.

In these cases the metaphorical mappings are roughly as follows:

	<b>SOURCE: physical space</b>	<b>TARGET: policy making</b>
TR:	- physical object (e.g. traveller)	- abstract object (e.g. bill)
SOURCE:	- point of departure	- drafting of the bill
PATH (LM):	- physical PATH through space	- abstract PATH through institution
GOAL:	- point of arrival	- passing of the bill
Impediments:	- physical obstacles	- institutional obstacles
(LM’s phase of matter)	(e.g. mud, stones, trees, rivers)	(e.g. political opposition, laws, regulations, etc.)

Therefore, when considering the use of TÔRU in the abstract domain, we can make the following observation regarding the parameter of *dimensionality*: Where the notion of resistance is salient, such as (23) and (24), *phase of matter* will necessarily play a role. In these cases the abstract LM is construed as a volume capable of including obstacles or impeding traversal through a higher density. In other cases, such as (25) and (26), the dimensionality parameter does not feature prominently and the LM's dimensionality is therefore less clear-cut.

We can further note that several LMs cannot be overtly realized by lexical material. Examples of such sub-lexical LMs are given in (24) and (25):

(24') *Hanako-ga ganko-ni jibun-no iken-wo (??)-ni tôshi-ta.*  
 Hanako-NOM stubbornly self-LK opinion-ACC (??)-DAT TÔSU-PAST

(25') *Kono sakka-ga 'kitsune udon' to iu pen nêmu-de (??)-wo tô-te iru.*  
 This author-NOM 'Kitsune Udon' QT call pen name-INS (??)-ACC TÔRU-PROG

In both cases the LM corresponds to some vague communicative PATH. Here, the impossibility of filling the lexical gap reflects the highly abstract nature of the LM. Such constructions, being not readily analyzable, usually become idiomatic.

### 13.1.7. Sense (IV): LM is an Instrument (*wo tôshite*)

(29) *Oto-ga kabe-wo tôshite mimi-ni todoi-ta.*  
 Sound-NOM wall-WO TÔSHITE ears-DAT reach-PAST  
 'The sound was audible through the wall.'

(30) *Gakusha-ga bôenkyô-wo tôshite hoshi-wo kansoku shi-ta.*  
 Scholar-NOM telescope-WO TÔSHITE stars-ACC observation do-PAST  
 'The scholar observed the stars through a telescope.'

(31) *Ryôgawa-wa bengoshi-wo tôshite kôshô shi-te iru.*  
 Both sides-TOP lawyers-WO TÔSHITE negotiation do-PROG  
 'Both sides are negotiating through their respective lawyers.'

(32) *shujinkô-wa samazama-na keiken-wo tôshite seichô suru.*  
 protagonist-TOP various-COP.ATT experiences-WO TÔSHITE growth do  
 'The protagonist matures by going through various experiences.'

As these examples show, the complex postposition *wo tôshite* marks its LM as an instrument. Since *wo tôshite* is a grammaticalized variant within the TÔRU network, it is worth asking what PATHs and instruments may have in common. In order to answer this question, consider the notion of an *action chain*. According to Langacker (1991: 292), an action chain follows the flow of energy from an energy source (or head) to an

energy sink (or tail). For example, in the sentence *A waiter cracked the ice with a rock* (1991: 292) the waiter is the energy source and the ice is the energy sink. However, the energy is not transmitted directly from waiter to ice. There is an intermediary, an instrument, through which the energy travels from waiter to ice, i.e. *the rock*. It is therefore natural to construe instruments as PATHs, because the image schematic structure of a prototypical action chain is SOURCE-PATH-GOAL.

Unsurprisingly, the same phenomenon can be observed cross-linguistically. In regards to the English preposition *through*, Radden (1989: 571) notes: “The spatial idea of passing through a tunnel or a channel gives rise to the figurative meaning of a determinate, ‘channelled’ means [...]” In a similar vein Smith (1987) points out the parallels between spatial and instrumental uses of German *durch*:

- (33) Er warf den Ball durch das Fenster. [He threw the ball through the window.]  
 (34) Das Haus wurde durch Feuer zerstört. [The house was destroyed by fire.]

(from Smith 1987: 445f.)

Following Langacker’s action chain model, he notes that “the LM of durch serves as a conduit of sorts in both of these examples: [...] as a concrete object through which the ball moves, and [...] as an instrument through which force or energy moves” (Smith 1987: 446). Therefore, returning to the case of *wo tôshite*, it seems only natural for a verb which is strongly associated with the PATH schema to gradually take on the role of an instrumental marker.

Although *wo tôshite* is aptly described as an instrumental marker, it should be noted that instrumentality is not a clear-cut concept but a scalar one. Based on the above data, a scale of instrumentality would look something like this (taking into account that the following is possibly an oversimplification):

- (35) Spatial PATH --> physical instrument --> abstract instrument/manner --> cause

A given instance may be located on any point on this continuum. (29), for example, is located towards the left end of this scale, since the LM is actually a spatial entity through which the TR travels. On the other hand, a sentence like (32) would gravitate towards the right end of the scale, since here the abstract LM of *wo tôshite* (experience) initiates

a maturing process. This conflation of instrument and cause is also reflected by the competition between *wo tôshite* and the SOURCE marker *ni yotte*<sup>3</sup>:

(36a) *Tarô-ga kono keiken-ni yotte seichô shi-ta.*  
 Tarô-NOM this experience-NI YOTTE growth do-PAST

(36b) *Tarô-ga kono keiken-wo tôshite seichô shi-ta.*  
 Tarô-NOM this experience-WO TÔSHITE grow do-PAST

‘Tarô matured through this experience.’

Causal uses of PATH prepositions are known from English and German as well:

(37) An immense number of people are killed *through* traffic accidents every year.

(38) Jedes Jahr verliert der Staat Geld *durch* Steuerhinterziehung.  
 Every year the state loses money through tax evasion.

[[37] from Radden 1989:571)

Considering the image schematic structure of the action chain, the cause-instrument-link is hardly surprising. In a prototypical action chain the SOURCE (the agent) affects the PATH (the instrument), which in turn affects the GOAL (the theme). I.e., we have a causal chain of the type *agent --> instrument --> theme*. However, as Langacker (e.g. 1991: 295ff.) and Talmy (e.g. 2003a: 357ff.) have pointed out, construal changes depending on our distribution of attention. Again, consider Langacker’s example from above:

(39) A waiter cracked the ice with a rock.

The causal chain in this scene is *waiter --> rock --> ice*. According to this construal, the waiter, being an animate intentional entity, causes the ice to crack. Although he only affects the ice indirectly through the rock, he is the original SOURCE of energy in the causal chain. But what if we eclipse the waiter from our construal of the scene?

(40) The rock cracked the ice.

This sentence could be used in a context where the waiter’s contribution to the ice-cracking event is deemed less relevant than the instrument’s. E.g.: *He tried an ice pick, a paperweight and a rock. But only the rock cracked the ice.* In this case, the instrument’s

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<sup>3</sup> For a more detailed discussion of *ni yotte* see Matsumoto (1998b). As he notes, the causal use is the oldest among the abstract uses of *ni yotte*, followed by its use as a marker of means (1998b: 40). So, here too, we have evidence for the close connection between causality and instrumentality.



level of agency is heightened, while the original energy source is backgrounded. We are familiar with similar cases of “transferred agency” from the so called *middle construction*:

- (41a) The employee sells the car.
- (41b) The car sells well.
- (41c) The car (virtually) sells itself.

I will not discuss the middle construction itself here, since such a discussion would be far beyond the scope of this chapter. For the present purpose, I am merely interested in the shift of agency from (a) to (c). In (41a) the employee’s actions are the main cause of the car’s selling. In (41b) the quality of the car seems to be more salient than the employee’s sales pitch. And finally, in (41c) the car’s quality is the only salient factor – so much so, that it is construed as “selling itself” without any human assistance. The upshot is this: If the energy source is removed from the causal chain, it is only natural for the next element downstream to take its place.

Thus, in terms of the action chain model, the conflation of instrument and cause is straightforwardly accounted for: Instruments, as intermediary elements, are adjacent to the energy source (the cause). Consequently, if the original energy source is backgrounded/gapped, the instrument becomes the “next-best energy source” and may therefore be construed as cause.

## 13.2. The Senses of V-TÔRU

### 13.2.1. LM is an X-dimensional Expanse in Physical Space

- (42) *Ame-ga fuku-no ura-made shimi-tôt-ta.*  
Rain-NOM clothes-LK backside-ALL soak-TÔRU-PAST  
‘The rain soaked through to the lining of the clothes.’
- (43) *Kawa-no mizu-ga suki-tôt-te iru.*  
River-LK water-NOM become transparent-TÔRU-RES ‘The water of the river is clear.’
- (44) *Tarô-ga ita-ni kugi-wo tsuki-tôshi-ta.*  
Tarô-NOM board-DAT nail-ACC thrust-TÔSU-PAST ‘Tarô drove a nail through the board.’
- (45) *Kaze-ga ie-no naka-wo fuki-tôshi-ta.*  
Wind-NOM house-LK inside-ACC blow-TÔSU-PAST ‘Wind blew through the house.’

This sense of V-TÔRU is analogous to its simplex counterpart in the spatial domain. That is, the TR traverses the LM in the manner expressed by the V1. As with the simplex,

there is variance along the parameters of *dimensionality* and *phase of matter*. For instance, the LM in (44) is two-dimensional and solid, while the LM in (45) is three-dimensional and empty. Since I have already commented on these parameters above, I have opted for a less fine-grained distinction in the case of V-TÔRU.<sup>4</sup>

### 13.2.2. LM is a Temporal Expanse (Extended Process)

- (46) *Hanako-ga sannnenkan onaji kutsu-wo haki-tôshi-ta.*  
 Hanako-NOM three years same shoes-ACC wear-TÔSU-PAST  
 ‘Hanako wore the same shoes for three straight years.’
- (47) *Tarô-ga hyakkiro-no michi-wo aruki-tôshi-ta.*  
 Tarô-NOM hundred kilometers-LK road-ACC walk-TÔSU-PAST  
 ‘Tarô walked a road of hundred kilometers all the way down.’
- (48) *Kono hon-wo yomi-tôsu no-ni issûkan kakat-ta.*  
 This book-ACC read-TÔSU NMLZ-DAT one week take-PAST  
 ‘It took a week to read through this book.’
- (49) *Hanako-ga uso-wo tsuki-tôshi-te, iki-te ki-ta.*  
 Hanako-NOM lies-ACC tell-TÔSU-TE live-TE come-PAST ‘Hanako lived a lie (all her life).’

This sense is analogous to its simplex counterpart in the temporal domain. However, here the LM of *-tôsu* is the process profiled by the V1. The V1, in turn, takes as its LM the direct object of the sentence (marked by *wo*). In (46), for example, the V1 *haku* takes *kutsu* as its LM, yielding the structure (*sannnenkan onaji*) *kutsu-wo haku*. This structure is a temporal expanse and an instance of the SOURCE-PATH-GOAL image schema:

SOURCE: Beginning of process, i.e. start wearing shoes  
 PATH: Duration of process, i.e. temporal portion during which shoes are worn  
 GOAL: End of process, i.e. stop wearing shoes

The V2 *-tôsu* takes this temporal expanse as its LM. That is, in terms of image schematic structure the TR (Hanako) is construed as moving through this temporal expanse in the same way it would move through a spatial expanse – from SOURCE to GOAL.

Further, *-tôsu* – like its simplex counterpart – does not focus on either the SOURCE or the GOAL but on the PATH portion. To illustrate this point, consider that both *V-kiru* and *V-tôsu* presuppose the whole SOURCE-PATH-GOAL structure as background (or *base*, in

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<sup>4</sup> Of course, in such matters of granularity – and therefore schematicity – judgement varies from author to author. For example, Sugimura (2012: 54f.) goes so far as to postulate separate senses for individual lexical items such as *fuki-tôsu* (blow through) and *mi-tôsu* (see through).

Langackerian terms), but differ as to what portion of the structure is “in spotlight” (see also fig. 8):

(47a) *Tarô-ga hyakkiro-no michi-wo aruki-kit-ta.*  
 Tarô-NOM hundred kilometers-LK road-ACC walk-KIRU-PAST

(47b) *Tarô-ga hyakkiro-no michi-wo aruki-tôshi-ta.*  
 Tarô-NOM hundred kilometers-LK road-ACC walk-TÔSU-PAST

The V2 *-kiru* contributes the conceptual content of the SPLIT schema and therefore profiles the portion where discontinuity emerges (the GOAL as point of segmentation). In contrast, *-tôsu* contributes the conceptual content of the PATH schema and thus profiles the portion *between* SOURCE and GOAL. These different focus properties can explain why (50a) is acceptable, while (50b) is not:

(50a) *Hanako-ga issshûkan hon-wo yomi-tôshi-ta.*  
 Hanako-NOM one week books-ACC read-TÔSU-PAST

(50b) \**Hanako-ga issshûkan hon-wo yomi-kit-ta.*  
 Hanako-NOM one week books-ACC read-KIRU-PAST

According to image schematic structure, there is a fundamental difference in dimensionality between PATHs on the one hand and SOURCES and GOALS on the other: A PATH has at least one dimension (its most schematic depiction is a line) while SOURCES and GOALS are zero-dimensional (their most schematic depiction is a point). In other words, *issshûkan* requires an extended process, whereas *V-kiru* is temporally punctual. Of course, one can observe the opposite of this as well:

(51a) *Goji nijuppun-ni yatto kono hon-wo yomi-kit-ta.*  
 17:20h-DAT finally this book-ACC read-KIRU-PAST

(51b) \**Goji nijuppun-ni yatto kono hon-wo yomi-tôshi-ta.*  
 17:20h-DAT finally this book-ACC read-TÔSU-PAST

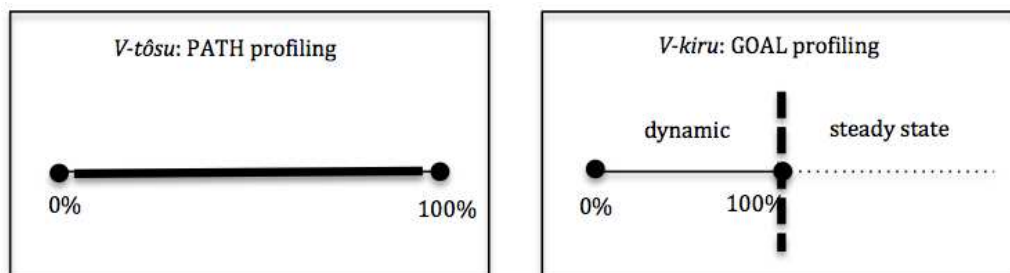


FIGURE 8: *V-tôsu* vs *V-kiru*

Note in passing the similar opposition between certain uses of the German particle verbs *durch-V* (PATH focus) and *aus-V* (GOAL focus):

- (52a) Ich habe die ganze Nacht durchgeschlafen.  
 (52b) \*Ich habe die ganze Nacht ausgeschlafen.

### 13.3. Related Constructions: *N-no tôri (N-dôri)/V-tôri*

- (53) *Isha-no iu tôri-ni shi-nasai.*  
 Doctor-LK say TÔRI-DAT do-IMP 'Do as the doctor says.'
- (54) *Yosô dôri-no tenkai dat-ta.*  
 Expectation TÔRI-LK development COP-PAST 'Things played out as expected.'
- (55) *Setsumeisho-ni kai-te aru tôri-ni yat-ta ga uma-ku ika-nakat-ta.*  
 Instructions manual-DAT be written TÔRI-DAT do-PAST CONJ good-INF go-NEG-PAST  
 'I did it according to the instructions manual, but it didn't work.'

Finally, let us briefly consider the *N-no tôri/V-tôri* construction, which may be viewed as an instance of a larger family of metaphorical "way-constructions" found across various languages. Compare (53)-(55) with the following examples from English and German:

- (56) Severe budget cuts are the only way to save this company from bankruptcy.
- (57) I followed in the footsteps of my father and became an actor.
- (58) Ich kann Dir nicht folgen, bitte erkläre es noch einmal.  
 I can't follow you, please explain it again.
- (59) Der Weg zum Erfolg ist mit vielen Steinen gepflastert.  
 The road to success is a rocky one.

Again, such expressions show the pervasiveness of space-time-homology in language and thought. As we have established, a terminal continuous process is understood in terms of the SOURCE-PATH-GOAL schema. However, there are multiple possibilities as to what happens between the onset and the end of a process, just as there are often multiple paths leading to the same physical destination. Thus, doing something in a certain manner (or something happening in a certain manner) is analogous to following a particular path to a physical destination. In other words, it follows from the EVENT STRUCTURE METAPHOR (Lakoff 2006: 204ff.) that manner should be mapped onto spatial navigation.

## Case Studies: Summary

As hypothesized, the preceding studies have shown that each verb under consideration is based upon a particular image schema. But what exactly does it mean to say that the semantic structure of KAKARU is centered around the image schema CONTACT; or that the semantic structure of DERU is centered around the EXIT schema?

As Lakoff (1990b: 438) cautions, it is important to distinguish between prediction and motivation. The super-schemas postulated at the outset of each case study do not allow us to predict the senses of the respective verbs. For example, the most schematic meaning of DERU – movement out of a container – underspecifies even the categorial prototype (*spatial exit*), since it says nothing about the dimensionality of the TR, the boundedness of the LM, and so forth. Likewise, the schema is too impoverished to predict senses that involve metonymy and/or metaphor. For instance, we have analyzed the *access* sense of DERU as an extension of the prototype via the primary metaphor(s) IN IS INACCESSIBLE/OUT IS ACCESSIBLE (see 10.1.5.). But this information is not included in the super-schema; nor do we have any *a priori* guarantee that a language will make use of a given metonymical or metaphorical extension just because it is theoretically available. In other cases, the most schematic meaning, although pervasive, does not even cover all the senses. As we have seen, some senses of AGARU such as *subtractive completion* hardly involve the vertical dimension at all (see 12.1.5).

What the case studies have given us instead is an account of the individual senses' motivatedness. Image schematic structure in tandem with mechanisms of meaning extension puts us in a position to explain, *a posteriori*, why a given sense exists. From this perspective, the high-level schemas of the verbs considered here are an indicator of their vast semantic potential. To recapitulate, let us consider the major mechanisms of meaning extension and their relation to image schematicity.

Schemas such as EXIT, SPLIT, or PATH are ideal candidates for metaphorical source domains in virtue of being among our most basic experiential gestalts. In some cases they will serve as source domains for multiple primary metaphors at once. For instance, the concepts of *transfer*, *access* and *excess* are all related to our experiences with things leaving CONTAINERS – and hence the EXIT schema (see chapter 10). Furthermore, SPACE, as the primary domain of experience, imposes its structure upon a variety of other domains such as TIME or SOCIAL RELATIONS. Subdomains like TEMPORAL DISCONTINUITY or SOCIAL DISCONNECTION are subsequently understood in terms of

the SPLIT schema (chapter 11), while “movement” through ACTIVITIES and INSTITUTIONS is understood in terms of PATH TRAVERSAL (chapter 13), and so forth.

The potential for metonymy is no less impressive. It is unsurprising that a basic spatial schema such as CONTACT serves as a point of access for a multitude of associated concepts, including SUPPORT, FORCE, ELICITED EFFECT, RESTRAINT, and CONTROL (see chapter 9). Although, considering the common basis of experiential correlation, the difference between metonymical mapping and primary metaphor is not always apparent and most likely a matter of degree. As a subtype of metonymy, active-zone phenomena deserve particular attention. Exemplary in this regard are the profiling properties of the various senses of KIRU, where focal prominence changes between the *LM as a whole*, the *obsolete portion of the LM* and the *point of segmentation* (see 11.1.).

Finally, we have seen how image schema transformations function as a source of polysemy. This is illustrated by the senses of KAKARU, which variously feature a zero-dimensional TR moving towards a goal, a one-dimensional TR extending (“growing”) towards a goal, and a one-dimensional link-type TR (see 9.1.). Other examples include the *volume*, *floor* and *wall* LMs of spatial TÔRU (see 13.1.) as well as the *ascension* and *extension* senses of AGARU (e.g. 12.1.1.; 12.1.3.).<sup>1</sup>

Perhaps most crucially, we have succeeded in showing that grammatical V2s are inherently meaningful. Their meaning reflects the image schematic structure of their simplex counterparts and is derived via the same mechanisms of semantic extension responsible for the complex category structure of the simplex. It was argued, for example, that the conceptual structure of inchoative *V-dasu* – a metaphorical extension of the EXIT schema – is closely related to the *access* sense of the simplex (see 12.2.6.). Analogous cases have been made for the remaining image schema verbs. In conclusion, then, the senses of the simplex and the V2 are best understood as constituting an internally coherent semantic category.

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<sup>1</sup> As in the latter case, image schema transformations and active zone phenomena often go hand in hand. E.g., a one-dimensional extending TR, when reduced to its active zone, will yield a zero-dimensional moving TR.

## PART III: BEYOND THE NETWORK

### 14. Compositional Disparity

#### 14.1. But What about Syntax?

The case studies in this thesis have mainly been concerned with image schematic structure. Specifically, they show how image schemas, in tandem with other cognitive phenomena such as conceptual metaphor and metonymy, play a vital role in polysemisation processes. A particularly interesting aspect of this is the semantic connection between the spatial senses of simplex verbs and the more abstract senses of grammatical V2s. For example, we have seen how spatial *dasu* and inchoative *V-dasu* are related to one another via the shared EXIT schema.

“But what about syntax?”, one might ask. Indeed, it is no exaggeration to say that the majority of the literature on Japanese V-V compounds is about “classical” questions of argument structure – often explicitly or implicitly presupposing a generative framework that treats syntax, semantics, and the lexicon as distinct linguistic components. How, then, are such questions addressed within a meaning-based approach to language that views lexicon and grammar as a continuum? Although I cannot possibly answer (or even consider) all open questions, I *can* – based on the preceding case studies – at least show how an alternative way of framing some of the main issues might lead to new insights. I will start by examining some earlier theory-neutral suggestions on how to classify Japanese V-V compounds according to their compositional properties, before eventually discussing more recent work, including Kageyama’s (e.g. 1993, 1996, 2009) influential distinction of *syntactic* vs *lexical* compounds.

#### 14.2. V-V Compounds in Teramura (1969), Nagashima (1976), and Yamamoto (1984)

One of the earliest classifications of Japanese V-V compounds from a compositional perspective is Teramura (1969), who recognizes two kinds of components: A given V1/V2 is “independent” (*jiritsu*) only if it preserves its original meaning as part of the compound, otherwise it counts as an “attached” (*fuzoku*) element. The *independent* vs *attached* dichotomy yields the following four permutations.

Type I: independent V1 independent V2

E.g.: *hashiri-saru* (run-leave) --> run away; *mochi-ageru* (hold-lift) --> lift up

Type II: independent V1 attached V2

E.g.: *hashiri-komu* (run-inwards movement) --> run into; *mi-ageru* (look-raise) --> look up (at)

Type III: attached V1 independent V2

E.g.: *tori-osaeru* (take-catch) --> catch (a criminal); *uchi-nagameru* (hit-gaze) --> look at sth. while absorbed in thought

Type IV: attached V1 attached V2

E.g.: *tori-nasu* (take-do) --> mediate (between parties); *nori-dasu* (ride-put out) --> start (to do), embark on

In a similar vein, Nagashima (1976) suggests that a V-V compound consists of a modifying element (*shûshoku yôso*) and a modified element (*hishûshoku yôso*). Based on this distinction, he postulates two types of compounds:

Type I: v1 (modifying, lower case v) V2 (modified, uppercase V)

Requirement: Both [N-ga N-wo/ni v1] and [N-ga N-wo/ni V2] are acceptable.

E.g.: *Tarô-ga ki-wo kiri-taosu.*

Tarô-NOM tree-ACC cut-knock down 'Tarô cuts down the tree.'

--> *Tarô-ga ki-wo kiru.*

--> *Tarô-ga ki-wo taosu.*

Type II V1 (modified) v2 (modifying)

Requirement: [N-ga N-wo/ni V1] is acceptable, but [N-ga N-wo/ni v2] is not.

E.g.: *Inu-ga kodomo-ni kami-tsuku.*

Dog-NOM child-DAT bite-stick to 'The dog bites the child.'

--> *Inu-ga kodomo-wo kamu.*

--> *\*Inu-ga kodomo-ni tsuku.*

It is worthy of mention that Nagashima's use of constructional templates marks a shift towards syntactic tests as a method of categorizing V-V compounds. Where Teramura's *dependent vs independent* distinction is based on the somewhat vague notion of "preserving the original meaning" of a given component, Nagashima's templates make for a more technical approach – although he ultimately fails to specify what kind of acceptability he has in mind.<sup>1</sup>

<sup>1</sup> Presumably, Nagashima has native speaker judgements in mind. However, a native speaker may accept or dismiss a sentence for various reasons. *He apple eat* is structurally flawed (ungrammatical), while *She drank solid stone* conflicts with what we know about drinking (Chomsky's famous example *Colorless green ideas sleep furiously* exemplifies the issue).



Criticizing Teramura's meaning preservation criterion as too subjective and Nagashima's categorization attempt as not comprehensive enough (note that there seems to be no place in his model for Teramura's Type IV compounds), Yamamoto (1984) suggests an account of V-V compounds based on the notion of "case government" (*kaku shihai*). According to Yamamoto, every verb has a fixed number of argument slots for "case components" (*kaku seibun*), which define its valence (*ketsugôka*). The verb *hashiru* (run), for example, has a subject argument slot for the case component [N-*ga*], as in [Tarô-*ga*] *hashiru* (Tarô runs), and therefore a valence of 1. Since *miru* (watch) has two argument slots, it has a valence of 2: [Kodomo-*ga*] [tere-*bi-wo*] *miru* (The child watches television). And *oshieru* (teach) with its three argument slots has a valence of 3: [Sensei-*ga*][seito-*ni*][rekishi-*wo*] *oshieru* (The teacher teaches the student history). That is, *hashiru* governs nominative case (N-*ga*), *miru* governs nominative and accusative case (N-*wo*) and *oshieru* governs nominative, accusative, and dative case (N-*ni*). Based on how the valence properties of the compound interact with the valence properties of each individual verb, Yamamoto (1984) argues for the following categorization:

--Type I: Both V1 and V2 exhibit case government--

*Kodomo-ga naki-sakebu.*  
 Child-NOM cry-scream 'The child cries and screams (cries intensely).'  
 --> *Kodomo-ga naku.*  
 --> *Kodomo-ga sakebu.*

*Haha-ga kodomo-wo daki-kakaeru.*  
 Mother-NOM child-ACC embrace-hold 'The mother cradles the child.'  
 --> *Haha-ga kodomo-wo daku.*  
 --> *Haha-ga kodomo-wo kakaeru.*

--Type II: Only V1 exhibits case government--

*Oyu-ga waki-tatsu.*  
 Water-NOM boil-stand 'The water seethes.'  
 --> *Oyu-ga waku.*  
 --> \**Oyu-ga tatsu.*

*Hanako-ga okashi-wo tabe-sugiru.*  
 Hanako-NOM sweets-ACC eat-exceed 'Hanako eats too many sweets.'  
 --> *Hanako-ga okashi-wo taberu.*  
 --> \**Hanako-ga okashi-wo sugiru.*

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Note that *inu-ga kodomo-ni tsuku*, by default, is neither "ungrammatical" nor nonsensical (It can be read as *The dog accompanies the child*). It becomes infelicitous only when read as an alternative to *inu-ga kodomo-ni kami-tsuku* – which brings us back to Teramura's notion of meaning preservation.

--Type III: Only V2 exhibits case government--

*Fuun-ga uchi-kasanaru.*  
Misfortune-NOM hit-pile up '(I) have a streak of hard luck.'  
--> \**Fuun-ga utsu.*  
--> *Fuun-ga kasanaru.*

*Fuchûi-ga jiko-wo hiki-okosu.*  
Negligence-NOM accidents-ACC pull-cause. 'Negligence leads to accidents.'  
--> \**Fuchûi-ga jiko-wo hiku.*  
--> *Fuchûi-ga jiko-wo okosu.*

--Type IV: Neither V1 nor V2 exhibit case government--

*Tarô-ga (nyûsu-wo kii-te) tori-midasu.*  
Tarô-NOM (news-ACC listen-TE) take-disturb 'Tarô gets upset (listening to the news).'  
--> \**Tarô-ga (nyûsu-wo kii-te) toru.*  
--> \**Tarô-ga (nyûsu-wo kii-te) midasu.*

*Keisatsu-ga inshu unten-wo tori-shimaru.*  
Police-NOM drunk driving-ACC take-tighten 'The Police crack down on drunk driving.'  
--> \**Keisatsu-ga inshu unten-wo toru.*  
--> \**Keisatsu-ga inshu unten-wo shimaru.*

Within this model a failed substitution test shows that a given V1/V2 does not exhibit case government over the compound's argument(s). For example, Yamamoto (1984: 38) claims that the result of substituting the simplex *tatsu* for *waki-tatsu* in *Oyu-ga waki-tatsu*, i.e. \**Oyu-ga tatsu*, is "ungrammatical" (*hibun*). However, this use of the term "ungrammatical" begs the question, since the sentence is not structurally flawed in the Chomskyan sense. In other words, in a generative framework the sentence *Oyu-ga tatsu* would not violate any "syntactic rules". So what else could Yamamoto have meant by "ungrammatical"? If we look at the sentences marked by an asterisk, it becomes clear that the V1/V2 in question either requires a different interpretation vis-a-vis its use in the compound or becomes difficult to interpret at all, thus changing the meaning of the sentence or rendering it outright incomprehensible. Viewed in this light, Yamamoto's grammatical/ungrammatical distinction is not so different from Teramura's meaning preservation criterion. In fact, if we take Teramura's examples from above and run Yamamoto's substitution tests with them, it turns out that all of Teramura's *independent* verbs exhibit case government in Yamamoto's sense, while the *attached* verbs do not.

### 14.3. Compositional Disparity as an Umbrella Term

The dichotomies *independent vs attached* and *case government vs no case government* agree with our intuition that within some V-V compounds V1 and V2 behave in a

somewhat asymmetrical manner. Moreover, this asymmetry concerns the level of discription which is traditionally known as argument structure. Consider the following examples:

- (1) *Kuchi-ga kawaki-kit-te iru.*  
 Mouth-NOM become dry-KIRU-RES '(My) mouth is all dried up.'  
 --> *Kuchi-ga kawai-te iru.*  
 --> \**Kuchi-ga kit-te iru.*
- (2) *Hanako-ga uta-wo utai-dashi-ta.*  
 Hanako-NOM song-ACC sing-DASU-PAST 'Hanako started singing a song.'  
 --> *Hanako-ga uta-wo utat-ta.*  
 --> \**Hanako-ga uta-wo dashi-ta.*
- (3) *Sagishi-ga okane-wo damashi-tot-ta.*  
 Scammer-NOM money-ACC deceive-take-PAST 'The scammer took the money by deception.'  
 --> \**Sagishi-ga okane-wo damashi-ta.*  
 --> *Sagishi-ga okane-wo tot-ta.*
- (4) *Tarô-ga ji-wo kaki-nagut-ta.*  
 Tarô-NOM characters-ACC write-beat-PAST  
 'Tarô wrote the characters in a disorderly manner.'  
 --> *Tarô-ga ji-wo kai-ta.*  
 --> \**Tarô-ga ji-wo nagut-ta.*

In each of these examples either V1 or V2 is somehow incompatible with at least one argument of the compound. I am deliberately using the vague gloss *somehow incompatible* to indicate that we have little beyond the intuition that "something is off" until we are able to specify what exactly that is. As a convenient umbrella term, I will refer to the asymmetry displayed by the above examples as *compositional disparity*.

#### 14.4. Saliency and Abstract Entities: Some Compounds with Grammatical V2s

Let us begin our inquiry into compositional disparity by examining the kind of verbs that have been the focus of this study: image schema verbs functioning as grammatical V2s. Recall that these V2s may have highly abstract TRs or LMs.

- (5) *Ame-ga furi-dasu.*  
 Rain-NOM fall-DASU
- (6) *Kuchi-ga kawaki-kiru.*  
 Mouth-NOM become dry-KIRU

- (7) *Hon-wo yomi-kakeru.*  
 Book-ACC read-KAKERU
- (8) *Karada-wo kitae-ageru.*  
 Body-ACC train-AGERU
- (9) *Uso-wo tsuki-tôsu.*  
 Lie-ACC tell-TÔSU

I have argued (see 10.2.6.) that *-dasu* in (5) is an extension from the ACCESS sense of DERU. What becomes accessible in (5) is not merely a THING (rain) but rather a state of affairs. Therefore, the TR of the V2 *-dasu* corresponds to the abstract proposition *that it rains*. The LM of *-dasu* is no less abstract. By application of the metaphor IN IS INACCESSIBLE/OUT IS ACCESSIBLE, the LM of *-dasu* corresponds to the realm of sensory inaccessibility. In other words, *that it rains* (i.e. the TR) emerges from the realm of sensory inaccessibility (i.e. the LM). It is crucial to note that the TR of *-dasu* and the TR of *furi-dasu* are not the same entity. Instead, the TR of *furi-dasu* corresponds to the TR of the V1 *furu*, i.e. rain (*ame*). Thus, we might say that in competing for the place of clausal TR and grammatical subject, the TR of *furu* prevails over the TR of *-dasu*. Or, to use a genetics metaphor, *furi-dasu* “inherits” its TR from *furu*.

How, then, is this competition for subjecthood decided? The straightforward answer is that the element with the highest cognitive salience is expected to prevail. But what exactly does “cognitive salience” refer to? According to Langacker (1991: 308) “a prototypical subject ranks highly with respect to all four topicality factors: it is agentive, human, definite, and the figure within the profiled relationship.” In the case of (5), both candidates are tied in terms of the first, third, and fourth factor: It seems dubious to say that one is more agentive or definite than the other, and both are TR of their respective verbs *furu* and *dasu*. This leaves us with the third criterium as the most relevant one: their places on the *empathy hierarchy*. Langacker (1991: 307) – based on previous research by Silverstein (1976), Deane (1987), and Kuno and Kaburaki (1977) – postulates the following order of entities, ranked “according to their potential to attract our empathy”:

*speaker > hearer > human > animal > physical object > abstract entity*

According to this hierarchy, abstract entities offer the lowest potential for human identification and therefore, all other things being equal, have the lowest cognitive

salience. Returning to (5), this means that a meteorological phenomenon such as *rain*, while not anthropomorphic or even very concrete, is still much less abstract and thus more empathy-enducing than a state of affairs, i.e. (the fact, circumstance, etc.) *that it rains*. Note in passing, that conceptual metaphor theory lends additional support to such an assumption. A great many (though not all) metaphorical mappings illustrate the abstract in terms of the more concrete, make non-sense-perceptible entities tangible in terms of sense-perceptible ones. Take the following examples:

- |      |                                       |                           |
|------|---------------------------------------|---------------------------|
| (10) | Ah, I see your point.                 | (UNDERSTANDING IS SEEING) |
| (11) | Our uncle left this world too early.  | (DEATH IS DEPARTURE)      |
| (12) | He used a dirty trick.                | (AMORAL IS DIRTY)         |
| (13) | She's a towering figure in her field. | (SIGNIFICANT IS BIG)      |

The most obvious examples are cases of personification:

- |      |                               |                        |
|------|-------------------------------|------------------------|
| (14) | The Grim Reaper came for him. | (DEATH IS A REAPER)    |
| (15) | Time is not on our side.      | (TIME IS AN ADVERSARY) |

Fauconnier and Turner (2003: 322), in their book on conceptual blending, are quite unambiguous on the matter of anthropocentrism and cognitive salience: "Human beings are evolved and culturally supported to deal with reality at human scale – that is, through direct action and perception inside familiar frames [...]."

Furthermore, note that the conceptual content of the V1 *furu* is already part of the TR of the V2 *dasu*. Thus, promotion of the TR of *dasu* to subjecthood would result in lexical redundancy<sup>2</sup>:

- |      |                  |             |                        |                    |
|------|------------------|-------------|------------------------|--------------------|
| (16) | *[ <i>Ame-ga</i> | <i>furu</i> | <i>no</i> ]- <i>ga</i> | <i>furi-dasu</i> . |
|      | [Rain-NOM        | fall        | NMLZ]-NOM              | fall-DASU          |

So in conclusion, what can be said about the compositional disparity of *furi-dasu*? Why is (17b) a felicitous sentence while (17c) is not?

- |       |                             |
|-------|-----------------------------|
| (17a) | <i>Ame-ga furi-dasu</i> .   |
| (17b) | <i>Ame-ga furu</i> .        |
| (17c) | * <i>Ame-ga dasu/deru</i> . |

As stated above, the TR of the V2 *dasu* is a state of affairs, i.e. an abstract entity ranked extremely low on the empathy hierarchy. As such, it remains schematic and unelaborated. Due to its low cognitive salience it is a bad candidate for subjecthood vis-

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<sup>2</sup> See, however, the active zone account of inchoative *-dasu* below (14.5.3.), which offers an elegant solution to the redundancy issue.

a-vis the less abstract TR of the V1, i.e. *ame*. The infelicity of (17c) is now easily explained: There is a mismatch of TRs. The compound *furi-dasu* requires the TR of *dasu* to be a state of affairs. The reason for this is that under the metaphor IN IS INACCESSIBLE/OUT IS ACCESSIBLE states of affairs can be conceptualized as physical things moving out of a container – thereby yielding an inchoative reading. While (17c) *could* be accommodated somehow (e.g. rain coming out of the clouds, etc.), we cannot expect it to have an inchoative reading without a state of affairs-type TR. Conversely, if we substitute *ame* with such a TR, we *do* get the desired reading:

- (16) \*[*Ame-ga furu no*]-*ga deru*.  
 [Rain-NOM fall NMLZ]-NOM DERU

While (17d) is not generally considered felicitous either, the intended inchoative meaning is easily recognized.

Let us now briefly consider the remaining sentences (6) through (9). As I have argued earlier (see 11.2.3.2.), the LM of the V2 *kiru* in *kawaki-kiru* is the timeline itself. Again, this is a highly abstract entity which remains unelaborated (i.e. linguistically unrealized) and is not inherited as either subject or object by the compound. The substitution test in (18c) fails due to the absence of a timeline-type LM.

- (18a) *kuchi-ga kawaki-kiru*.  
 (18b) *kuchi-ga kawaku*.  
 (18c) \**kuchi-ga kiru*.

In (18a) the V1 *kawaku* profiles a scalar process whose GOAL portion serves as point of segmentation (POS), i.e. the end-point of the process profiled by *kawaku* marks the transition from dynamic to static. This is what makes the timeline itself a salient frame element in the first place. However, with no such V1 there is nothing in (18c) to suggest the existence of a timeline-type LM.

Moving on to (7), the LM of the V2 *kakeru* is the process profiled by the V1. Metaphorically, *kakeru* indicates that the TR makes CONTACT with the frontal boundary of that process (see 9.2.3.). Since a book and the process of reading a book are two very different entities, the substitution test cannot yield the desired inchoative reading:

- (19a) *Hon-wo yomi-kakeru*  
 (19b) \**Hon-wo kakeru*/\**Hon-ni kakaru*

As with the V2 *-dasu*, we get closer to the intended reading by replacing the LM of the compound with the appropriate abstract entity. (Though, again, the result is not entirely felicitous.)

(19c) \**[Hon-wo yomu no]-ni kakaru*  
 [Book-ACC read NMLZ]-DAT KAKARU

Sentence (8) is an instance of what I have called – building on Lindner (1981) – the *achievement of sufficient state* sense of AGARU. Here the V1 *kitaeru* profiles a scalar process. The TR corresponds to the degree of progress on that scale towards some sufficient state (i.e. the LM). In the case of *kitae-ageru*, *kitaeru* evokes a fitness scale. The TR thus corresponds to the degree of fitness which moves towards – and eventually coincides with – the state of sufficient fitness. Note that both TR (degree) and LM (sufficient state) are quite abstract and remain sublexical. Crucially, the TR is too abstract to compete with *karada* for overt realization. Analogous to the above examples, the substitution test fails due to a mismatch of entity types:

(20a) *Karada-wo kitae-ageru.*  
 (20b) \**Karada-wo ageru./\*Karada-ga agaru.*

Paraphrase closest to the intended reading:

(20c) *Karada-no kitae guai-ga/wo (jûbun-na tokoro-made) agaru/ageru.*  
 Body-LK degree of fitness-NOM/ACC (sufficient-COP.ATT point-ALL) AGARU/AGERU

Finally, *-tôsu* in (9) requires its LM to be a temporal PATH (see 13.2.2.). This PATH corresponds to the process profiled by the V1 (*uso-wo tsuku*). I.e., in (9) the TR traverses the process of telling lies. In other words, the TR metaphorically traverses the *path of telling lies* as if it were a spatial expanse. The closest paraphrase for the intended reading would look something like this:

(21a) *Uso-wo tsuki-tôsu.*  
 (21b) \**[Uso-wo tsuku no]-wo (saisho-kara saigo-made) tôru.*  
 [Lies-ACC tell NMLZ]-ACC (beginning-ABL end-ALL) TÔRU

Again, the more abstract TR of *-tôsu* cannot compete with the TR of the V1 for overt realization, and the substitution test fails to evoke the desired interpretation, since *uso* does not profile a process/temporal expanse:

(21c) \**Uso-wo tôsu*/\**Uso-wo tôru*

To summarize: The asymmetry between lexical V1 and grammatical V2 in (5)-(9), or more specifically, the “incompatibility” of the V2 with at least one argument of the compound, is the result of a mismatch between entity types. In each case, the compound in its entirety evokes at least one highly abstract frame element (e.g. a state of affairs, a timeline, a degree of progress, etc.) not evoked by either the V1 or V2 alone. The V2 takes at least one such entity as a sublexical TR/LM. However, because of their abstract nature, these entities are not salient enough to compete with the V1’s TR/LM for overt realization as subject or object. In other words, if a V2 in (5)-(9) is not compatible with some argument of the compound (as indicated by a failed substitution test), there is a simple reason: That argument does not match the V2’s TR/LM (or even its entity type). The corresponding TR/LM of the V2 remains unelaborated, i.e. is “missing” from the level of lexical realization.

#### 14.5. Grammatical V2s and “Fake Transitivity”

Up to this point I have claimed that several grammatical V2s, such as *-dasu* and *-kakeru* – despite being morphologically marked as transitive – should really be considered intransitive (see 9.2.3.; 10.2.). The reason for this has been touched upon in the respective case studies and pertains to the image schematic topology and TR-LM arrangement for these V2s:

(22) inchoative *-dasu*  
schema: EXIT (state of affairs<sub>[TR]</sub>, CONTAINER<sub>[LM]</sub>)  
metaphor at work: IN IS INACCESSIBLE, OUT IS ACCESSIBLE

(23) inchoative *-kakeru*  
schema: CONTACT (thing/person<sub>[TR]</sub>, process<sub>[LM]</sub>)  
metaphor at work: STATES ARE LOCATIONS

Observe that in the above schemas the LM is a *location* rather than a participant, which is characteristic for an intransitive relation, whereas a transitive relation obtains between two participants (Langacker 1991: 343ff.). In fact, it is not at all uncommon for verbs to have transitive form without being true transitives. One example of this is the *setting-subject construction* in English:

(24a) Thursday saw yet another startling development.

(24b) \*Yet another startling development was seen by Thursday.

(from Langacker 1991: 346)



Since the TR, elaborated by *Thursday*, profiles a setting rather than a participant, the clause fails to passivize. This is not the case if both TR and LM are participants (*Mary saw John --> John was seen by Mary*).

In conclusion, then, the fact that several grammatical V2s profile abstract intransitive relations despite being morphologically transitive is unproblematic in light of the *participant vs setting/location* distinction.

## 14.6. Other Sources of Compositional Disparity

At this point we have identified the abstract nature of the TR/LM of several grammatical V2s as one source of compositional disparity. Of course, there are many V-V compounds that do not feature grammatical component verbs, but still display compositional disparity. How can we, for instance, account for the “missing arguments” (Wittfeld 2013) of *lexical – lexical* type compounds? In the following I will postulate several additional sources of compositional disparity:

### 14.6.1. “Subordination”, Conceptual Autonomy, and Discourse Context

Consider the following sentences:

- (25) *Tarô-ga (Jirô-kara) okane-wo damashi-tot-ta.*  
 Tarô-NOM (Jirô-ABL) money-ACC deceive-take-PAST  
 ‘Tarô took money (from Jirô) by deception.’  
 --> *Tarô-ga okane-wo tot-ta.*  
 --> *Tarô-ga Jirô-wo damashita.*  
 --> \**Tarô-ga okane-wo damashi-ta.*
- (26) *Tarô-ga (Jirô-kara) pasokon-wo yuzuri-uke-ta.*  
 Tarô-NOM (Jirô-ABL) computer-ACC yield-receive-PAST  
 ‘Tarô received a computer by (Jirô’s) yielding.’  
 --> *Tarô-ga pasokon-wo uke-ta.*  
 --> *Jirô-ga pasokon-wo yuzut-ta*  
 --> \**Tarô-ga pasokon-wo yuzut-ta.*
- (27) *Sûtsu-ga ki-kuzure-ta.*  
 Suit-NOM wear-crumble-PAST  
 ‘The suit has lost its shape due to (someone) wearing it.’  
 --> (??) *Sûtsu-ga kuzure-ta.*  
 --> *Dareka [someone]-ga sûtsu-wo ki-ta.*  
 --> \**Sûtsu-ga ki-ta.*

In (25) the LM of the V1 is not overtly realized as direct object. In (26) and (27) the TR of the V1 is not overtly realized as subject (although in the first two sentences the

“missing” participant can optionally appear as an oblique). In order to explain the participant profiling properties of these compounds, it is important to note that they instantiate a certain type of construction in which the V1 designates a manner, means, or cause that modifies the event profiled by the V2. While the classification of compounds into various constructional schemas is hardly a new idea, their so-called “argument selection” properties are usually accounted for within the list-and-rules paradigm of Generative Grammar (e.g. Kageyama 1993; Yumoto 1996; Matsumoto 1998; Fukushima 2005). In this section I will sketch out a salience-based account that does not depend on the postulation of semantically vacuous structures.

Let us begin with the observation that the V1s in the above sentences are equivalent to English adverbial clauses in several key respects. According to Langacker (1991, 2008), the following are some characteristics of subordinate clauses (of which adverbial clauses are a subtype):

(i) Subordinate clauses serve to modify another structure. Accordingly, the function of an adverbial clause is to “qualify the main-clause process with respect to factors such as time, means, cause, and purpose [...]” (Langacker 2008: 419)

(ii) One or more participants of the event designated by the subordinate clause will often be absent from the level of linguistic realization, i.e. they will not appear as overt nominals. (Langacker 1991: 420)

(iii) A subordinate clause is often morphologically marked by the lack of a finite verb. Such a clause has no temporal profile and is thus ungrounded, i.e. it makes no reference to the time of the speech event. (Langacker 1991: 421)

These properties are illustrated by (28a) and (28b):

- (28a) John makes a living [by stealing puppies]. (“missing” TR in subordinate clause)  
(28b) John makes a living [by stealing]. (“missing” TR and LM in subordinate clause)

As Langacker (2008: 413) notes, “[a]temporalization of the clausal process – viewing it holistically rather than sequentially – is one step in the direction of its nominalization.” The main difference pertains to the level of autonomy: An atemporal relation still contains a schematic TR/LM as part of its profile and is therefore *conceptually*

*dependend*, while a thing does not and is thus *conceptually autonomous* (Langacker 1991: 25).

Observe, however, that the difference seems to be gradual rather than absolute. For example, *stealing* can be substituted by the nominal *theft* in (28b). Furthermore, *stealing* is licensed as subject and direct object in sentences like the following:

- (29a) Stealing makes Baby Jesus cry.  
 (29b) Lilly likes stealing.

As shown in figure 1 below, the atemporalized process is analyzed as a relation if the participants are part of the profile (bold lines) and analyzed as a thing if they are part of the base.

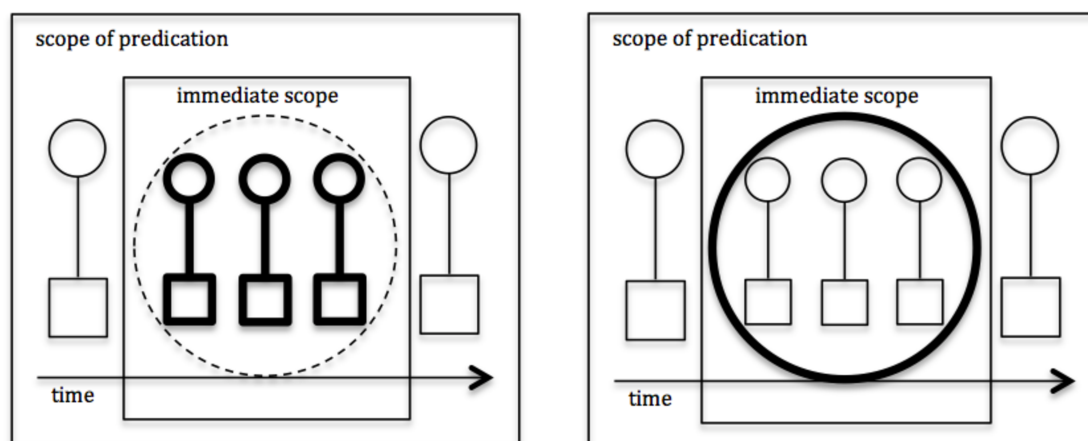


FIGURE 1: Profiling properties of relational V-ing (left) vs nominal V-ing (right);  
 adapted from Langacker (1991: 26)

In the case of *-ing* both constitute polysemous variants – and as always with polysemy, we should not expect a clear line of demarcation. It stands to reason, then, that the thing-sense has a tendency towards conceptual dependence<sup>3</sup>, while the relation-sense has a tendency towards conceptual autonomy. This latter tendency is reflected by the frequent absence of overtly realized participants in the subordinate clause.

Whether *V-ing* profiles participants, and whether such participants are elaborated or not, will naturally depend on their salience – after all, profiling is a matter of relative prominence. Compare the following examples:

<sup>3</sup> A noun like *stealing* (as in 29a,b), while relegating thief and stolen goods to the base, still evokes these participants quite forcefully. The conceptual connection is arguably stronger than in the case of *sand* or *bunny*, which lack such “default participants” as part of their base.

- (30a) Climbing is a great way to stay in shape.  
 (30b) [Climbing Mt. Rushmore] is a great way to stay in shape.
- (31a) I stay in shape by regular climbing.  
 (31b) I stay in shape [by climbing regularly].

In (30a) *climbing* is clearly a nominal (profiling a thing). Here the load of salience is on the activity itself. Schematic participants hardly enter the picture and are therefore relegated to the base. The sentence is about the beneficial effect of the activity – regardless of who climbs what. In (30b), on the other hand, it is the activity of climbing a certain object that is claimed to be beneficial, not the act of climbing *per se*. In other words, the schematic LM (elaborated by *Mt. Rushmore*) is now salient enough to be profiled and *climbing* is consequently understood as profiling a relation. Hence, compared to (30a), *climbing* becomes significantly more “clause-like”, while still being “thing-like” enough to function as subject of the matrix sentence.<sup>4</sup> Moving on to (31a) and (31b), the difference is quite subtle: (31a) construes climbing as a thing<sup>5</sup>, (31b) as a relation. Arguably, the salience of schematic participants is slightly higher in (31b), albeit only minimally. In (31b), too, the focus is clearly on the activity itself, leaving TR and LM unelaborated. In this sense, the subordinate clause displays a characteristic tendency towards conceptual autonomy. The fact that *climbing* could be interpreted as either nominal or clausal if we removed the modifier *regular(ly)* further attests to the close semantic relationship between the respective variants.<sup>6</sup>

Returning to the Japanese compounds, we encounter striking similarities. First, as noted above, the V1 functions much like an adverbial clause in that it specifies the manner, means, or reason pertaining to the event designated by the V2. Secondly, like English *-ing* (or the infinitival complement *to V*) the grammatical form of the V1, the *ren'yōkei* (or “continuative form”), has a tendency towards conceptual autonomy. In fact, like English *-ing*, it is (I) always ungrounded and (II) has a semantic variant that profiles a thing instead of a relation. This is illustrated below:

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<sup>4</sup> Note that the TR still remains unelaborated. Is a schematic TR part of the profile in (30b), but not in (30a)? A tentative answer is that the high salience of the LM in (30b) will automatically raise the schematic TR to some level of prominence. Thus the TR would pass the salience threshold for *profiling*, while still not salient enough for *elaboration*.

<sup>5</sup> The nominal character is indicated by the adjective *regular*. A search on the internet reveals similar usages, such as the headline “Study: Regular Running Can Increase Your Life” ([http://running.competitor.com/2012/05/news/study-regular-running-can-increase-your-life\\_51953](http://running.competitor.com/2012/05/news/study-regular-running-can-increase-your-life_51953), retrieved 16 Oct. 2016)

<sup>6</sup> We can say that in sentences like *I stay fit by running/climbing/lifting/etc.* the construction *V-ing* “straddles the fence” between clausal and nominal (see Tuggy’s [1993:285] remarks on polysemy).

- (32a) *Tarô-ga Jirô-wo damashi okane-wo nusun-da.*  
 Tarô-NOM Jirô-ACC deceive money-ACC steal-PAST  
 ‘Tarô deceived Jirô and stole (his) money.’
- (32b) *Tarô-ga Jirô-wo damashi okane-wo nusumu deshô ka.*  
 Tarô-NOM Jirô-ACC deceive money-ACC steal COP.POL.CON Q  
 ‘Will Tarô deceive Jirô and steal (his) money?’
- (33) *Tarô-wa sagi-to damashi-de kut-te iru.*  
 Tarô-TOP fraud-and deception-INS eat-PROG  
 ‘Tarô makes a living by fraud and deception.’

As shown in (32a) and (32b), the *ren'yôkei* causes atemporalization. The clause headed by *damashi* contains no reference to the time of the speech event and thus depends on the second clause's finite verb for temporal grounding. In sentence (33) *damashi* is a nominal and profiles a thing, as indicated by the instrumental marker *de* and the conjunction<sup>7</sup> with *sagi* (fraud). This semantic variant of the *ren'yôkei* is similar to the nominalizer *-ing* (e.g. 30a) in that it reifies a process and relegates its participants to the base. Like a deverbal nominal in English, this variant can enter into N-N compounds such as *kodomo-damashi* (child's play) or *damashi-e* (trompe l'oeil) (cf. *rock climbing, eating contest, etc.*).

Given that atemporalization is the first step towards nominalization, and therefore conceptual autonomy, the polysemy of the *ren'yôkei* comes as no surprise. Considering that the nominalized *ren'yôkei* directs the spotlight of prominence away from the participants and at the activity itself, it stands to reason that its conjunctive variant, too, retains this tendency to some degree. In all of these respects the argument runs parallel to the one regarding *-ing*.

On the basis of these considerations we are now in a position to account for any “missing” participants in terms of salience. In some cases, the fact that the LM of *damashi* in *damashi-toru* is not overtly realized as direct object can be interpreted as a reflection of its low prominence. In this respect the V1 is not unlike its nominal counterpart in (33). Observe that (33) is primarily about Tarô's methods, not about his victims.

On the other hand, one can hardly overstate the importance of discourse context when talking about salience. On many occasions, the victim's identity will be inferable without explicit mention. If this is the norm rather than the exception, we can alternatively interpret its inability to manifest as direct object as the syntactic consequence of a

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<sup>7</sup> Unlike English *and*, the particle *to* can only link nominals.

usage-based effect: In accordance with the Gricean maxims of quantity, information that constitutes “common ground” need not be explicitly mentioned.<sup>8</sup> The same applies, *mutatis mutandis*, to the TR of *yuzuri* in (26). Consider the following stretches of discourse:

- (34a) Tarô: *Sono pasokon, saikin katta no?*  
 Tarô: That computer, did you buy it recently?  
 Hanako: *Un, kono aida yasuku yuzuri-uketa.*  
 Hanako: Yeah, bought it (off someone) for cheap a couple of days ago.
- (34b) Tarô: *Sono pasokon, Jirô-no yatsu ja nai?*  
 Tarô: Isn't that Jirô's computer?  
 Hanako: *Un, kono aida yasuku yuzuri-uketa. Atarashii no kau kara, mô iranai tte.*  
 Hanako: Yeah, bought it (off him) for cheap a couple of days ago. He said he'll buy a new one, so he doesn't need it anymore.

In (34a) the V1 puts the load of salience on the manner of acquisition. While the existence of a schematic seller/yielder is vaguely presupposed, its identity is construed as irrelevant. I.e., with regards to its TR, the V1's behavior resembles that of a deverbal nominal.<sup>9</sup> In (34b), on the other hand, the seller's/yielder's identity is easily inferred from the preceding utterance and does not need to be restated. We could come up with analogous examples for *ki-kuzureru*, but I believe the gist of the argument should be clear by now. In summary, when a participant remains unelaborated, it is either *not salient enough* to be stated explicitly or it is already part of the discursive “common ground” (and therefore *too salient* to be stated explicitly). As shown in (34a) and (34b), both cases complement each other, and thus every utterance needs to be analyzed on its own terms.

#### 14.6.2. Active Zones

- (35a) *Hannin-ga higaisha-wo shime-koroshi-ta.*  
 Criminal-NOM victim-ACC choke-kill-PAST ‘The criminal choke the victim to death.’
- (35b) *\*Hannin-ga higaisha-wo shime-ta.*  
 Criminal-NOM victim-ACC choke
- (35c) BUT: *Hannin-ga higaisha-no kubi-wo shimeta.*  
 Criminal-NOM victim-LK throat-ACC choke  
 ‘The criminal choked the victim's throat.’

<sup>8</sup> The second maxim of quantity states: “Do not make your contribution more informative than is required” (Grice 1975: 45).

<sup>9</sup> As mentioned above, a subtle difference between clausal vs nominal *-ing*/conjunctive vs nominal *ren'yôkei* is that the former variants profile schematic participants, but often leave them unelaborated, whereas the latter variants relegate participants to the base. Thus, there is a prominence-cline for participants along the lines of: *part of the base --> schematically profiled, but unelaborated --> elaborated*.

- (36a) *Sairen-ga nari-wataru.*  
 Siren-NOM sound-cross 'The siren resounded (throughout the area).'
- (36b) *\*Sairen-ga wataru.*  
 Siren-NOM cross

We have already encountered active zone phenomena throughout the case studies (see e.g. 12.1.3.). Recall that they serve “to accommodate the greater cognitive salience of concrete objects over abstract entities, wholes over parts, and so on” (Langacker 1987: 272). In (35a) *shime-korosu* evokes the throat as the active zone of the victim (*part - whole* relation). The victim as a whole is deemed more salient than the body part and is therefore licensed as direct object. (35b), however, shows that *shimeru* without *korosu* fails to trigger the *part --> whole* metonymic shift and therefore does not permit *higaisha* as object. Likewise, *nari-wataru* in (36a) evokes the soundwaves as active zone of the siren. Since the siren is the less abstract entity, it is – in virtue of its greater cognitive salience – licensed as subject. But without *naru* the simplex *wataru* does not trigger the metonymic shift *sound --> source* and (36b) ends up infelicitous.

#### 14.6.3. Towards an Active Zone Analysis of Some Grammatical V2s

While on the topic of active zone phenomena, it is worth pointing out that the profiling properties of some grammatical V2s bear an uncanny resemblance to those exhibited by so-called “raising”-constructions (see e.g. Langacker 1991, 1995). In this section inchoative *V-dasu* will serve as an example to examine the parallels.

To briefly recapitulate, I have treated verb-verb compounds as an amalgamation of two processes, each with their own respective TR/LM slots. For example, in the case of *furi-dasu* I have claimed (on the basis of the preceding case studies) that inchoative *-dasu* has a sub-lexical state of affairs type TR along the lines of *that it rains*, while the TR of the V1 *furu* is elaborated by a thing, i.e. *rain*. Since the specifications for both TRs clash and the compound as a whole can only have a single TR, the clausal subject is chosen according to an empathy hierarchy, which puts things above states of affairs.

The most controversial part of this analysis, the postulation of a sub-lexical state of affairs-type TR, hinges on the argumentation in chapter 10.2.6.: Here it was suggested that *V-dasu* is best understood as a variant of the simplex verb’s *access* sense (recall the arguments from perceptibility and non-intentionality). This *access* sense of DERU is arrived at via the conceptual metaphor BECOMING ACCESSIBLE IS EMERGING FROM A CONTAINER

with its entailments INACCESSIBLE IS IN and ACCESSIBLE IS OUT. The EXIT schema as instantiated by DERU has a schematic TR and a schematic LM: An entity (the TR) moves out of a CONTAINER (the LM). Under the metaphorical inchoative reading this TR is a state of affairs that moves out of the realm of sensory inaccessibility. At the very least, this is the correct TR/LM configuration on the level of image schematic structure, i.e. as pertaining to the image schema EXIT under the scope of the aforementioned metaphor.

Let us now consider the possibility of an active zone analysis. Langacker (1991: 453ff., 1995: 21ff.) has convincingly argued for such an analysis to account for the phenomenon known as “raising”. Consider the following sentences (from Langacker 1995: 24):

- (37) [That Don will leave]<sub>SBJ</sub> is likely.  
(38) [Don]<sub>SBJ</sub> is likely to leave.

In (37) *likely* takes a propositional subject (i.e. *that Don will leave*), while in the raised sentence (38) it takes a subject nominal designating a thing (i.e. *Don*). According to Langacker (1995: 32), this shift is easily accounted for once we realize that the propositional subject in (37) corresponds to the active zone of the raised sentence’s subject in (38). As shown in figure 2 below, both sentences feature exactly the same conceptual content but differ in regards to their profiling properties (as indicated by the bold lines). In both cases, *likely* situates a process with respect to a region on a probability scale. However, while (37) confers primary focal prominence (trajector status) on the process as a whole, (38) restricts this prominence to Don, i.e. the process’ most salient participant (Langacker 1995: 24-25). Langacker points out that this sort of metonymic shift is not limited to “raising” phenomena. In fact, the involvement of *processual active zones* is nothing out of the ordinary at all:

For example, when I say *This barber is fast*, I do not imply that the barber himself – *qua* person or physical object – falls within a certain region on a scale of rapidity. It is rather a characteristic activity in which the barber engages, such as shaving, cutting hair, or even running (the default for people in general), that directly interacts with the scale and is thus the subject’s active zone with respect to *fast*. (Langacker 1991: 456)

He further notes that a shift of prominence from process to participant is not unexpected, considering that the latter – *per default* – makes for a more prototypical subject (recall the *empathy hierarchy* from above):

Because a processual participant is conceptually autonomous and usually less abstract than the process itself, the discrepancy between active zone and profiled participant once again enables the spotlight of main-clause focal prominence to fall on an entity of greater cognitive salience. (Langacker 1991: 456)



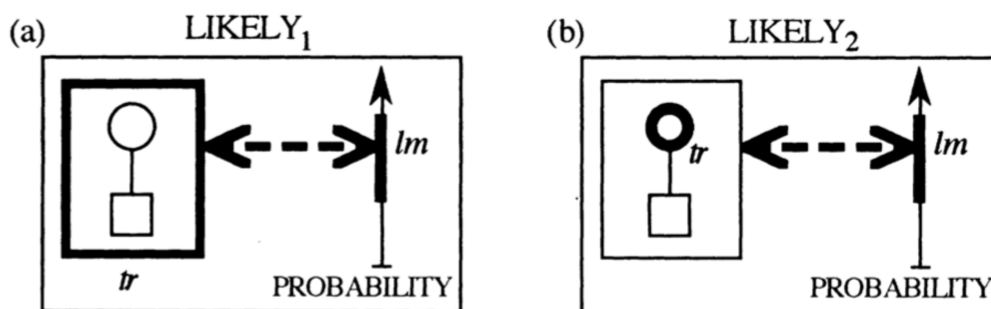


FIGURE 2: likely<sub>1</sub> (non-raised variant, e.g. [37]) vs likely<sub>2</sub> (raised variant, e.g. [38]);  
from Langacker (1995: 24)

It is now easy for us to see that the subject of inchoative V-*dasu* displays all the characteristics of a “raised” nominal. We have established that inchoative -*dasu* profiles a relation between a process and a metaphorical “container” (i.e. the realm of sensory inaccessibility). For illustrative purposes, this relation can be paraphrased roughly as follows:

- (39) [*Ame-ga furu no*]-*ga* (LM-*kara*) *deru*.  
[Rain-NOM fall NMLZ]-NOM (LM-ABL) DERU  
‘[That it rains] emerges (from the LM).’

Now compare this to the non-“raising” variant of the *likely*-construction:

- (37) [That Don will leave] is likely.

In both cases it is the process itself (*ame-ga furu no*; *that Don will leave*), not its primary participant (*ame*, *Don*), that participates directly in the relation profiled by *deru* and *likely*, respectively. As argued by Langacker, the interaction between *Don* and the LM of *likely* (i.e. a region on the probability scale) is mitigated by *Don*’s processual active zone *that Don will leave*. While the “raised” variant *Don is likely to leave* does not change the indirect nature of participation, it construes *Don* as the more prominent entity vis-a-vis the process itself. In analogous fashion, *ame* does not directly interact with the LM of *deru*, but only indirectly through its processual active zone *ame-ga furu no*.

Given the above analysis, it is not unreasonable to speak of *ame* as the “TR of -*dasu*” in *ame-ga furi-dasu*. In this case, *ame* would be accorded focal prominence instead of its less cognitively salient processual active zone *ame-ga furu-no*. Is this interpretation at odds with our previous one? Slightly, but the differences are quite minimal. Crucially, both interpretations have the same basic thrust: Two metonymically related entities are

competing for subjecthood and the one with higher cognitive salience prevails in accordance with the empathy hierarchy. The main difference is that I have treated the process itself as a sub-lexical TR (due to its prominence within the scope of metaphor), while I believe that Langacker would avoid such an interpretation. On the other hand, I know of no comprehensive treatment of Japanese grammatical V2s within the framework of Cognitive Grammar. I will therefore merely point out that this is a potentially promising area for future research. After all, it stands to reason that an active zone account could work for a variety of grammatical V2s, including *V-kakeru* and *V-tôsu*: Here, nominals like *hon* and *uso* would be considered to have focal prominence instead of their processual active zones *hon-wo yomu no* and *uso-wo tsuku no* (see examples [7] and [9]).

#### 14.6.4. Partial Metaphorical Mappings

(40a) *Tarô-ga ji-wo kaki-nagut-ta.*  
 Tarô-NOM characters-ACC write-beat-PAST  
 ‘Tarô wrote the characters in a disorderly manner.’

(40b) \**Tarô-ga ji-wo nagut-ta.*  
 Tarô-NOM characters-ACC beat-PAST

Consider the conceptual metaphor THEORIES ARE BUILDINGS, exemplified by expressions such as *Your theory has a shaky foundation*, *The argument collapsed*, and so on. As Lakoff and Johnson note, only certain parts of the source domain are mapped onto the target domain:

The parts of the concept BUILDING that are used to structure the concept THEORY are the foundation and the outer shell. The roof, internal rooms, staircases, and hallways are parts of a building not used as part of the concept THEORY. Thus the metaphor THEORIES ARE BUILDINGS has a “used” part (foundation and outer shell) and an “unused” part (rooms, staircases, etc.). (Lakoff and Johnson 2003: 52)

As (40) shows, this partial nature of metaphorical mappings can have bearing on argument realization. The aspect of *naguru* (beat, hit) which is in focus throughout the mapping is the chaotic/disorderly/violent manner of the activity. The force dynamic aspects of *naguru* on the other hand (i.e. energy transfer and patient) are non-salient elements of the source domain that remain “unused”. The closest paraphrase of (40a) using *naguru* would be something like:

- (41) *Tarô-ga ji-wo naguru yô-ni kai-ta.*  
 Tarô-NOM characters-ACC beat like manner-DAT write-PAST  
 'Tarô wrote the characters in a beating-like manner.'

The point is that there can be no paraphrase of (40a) featuring the LM of *naguru* (i.e. something that gets hit), because the corresponding entity is excluded from the scope of the metaphor on which the compound is based.

#### 14.7. Lexicon vs Syntax? Towards a Unified, Schema-based Account

Up until now we have looked at various cases of compositional disparity and thereby sketched out the foundations of an account of argument structure that does not violate the *content requirement* (Langacker 1987: 53f.). The argument structure phenomena we have encountered above are not explained in terms of procedural grammatical rules (which are not themselves symbolic units), but rather in terms of cognitive salience. Furthermore, we have assumed the *lexicon-grammar continuum*, which makes no principled distinction between lexical and grammatical elements (see 1.2.; Langacker 1990: 29). On this view, the difference between a “lexical” V2 such as *-asaru* in *kai-asaru* (buy-scavange --> go about shopping for sth.) and a “grammatical” V2 such as *-dasu* in *warai-dasu* (laugh-DASU --> start laughing/burst out in laughter) pertains to that unit’s degree of schematicity. While the former codes rather specific, conceptually rich content, the latter codes conceptually lean content of a more structural type.

However, this perspective is by no means prevalent in the contemporary discussion of Japanese V-V compounds. Instead, the vast majority of the literature assumes a compartmentalized view of grammar with a sharp distinction between lexicon and syntax (see e.g. Fukushima 2005, Yumoto 2008, Kageyama 2009). On this view, there are two fundamentally different kinds of Japanese V-V compounds: “Lexical” compounds (*goiteki fukugô dôshi*) assembled in the lexical component (or “module”) of the grammar and “syntactic” compounds (*tôgôteki fukugô dôshi*) assembled in the syntactic component. Proponents of this dichotomy claim that evidence comes from a variety of linguistic tests. Specifically, “lexical” and “syntactic” compounds exhibit distinct behavior in the following cases (based on Yumoto 2008: 2):

--Test 1: *sô suru*--

- (42a) \**Tarô-ga ason-de bakari iru no-wo mi-te, Jirô- sô shi-kurashi-* (lexical)  
*mo ta.*  
 Tarô- play- only PROG NMLZ- see- Jirô- so do-live-  
 NOM PROG ACC TE too PAST  
 Intended meaning: 'Seeing that all Tarô did was play, Jirô, too, idled his time away.'

- (42b) *Tarô-ga mada hashit-te no-wo mi-te, Jirô- sô shi-tsuzuke-ta.* (syntactic)  
*iru mo*  
 Tarô- still run-PROG NMLZ- see- Jirô- so do-continue-  
 NOM ACC TE too PAST  
 'As Jirô saw that Tarô was still running, he continued doing so as well.'

--Test 2: *o-V ni naru*--

- (43a) *Shachô-wa o-asobi-kurashi ni-nat-ta.* (lexical)  
 CEO-TOP HON-play-live HON-PAST 'The CEO idled his time away.'
- (43b) \**Shachô-wa o-asobi ni nari-kurashi-ta.* (lexical)  
 CEO-TOP HON-play HON-live-PAST Intended meaning: same as (36a)
- (44a) *Seinsei-wa tegami-wo o-kaki ni nari-hajime-ta.* (syntactic)  
 Teacher-TOP letter-ACC HON-write HON-begin-PAST  
 'The teacher began writing a letter.'
- (44b) \**Sensei-wa tegami-wo o-kaki-hajime ni-nat-ta.* (syntactic)  
 Teacher-TOP letter-ACC HON-write-begin HON-PAST  
 Intended meaning: same as (37a)

--> lexical: [*o-V1-V2 ni naru*]

--> syntactic: [*o-V1 ni nari-V2*]

--Test 3: Passivization--

- (45a) *Kizôhin-ga mochi-yor-are-ta.* (lexical)  
 Donation-NOM hold-draw near-PASS-PAST 'A donation was brought (along).'
- (45b) \**Kizôhin-ga mot-are-yot-ta.* (lexical)  
 Donation-NOM hold-PASS-draw near-PAST Intended meaning: same as (46a)
- (46a) *Tegami-ga kak-are-tsuzuke-ta.* (syntactic)  
 Letter-NOM write-PASS-continue-PAST 'The letter was continued.'
- (46b) \**Tegami-ga kaki-tsuzuker-are-ta.* (syntactic)  
 Letter-NOM write-continue-PASS-PAST Intended meaning: same as (47a)

--> lexical: [*V1-V2-PASS*]

--> syntactic: [*V1-PASS-V2*]

--Test 4: Light verb construction (*N suru*)--

- (47a) \**Kinyû shi-komu* ; \**Jisan shi-yoru* (lexical)  
 Entry do-[inwards movement] Bringing do-draw near  
 Intended meaning: 'Fill in (a form etc.)' Intended meaning: 'bring along'

(47b) *Ensetsu shi-owaru* ; *Tôkan shi-wasureru* (syntactic)  
 Speech do-finish Mailing do-forget  
 'End a speech' 'forget to dispatch sth.'

Yumoto (2008: 2) concludes: “The fact that Japanese V-V compounds can be distinguished by clear-cut formal criteria provides strong evidence in support of the modularity of morphology.”

This interpretation is, of course, inconsistent with a major guiding assumption of this thesis, namely the view that grammar is exhaustively characterized as a structured inventory of symbolic units. It is therefore important to reconcile the above data with the basic principles of Cognitive Linguistics. I believe that this is indeed possible if we consider what a bottom-up, usage-based approach to grammar entails. Let us begin by looking at frequency effects and entrenchment.<sup>10</sup> According to Kageyama (2009: 522), there are approximately thirty syntactic V-V compounds in Japanese. He lists the following examples:

*V-hajimeru* (begin to V), *V-oeru* (finish V-ing), *V-tsuzukeru* (continue V-ing), *V-kakeru* (be about to V), *V-sokoneru* (fail to V), *V-kaneru* (cannot afford to V), *V-wasureru* (forget to V), *V-naosu* (V again), *V-okureru* (be late in V-ing), *V-sugiru* (V excessively)

As Kageyama notes, these compounds are all highly productive, as opposed to lexical compounds, which “lack full productivity” (2009: 522). If we look at the semantics of the above V2s, there is nothing mysterious at all about their high level of productivity. Take *V-hajimeru* for instance. The V2 *hajimeru* places virtually no semantic restrictions on its V1 except that it be a temporally extended event. Or, simply put, *-hajimeru* is compatible with just about anything that has a beginning. And this, in turn, results in near 100% productivity. However, one should be mindful of the fact that this is a bottom up process: In real world communication *-hajimeru* is suffixed to various individual V1s over the course of myriads of different usage events, resulting in the entrenchment of compounds such as *tabe-hajimeru* (begin to eat), *aruki-hajimeru* (begin to walk), *kiki-hajimeru* (begin to listen), *odori-hajimeru* (begin to dance), and so on. Through continuous usage each compound becomes entrenched in the cognitive system, i.e. it achieves unit status (see Langacker 1987: 57ff.). Once a large number of these compounds achieve unit status, the partially filled schema [*V-hajimeru*] will – as a result of inductive reasoning – achieve unit status as well. Keep in mind that unit status is a

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<sup>10</sup> The following arguments assume that Langacker’s principles of *convention and usage* (1987: 65f.) as well as *full and partial sanction* (1987: 66ff.) apply.

matter of degree. Since *-hajimeru* appears as V2 in hundreds of compounds, the construction [*V-hajimeru*] is firmly entrenched in the cognitive system. Now, compare this to *-naguru*. While the compound *kaki-naguru* (write-beat --> write in a disorderly manner) has clearly achieved unit status through repeated usage (i.e. in virtue of its relatively high token frequency), the partially filled schema [*V-naguru*] can hardly be said to be cognitively entrenched. The reason for this is that *-naguru* does not appear in the V2 slot of any other compounds. After all, the semantics of *-naguru* are much less schematic than those of *-hajimeru*, and thus the former is a lot more specific in its choice of V1. In conclusion, then, the cognitive entrenchment/unit status of lexically filled constructions can be measured in terms of token frequency, while the entrenchment of schematic constructions is best measured in terms of how numerous their instantiations are, i.e. by type frequency.

Once a schema is well-entrenched, it will, in turn, serve as a template to sanction specific instances in top-down fashion. I.e., the compound *yomi-hajimeru* (begin to read) is considered “well-formed”, because the schema [*V-hajimeru*] is a firmly entrenched unit. In contrast, *\*nuri-naguru* would be judged as “ill-formed”, since the schema [*V-naguru*] is not a well-entrenched unit at all:

- (48) *\*Tarô-ga*            *penki-wo*            *nuri-nagut-ta.*  
 Tarô-NOM            paint-ACC            apply-beat-PAST  
 Intended meaning: ‘Tarô applied the paint in a disorderly manner.’

To be sure, it is not inconceivable for *nuri-naguru* to attain unit status. After all, the construction is based on an already well-entrenched compound, and a speaker community (or some sub-community) might find the expression amusing or useful for some reason or another. Through repeated usage the novel expression would then gradually become entrenched as well. But as Tuggy (2005: 254) notes, extensions of this type are “norm-bending and quite creative”. So as a rule of thumb, instances are sanctioned by well-entrenched schemas. Conversely, if a schema is not well-entrenched it is less likely to sanction a particular instance. On the other hand, if a unit is extremely well entrenched it is not only fit to sanction instances in virtue of *full schematicity* (e.g. [edible thing – soup] --> tomato soup), but also more likely to give rise to novel expressions in virtue of *partial schematicity* ([edible thing – soup] --> primordial soup).

I will now argue that this interplay between entrenchment and sanction is responsible for the results in (42)-(47). Once again, consider the examples listed above by Kageyama.

Observe that all of these “syntactic” compound schemas are extremely well entrenched. Schemas like [V-*hajimeru*], [V-*tsuzukeru*] or [V-*wasureru*] are instantiated by myriads of different lexical items. For instance, [V-*tsuzukeru*] effortlessly serves as a template for [*hashiri-tsuzukeru*] (continue to run), since [V-*tsuzukeru*] is deeply entrenched in the cognitive system and stands in a relation of full schematicity to [*hashiri-tsuzukeru*]. But what about the relation between [V-*tsuzukeru*] and, say, the light verb construction [N *suru*]? This is the aforementioned case of partial schematicity. On the one hand, [V-*tsuzukeru*] requires an antecedent of the type [V], which clearly clashes with the specifications of [N *suru*]: [V] is a simplex verb whereas [N *suru*] is a composite construction consisting of a noun and the light verb *suru*. On the other hand, [V] and [N *suru*] are quite similar insofar as they are both instances of the [PROCESS] schema. In other words, it only takes a small generalization to license [N-*suru*] in the [V]-slot of [V-*tsuzukeru*], thereby giving rise to the schema [N *shi-tsuzukeru*]. In analogous fashion the same holds true for [*sô suru*], [*o-V ni naru*], and the passive construction. By extending the category [V] to all processes and not just simplex verbs we arrive at the meta-schema [PROCESS-*tsuzukeru*].

Now compare this to what adherents of the dichotomy call “lexical compounds”. Schemas for these compounds come in different degrees of entrenchment. On the high end of the spectrum we have well-entrenched schemas like [V-*komu*] (as in *hairi-komu* [enter]) with a considerable number of instances. On the low end of the spectrum we have schemas like [V-*asaru*] or [V-*naguru*] with only one or two instances (*kai-asaru* [buy-scavange --> go around shopping for sth.]; *yomi-asaru* [read-scavange --> read what one can get one’s hands on]; *kaki-naguru* [write-beat --> write disorderly]). These latter schemas are not well-entrenched at all and lack unit status. They are therefore unfit to sanction further instances despite a relation of full schematicity. Naturally then, they are even less fit to sanction extensions of the schema via partial schematicity. Simply put, [V-*asaru*] cannot be extended to [PROCESS-*asaru*], since [V-*asaru*] does not even have unit status. This is, of course, an extreme example. [V-*komu*] is a much better candidate for unit status, but still not nearly as well-entrenched as [V-*tsuzukeru*], [V-*hajimeru*], etc. – and thus still unfit to give rise to [PROCESS-*komu*].

From a usage-based perspective, “lexical” compounds are more deeply entrenched on the non-schematic level than on the schematic level (e.g. *kai-asaru* is better entrenched than [V-*asaru*]), whereas “syntactic” compounds tend to be more deeply entrenched on the schematic level (e.g. [V-*hajimeru*] is better entrenched than its instances). It is easy

to see how this affects composition. To illustrate, consider *kaki-hajimeru* (begin to write) and the honorific construction [*o-V ni naru*]. Between *kaki-hajimeru* and [*V-hajimeru*], the latter is much better entrenched. Consequently, it makes more sense for [*o-V ni naru*] to elaborate the V-slot of [*V-hajimeru*], then for the less well-entrenched *kaki-hajimeru* to elaborate the V-slot of [*o-V ni naru*]. That is, the composition works as follows: The verb *kaku* elaborates the V slot of [*o-V ni naru*], yielding *o-kaki-ni naru*. The result, *o-kaki ni naru*, then elaborates the V slot of [*V-hajimeru*] (for this [*V-hajimeru*] is extended to [PROCESS-*hajimeru*]). Note, that on this account the fully elaborated compound *kaki-hajimeru* does not even partake in the composition. Now, contrast this with the case of *kai-asaru* and [*o-V ni naru*]. Between *kai-asaru* and [*V-asaru*] the former is much better entrenched than the latter. Thus, it makes more sense for *kai-asaru* to elaborate the V slot of [*o-V ni naru*] than for [*o-V ni naru*] to elaborate the V-slot of the non-unit [*V-asaru*].

Let us summarize: The morphological “inseparability” of so-called lexical compounds is straightforwardly accounted for in light of their low schematicity. A compound such as *kai-asuru* is filled with lexical material in both the V1- and V2-slot (by *kau* and *asaru*, respectively). In contrast, the partially filled construction [*V-asaru*] cannot license other constructions due to its insufficient degree of entrenchment. E.g., since [*V-asaru*] lacks unit status, its V1 slot cannot be elaborated by, say, the light verb construction [N *suru*] – hence the infelicity of [N *shi-asaru*]. In the case of “syntactic” compounds, on the other hand, the partially filled construction is better entrenched than the fully elaborated construction. E.g., [*V-hajimeru*] is extremely well-entrenched; arguably more so than the fully elaborated [*tabe-hajimeru*]. Consequently, “syntactic” compounds can license other PROCESS-type constructions (such as the light verb-, the honorific-, or the passive-construction) in their V1-slot by way of full or partial sanction – hence the felicity of, say, [N *shi-hajimeru*]. Of course, all of this is still rather programmatic. But the above considerations show that the linguistic data presented by proponents of the *lexical vs syntactic* dichotomy does not compel us to a modular view.



## 15. Embodiment and the Scope of Metaphor in German and Japanese

At several points during the course of this thesis I have considered cross-linguistic data. Recall, for instance, the discussion of *-kakaruru* and German *an*. A cross-cultural perspective on embodied experience certainly seems interesting enough to warrant closer inspection. At the same time, a comprehensive treatment of the topic would be far beyond the scope of this thesis. I will instead restrict myself to a small-scale comparative study of German and Japanese. Specifically, I will consider three source domains directly based in embodied experience: *weight*, *edge properties*, and *surface properties*. The question, then, is whether these will have similar or different *scope* in both languages. Will we end up with the same metaphors in German and Japanese? Since our source domains are directly embodied, and given the universal nature of human physiology, we should expect only subtle variance.

I have chosen metaphor as a tool of analysis for practical reasons. Each source domain will likely correspond to an overseeable number of target domains. Thus, the amount of data remains manageable, whereas “raw” image schemas such as CONTAINER, CONTACT, etc. correspond to countless linguistic expressions.

Before proceeding, I should mention the vast body of existing research on the topic of metaphor and culture.<sup>1</sup> Of these studies, a significant number focus on specific emotion concepts such as *anger* (e.g. Lakoff and Kövecses 1987; Munro 1991; Matsuki 1995; Yu 1995) or *love* (e.g. Kövecses 1988, Yang 2002). These works share a common methodology in that they start with the target domain and work their way towards various source domains. I.e., the *range* of metaphor is a primary concern. In contrast, I have opted for the opposite direction from directly embodied source to target, in order to examine cross-linguistic variance (or lack thereof) in metaphorical *scope*.

### 15.1. (I) The Weight Scale: *Heavy* and *Light*

#### 15.1.1. (Ia) EFFORTFUL ACTIVITY IS HANDLING HEAVY OBJECTS

Consider the following German sentences:

- (1) Das ist ein *schweres* Stück Arbeit.  
This is a hard [*heavy*] piece of work.
- (2) Wenn wir uns anstrengen, können wir die Aufgabe *stemmen*. (colloq.)

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<sup>1</sup> See Kövecses (2005) for a representative book-length study.

If we work hard we can finish [*lift up*] the task.

- (3) Er hört *schwer* und kann dich nur mit Mühe verstehen.  
His hearing is bad [*'he hears heavily'*], so he has trouble understanding you.
- (4) Das Rätsel war *schwer* zu lösen.  
The puzzle was hard [*heavy*] to solve.
- (5) Ich habe Rückenschmerzen und kann nur *leichte* Arbeit verrichten.  
I have a backache and can only perform *light* work.
- (6) Wenn du lauter sprichst, kann ich dich *leichter* verstehen.  
If you speak up I can understand you better [*lighter*].
- (7) Diese Mathematikaufgabe ist *leicht*.  
This math problem is easy [*light*].

This metaphor is experientially grounded in a metonymical relationship between source and target domain. Dealing with heavy objects is a prototypical instance of exercising effort, giving rise to a strong experiential correlation between the two. Consequently, the source concept of weight is extended to other forms of effortful activity, e.g. sense-perceptual (3,6) or mental (4,7). In (8) we encounter a seemingly similar expression from Japanese:

- (8) *Omoi shigoto-wo makas-are-te, sutoresu-ga tamaru.*  
heavy work-ACC entrust-PASS-TE stress-NOM accumulate  
'I'm entrusted with high responsibility jobs and stress is adding up.'

However, note that the weight coded by *omoi* in the above sentence is not coupled with the target domain of EFFORT but rather with the target domain of PSYCHOLOGICAL BURDEN (see also [16] below).

Due to the lack of expressions corresponding to (1)-(9) we conclude that the metaphor EFFORTFUL ACTIVITY IS HANDLING HEAVY OBJECTS does not seem to exist in Japanese.

### 15.1.2. (Ib) ABSTRACT BURDENS ARE PHYSICAL WEIGHTS

- (09) Große Verantwortung *lastet* auf ihren Schultern.  
Great responsibility *rests* on her shoulders.
- (10) Er neigt zu *Schwermut*.  
He is prone to depression.
- (11) Ich möchte niemandem zur *Last* fallen.  
I don't want to be a *burden* to anyone.
- (12) Mit ihrer Tat hat sie Schuld *auf sich geladen*.  
She incurred guilt [*'piled guilt onto herself'*] by what she did.

- (13) Ein(e) *leichte(s)* Verletzung/Strafe/Erkältung/Vergehen  
A minor [*light*] injury/punishment/cold/offense
- (14) Was für eine *Erleichterung!* Mir fällt ein Stein vom Herzen!  
What a *relief!* That's a load off my chest!
- (15) *Omoi sekinin-wo seu*  
Heavy responsibility-ACC shoulder  
'To bear a heavy responsibility'
- (16) (*Sekinin-no*) *omoi shigoto-wo makas-are-te, ki-ga omoi*  
(Responsibility-NOM) heavy work-ACC entrust-PASS-TE mind-NOM heavy  
'I'm being left with high-responsibility jobs and I am feeling depressed.'
- (17) *Tanin-no onimotsu-ni nari-taku-nai.*  
Others-LK baggage-DAT become-DES-NEG  
'I don't want to become a burden to others.'
- (18) *Hannin-ga jûhan-wo okashi-te, jûbatsu-wo uke-ta.*  
Criminal-NOM serious crime-ACC commit-TE severe punishment-ACC receive-PAST  
'The perpetrator committed a serious [heavy] crime and received severe [heavy] punishment.'
- (19) *Karui byôki/hanzai/sekinin*  
Light illness/crime/responsibility
- (20) *Toriaezu karui kimochi-de yat-te mi-te.*  
For now light feeling-INS do-try-IMP  
'For now, try doing it without taking it to seriously.'

As evidenced by the above sentences, the scope of this metaphor is nearly identical in German and Japanese. Both languages express psychological, emotional, and somatic<sup>2</sup> burdens such as sadness and responsibility in terms of physical weight. Note at this point that *omoi shigoto* in (16) emphasizes the weight of social obligation and burden of expectation, whereas *ein schweres Stück Arbeit* in (1) merely emphasizes the required degree of effort. Furthermore, German and Japanese share a common folk theory of *justice as balance* (see Johnson 1990: 90) in the domains of law and morality: The weight of the punishment/atonement must match the weight of the crime/guilt in order to restore equilibrium.

As for the grounding of the metaphor, we can observe parallels between the effects physical weight and abstract burdens have on their “bearer“. Note that carrying a heavy object has two important implications:

- Incapacitation: The weight limits the bearer’s abilities and potential for action.

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<sup>2</sup> The characterization of somatic burdens such as injury or sickness (e.g. [15], [21]) as “abstract“ may seem dubious. However, the point is that injury and sickness do not necessarily involve the sensation of physical weight on the body.

- Exhaustion: The weight will incrementally affect the physical condition of the bearer.

Now compare this to the “symptoms” of depression and responsibility.

#### Depression

- Incapacitation: A depressed person is unable to use his/her abilities and potential to the fullest.
- Exhaustion: A depressed person will often feel fatigued and unmotivated.

#### Responsibility

- Incapacitation: Being responsible entails self-restraint. (Inability to “do as you please”)
- Exhaustion: Not living up to one’s responsibilities entails negative consequences. Awareness of these consequences can be psychologically exhausting.

Thus, depression, responsibility, guilt, etc. are like physical weight insofar as they cause incapacitation and exhaustion within their respective domains. In virtue of these correspondences the latter can serve as source domain for the former.

### 15.1.3. (Ic) INTENSITY IS WEIGHT

If ABSTRACT BURDENS ARE PHYSICAL WEIGHTS, then the intensity of the burden is proportional to the amount of weight. We have seen this entailment at work above in both German and Japanese in expressions such as *schwere/leichte Krankheit* and *omoi/karui byôki*. In the case of German, it is interesting to observe, however, that the intensity entailment of weight has been extended from the domain of abstract burdens to the more general domain of negatively evaluated phenomena:

(21) Er hat sich *schwer* betrunken.  
He got totally [*heavily*] drunk.

(22) Alle waren *schwer* enttäuscht von ihm.  
Everyone was extremely [*heavily*] disappointed of him.

Although I suppose it would still be possible to view (21) and (22) as instantiations of the *abstract burden* sense, the usage of *schwer* seems to have a more general augmentative function in these cases. This becomes even more evident in examples like the following:

(23) Sie ist *schwer* in Ordnung.  
She’s a real trouper [‘She is *heavily* decent’].

- (24) Alle waren *schwer* beeindruckt von dieser Leistung.  
Everyone was extremely [*heavily*] impressed by this accomplishment.
- (25) Das möchte ich doch *schwer* hoffen!  
I sure [*heavily*] hope so! (uttered as a warning)

In these rather colloquial expressions *schwer* already functions as an augmentative adverb along the lines of *very*. Only (25) shows traces of the *abstract burden* sense and its negative connotations, as the sentence is usually uttered as a threat or warning. Note in passing that it is not uncommon for negatively evaluated content words to take on an augmentative function, especially in colloquial speech styles:

- (26) Sick car, dude!
- (27) *Kono konbini-no poteeto, yabai umai!*  
This convenience store-LK fries dangerously tasty  
'The fries at this convenience store are the bomb!'

In summary, the grammaticalization path for *schwer* in German can be roughly sketched out as follows, whereby the original meaning of physical weight gradually fades out in favor of the intensity aspect: (intensity of) abstract burdens --> intensity of negatively evaluated phenomena --> usage as augmentative marker.

#### 15.1.4. (Id) IMPORTANCE IS WEIGHT

- (28) Seine Stimme hat in der Partei großes *Gewicht*.  
His voice carries great *weight* within the party.
- (39) Wir müssen Risiken und Vorteile gegeneinander *abwägen*.  
We must consider [*weigh*] both the risks and benefits.
- (30) Diese Faktoren fallen nicht weiter ins *Gewicht*.  
These factors are irrelevant [do not carry any *weight*].
- (31) *Kono gakkô-wa bunkei-yori rikei-ni omoki-wo oku.*  
This school-TOP humanities-ABL sciences-DAT weight-ACC put  
'This school lays emphasis on the sciences rather than the humanities.'
- (32) *Keizai-wo jûshi ['heavy'-'view'] shi-ta atarashii seisaku*  
Economics-ACC importance do-PAST.ATT new policy  
A new policy focusing on economics

Earlier, we have seen that there is a strong experiential correlation between handling heavy objects and exercising effort. In a similar vein, we can hypothesize that importance and weight are tied in human experience as well. Heavy objects generally

require more resources, such as force, attention, and time, to be dealt with. For example, moving a heavy rock out of the way will require a certain amount of strength, possibly the application of tools, and so forth. In short, the task will make itself more salient vis-a-vis the handling of a light-weight object. (In this sense, the heavy object “cannot be taken lightly.”) The metaphor is prominent in both German and Japanese and often instantiated by parallel expressions such as *Schwer=punkt/jû=ten* (“heavy=point” --> emphasis).

#### 15.1.5. (Ie) RESPECT/DIGNITY IS WEIGHT

The fact that importance is conceptualized as weight has implications for the social domain as well. Someone whose function or status in society is deemed important is also more likely to be viewed as respectable and dignified. Metonymically, this evaluation carries over to that person’s actions, thoughts, manner of speech, and so on. Similarly, certain abstract entities such as ideals or moral values are not merely important, but command respect from a social perspective.

(33) *Yamada-sensei-wa omomi-no aru kata desu.*  
 Yamada-teacher-TOP weight-NOM exist.ATT person COP.POL  
 ‘Mr. Yamada carries an air of dignity about him.’

(34) *Shachô-ga oomoshii [omoi = heavy] kuchô-de ensetsu-wo hajime-ta.*  
 CEO-NOM solemn tone-INS speech-ACC begin-PAST  
 ‘In a solemn tone, the CEO began his speech.’

(35) *Kojin-no kenri-wo sonchô [‘respect-heavy’] suru.*  
 Individual-LK rights-ACC value do  
 ‘To value the rights of the individual’

On the other end of the scale lack of respect is conceptualized as lack of weight:

(36) *Hanako-ga Tarô-wo keibetsu [‘light-disregard’]-no me-de mi-te iru.*  
 Hanako-NOM Tarô-ACC contempt-LK eye-INS view-PROG  
 ‘Hanako views Tarô with contempt.’

It is interesting to observe that this metaphor seems to be much more prominent in Japanese than in German, where linguistic instantiations such as *Würdenträger* (“bearer of dignity” --> dignitary) are quite rare.

## 15.2. (II) Edge Properties: *Sharp* and *Dull*

### 15.2.1. (IIa) Synaesthetic Mappings

- (37) ein *scharfes* Chili (taste)  
a spicy [*sharp*] chili
- (38) ein *scharfer/stechender* Geruch (scent)  
a pungent [*sharp/piercing*] smell
- (49) ein *scharfes* Zischen/ein *dumpfes* Geräusch (sound)  
a *sharp* hissing/a *dull* noise
- (40) ein *scharfes/stumpfes* Licht (vision)  
a *strong/dull* light
- (41) *shita-wo* *sasu* *aji*  
tongue-ACC pierce.ATT taste  
'a spicy taste'
- (42) *hana-wo* *sasu* *nioi*  
nose-ACC pierce.ATT smell  
'a pungent smell'
- (43) *surudo/nibui* *oto*  
'a sharp/dull sound'
- (44) *surudo/nibui* *hikari*  
'a glaring [*sharp*]/dull light'

Synaesthetic metaphor is characterized by mappings from one sense perceptual domain to another sense perceptual domain. Some metaphors are possibly grounded in functional similarities between the respective sense perceptual faculties. For example, eating a hot chili pepper can result in a pain-like sensation not dissimilar to the tissue damage caused by a sharp object. That is, someone eating spicy food might experience a sensation *as if* pierced or cut by a sharp object. Such phenomena are closely related to Sadamitsu's (2001) *Co-occurrence Condition of Sensations* which, based on Lehrer (1978), holds that "[t]he mapping between the sensory modalities which can co-occur is preferable to that between those which cannot" (Sadamitsu 2001: 126). In other words, mappings between domains such as *touch* --> *taste* and *taste* --> *scent*<sup>3</sup> are so common, because the respective sense perceptual faculties often function in unison. However, since eating spicy food does not actually involve tissue damage caused by a sharp object, one might hesitate to speak of a strict experiential correlation in Grady's (1997a, 1997b) sense (see 4.1.).

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<sup>3</sup> For a discussion of directionality see also Yamanashi (1988) and Shen (1997).

Note that the extensions to the domains of sound and vision likely involve a higher degree of semantic bleaching than the aforementioned extensions to taste and scent. For example, a sharp object and a glaring light, despite causing different sensations and being perceived in different ways, are still broadly similar in that both involve sense data of unpleasant intensity.

### 15.2.2. (Iib) UNPLEASANT INTENSITY IS SHARPNESS

- (45) Er versuchte, der Diskussion die *Schärfe* zu nehmen.  
He tried to reduce the severity [*sharpness*] of the discussion.
- (46) Deine *spitzen* Bemerkungen sind unnötig.  
Your *pointed* remarks are unnecessary.
- (47) *Scharfe* Munition/Ein *scharfer* Hund  
armed [*sharp*]munition/a vicious [*sharp*] dog
- (48) *Surudo* *goki-de* *aite-wo* *ii-makasu*  
Sharp tone-INS opponent speak-defeat  
'To argue down one's opponent in a sharp tone'
- (49) *Toge-no* *aru* *iikata-wo* *suru*  
Thorn-NOM exist.ATT manner of speaking-ACC do  
'To use harsh language.'
- (50) *Surudo* *metsuki-no* *hito*  
Sharp gaze-LK person  
'A person with a sharp gaze'

In the previous section we have seen that the concept of sharpness has been extended to include general unpleasant intensity in the sense perceptual domain. As the above examples show, this sense can be further extended to apply to more abstract domains as well. In both German and Japanese the metaphor seems to show an affinity towards the domain of verbal expression, often referring to a potentially hurtful manner of communication (and thereby piggybacking on the metaphor EMOTIONAL DISTRESS IS PHYSICAL INJURY). Some applications, however, go beyond this central aspect. The intensity in (47), for instance, refers to the state of being potentially dangerous. (50) implies that the conceptualizer is unpleasantly affected on an emotional level, but without reference to the verbal domain.



### 15.2.3. (Iic) PRECISION IS SHARPNESS

- (51) Die Konturen sind gestochen *scharf*.  
The contours are razor-*sharp*.
- (52) Mit ihren *scharfen* Augen kann sie alles erkennen.  
With her *sharp* eyes she can see everything.
- (53) Wir müssen die Unterlagen einer *scharfen* Prüfung unterziehen.  
We must subject the documents to a severe [*sharp*] audit.
- (54) *Kare-no shinkei-ga hari-no yô-ni togat-te iru.*  
3S.M-LK nerves-NOM needle-LK like manner-DAT become sharp-RES  
'He is extremely perceptive.'
- (55) *Surudoï kansatsuryoku*  
Sharp observation skills
- (56) *Kankaku-no surudoï/nibui hito*  
Senses-LK sharp/dull person  
'A person with sharp/dull senses'

The experiential correlation here is that sharp objects lend themselves to precise operations. For example, the use of scissors, knives, etc. as tools usually results in clearly demarcated boundaries. This, in turn, entails ease of distinction. And the better our ability to distinguish becomes, the more likely we are to make correct judgements. Consider (51): The most salient aspect of sharp contours is a clear-cut demarcation of boundaries. This means that we are in an ideal position to differentiate between figure and ground in a visual scene. A *sharp* photo will leave no doubt as to where one object ends and another one begins. The very same effect (i.e. the ability to make precise distinctions) is achieved by high visual acuity (see 52) and – via extension to the other faculties – by sense perceptual acuity in general (e.g. 54, 56). Similarly, a severe audit (see 53) entails making precise distinctions between relevant and irrelevant information.

### 15.2.4. (Iid) INTELLIGENCE IS SHARPNESS

- (57) Ihr Verstand ist *scharf* wie ein Skalpell  
Her mind is razor-*sharp* [sharp like a lancet]
- (58) Eine messerscharfe *Analyse* (by metonymy: RESULT for INSTRUMENT)  
A razor-*sharp* analysis [An analysis as sharp as a knife]
- (59) *Tarô-wa zunô-ga surudoï.*  
Tarô-TOP brain-NOM sharp  
'Tarô has a sharp mind.'

- (60) *Hanako-wa nakanaka-no kiremono [kiri = to cut] desu.*  
 Hanako-TOP quite-LK brilliant person COP.POL  
 'Hanako is quite brilliant.'

Both German and Japanese seem to share a folk theory according to which ANALYTICAL THINKING IS DISASSEMBLING COMPLEX OBJECTS. Consider, for instance, the following expressions from German:

- (61) Ein Problem in seine Bestandteile *zerlegen*  
 To *break down* a problem into smaller components
- (62) Die wesentlichen *Bausteine* der Theorie<sup>4</sup>  
 The major components [*building-blocks*] of the theory

In the case of Japanese, the most striking example is probably the verb *wakaru* (understand, comprehend) which is etymologically related to *wakareru* (divide, split into).

Thus, if analytical thinking is conceptualized as decomposition, it follows by metaphorical entailment that an able mind is a sharp instrument (since sharp instruments are ideal for disassembling objects).

#### 15.2.5. Excursion: Overlap of Metaphors in a Single Expression

It is interesting to observe that some expressions seem to instantiate multiple metaphors at once. Recall (53) from above:

- (53) Wir müssen die Unterlagen einer *scharfen* Prüfung unterziehen.  
 We must subject the documents to a severe [*sharp*] audit.

I have categorized this under the *precision* reading, since most native speakers agree that accuracy and precision are the main aspects here. However, we can hardly deny that the other target domains discussed above play a role as well. The expression *scharfe Prüfung*, best translated as *severe audit*, at least implies some amount of unpleasant intensity. And since such an activity requires analytical rigor, the target domain of intelligence is activated as well. A similar conflation can be noted regarding expressions such as (57) and (59):

- (57) Ihr Verstand ist scharf wie ein Skalpell  
 Her mind is razor-sharp

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<sup>4</sup> See also Grady (1997a, 1997b) on the conceptual metaphor THEORIES ARE BUILDINGS.

- (59) *Tarô-wa zunô-ga surudoï.*  
 Tarô-TOP brain-NOM sharp  
 'Tarô has a sharp mind.'

As I have argued above, the INTELLIGENCE IS SHARPNESS metaphor is an entailment of the metaphor ANALYTICAL THINKING IS DISASSEMBLING COMPLEX OBJECTS. But at the same time, there are metaphorical links between sense perception and mental activity in both German and Japanese:

- (62) Ich *sehe* momentan keine Lösung.  
 I don't *see* a solution at the moment.

- (63) Das *klngt* nach einem guten Plan.  
*Sounds* like a good plan.

- (64) *Anata-no keikaku-wa subete omitôshi da.*  
 2S-LK plan-TOP all see-through COP  
 'I've completely seen through your plan.'

- (65) *Keiji-ga hannin-wo kagi-dashi-ta.*  
 Detective-NOM perpetrator-ACC sniff-DASU-PAST  
 'The detective found out who the perpetrator was.'

These are all instances of a higher-level metaphorical system called the *Mind-as-Body Metaphor* (Sweetser 1991: 28ff.). The point is that expressions like (57) and (59) can be seen as instances of both the *precision* and the *intelligence* reading. I.e., the MIND-AS-BODY metaphor and the ANALYTICAL THINKING IS DISASSEMBLING COMPLEX OBJECTS metaphor simultaneously construe the mind as a sharp object. In fact, it might be possible to subsume the *intelligence* under the *precision* reading. However, I have chosen to keep them separate here to draw attention to a relatively prominent folk model of analytical thinking. Either way, the exact distinction is of little concern for the present purpose.

### 15.3. (III) Surface Properties: *Smooth and Rough*

#### 15.3.1. (IIIa) ABSTRACT REFINEMENT IS SMOOTH, LACK OF ABSTRACT REFINEMENT IS ROUGH

These mappings are entailments of the highly schematic ontological metaphor ABSTRACT SUBSTANCE IS RAW MATTER – a prominent consequence of which is the view of ABSTRACT DEVELOPMENT AS AN ARTISANAL PROCESS. For instance, humans and their skills are understood as being shaped by external and internal forces in a teleological manner towards some desired end state. This is evidenced by German expressions such as *sich*

*bilden* (lit. to form, shape, build oneself), which refers to the process of self-education, including personal maturation aspects. Similarly, in Japanese we have phrases like *seishin-wo kitaeru* (lit. forge one's mind).

Given the above, it is not hard to see why abstract refinement is conceptualized as smooth, and lack thereof as rough: The raw untreated material which marks the starting point of the developmental path is coarse and rough, and gradually becomes smooth and refined, as it is subjected to the artisanal treatment. To illustrate, consider the following examples.

*Manners and personality:*

- (66) Er benahm sich wie ein *ungehobelter Klotz*.  
He conducted himself uncouthly [like a *rough-hewn brick*].
- (67) Sie beeindruckte durch *geschliffene* Manieren.  
Her *polished* manners left an impression.
- (68) *arappoi kotobazukai*  
rough language
- (69) *Seikaku-no kado-ga tore-te, maru-ku ochitsuku.*  
Personality-LK edges-NOM come off-TE round-INF calm down  
'(His/her) personality became more mellow.'

*Skill:*

- (70) Er ist ein *Rohdiamant*.  
Though unrefined, he has great potential [He is a *rough diamond*].
- (71) Ich muss mein Englisch *aufpolieren*.  
I have to brush up on [*polish*] my English.
- (72) *Ude-wo migaku*  
arm-ACC polish  
'to improve one's skill'
- (73) *Arakezuri-no senshu da ga, mikomi-ga aru.*  
Rough hewn-LK athlete COP CONJ expectation-NOM exist  
'The athlete is still rough around the edges but shows promise.'

15.3.2. (IIIb) GOOD DEVELOPMENT IS SMOOTH, BAD DEVELOPMENT IS ROUGH

These are entailments of the *event structure metaphor* (Lakoff 2006: 213). More specifically, the relevant mappings are:

- PURPOSEFUL ACTIVITIES ARE JOURNEYS
- MEANS ARE PATHS
- DIFFICULTIES ARE IMPEDIMENTS TO MOTION

In other words, if means are paths, then smooth surface structure is preferable, since it poses no impediments to motion:

- (74) Sie hat zukünftigen Generationen *den Weg geebnet*.  
She has *paved the way* for future generations.
- (75) Vor uns liegt ein *steiniger Weg*.  
A *rocky road* lies ahead of us. [I.e., difficulties are to be expected]
- (76) *Kôshô-ga nameraka-ni shinkô shi-ta.*  
Negotiation-NOM smoothly progress do  
'The negotiation progressed smoothly.'
- (77) *Gengo gakushû-wa dekokoko michi.*  
Language learning-TOP bumpy road  
'Language learning is a bumpy road.'

As indicated by these examples, a particularly salient aspect of the smooth-rough scale is the force dynamic notion of *friction*. As evidenced by the CONFLICT IS FRICTION metaphor, friction is generally considered as something negative:

- (78) Es kam zu *Reibungen* zwischen Russland und der Türkei.  
*Friction* ensued between Russia and Turkey
- (79) *Iken-ga masatsu shi-te iru.*  
Opinions-NOM friction do-PROG  
'There is a conflict of opinion.'

Note, however, that some amount of friction is needed since MAKING A MISTAKE IS SLIPPING:

- (80) Ein bedauerlicher *Ausrutscher*  
An unfortunate *slip-up*
- (81) Bei ihrer Erklärung geriet sie ins *schlingern*.  
She had difficulty giving an explanation [started to *swerve*].
- (82) *Shiken-ni suberu*  
Test-DAT slip  
'To fail a test'

In summary, then, both German and Japanese metaphorically express the difficulty of developmental paths in terms of smooth, rough, or slippery surface structure.

### 15.3.3. (IIIc) DEGREE OF DETAIL IS GRANULARITY OF SURFACE STRUCTURE

Rough surfaces, by their nature, are interspersed with gaps. This is illustrated in the diagram below:

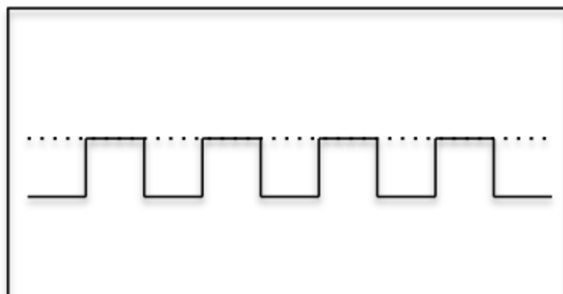


FIGURE 1

Mentally filling the gaps between the “grains” yields an even surface (as indicated by the dotted line). Thus, mapping the embodied notion of fine-grained/coarse-grained surface structure onto the domain of information allows us to conceive of detail in terms of physical granularity<sup>5</sup>:

- (83) Eine *grobe* Schätzung  
A *rough* estimate
- (84) Ein *feinkörnige* Unterscheidung  
A *fine-grained* distinction
- (85) Eine *dichtgewobene* Erzählung  
A *tightly woven* narrative
- (86) Eine *lückenhafte* Wiedergabe  
An incomplete [*gappy*] recollection
- (87) *Jiken-wo ara-ku shiraberu*  
case-ACC rough-INF investigate  
'To conduct a superficial investigation.'
- (88) *Shōsetsu-no arasuji*  
novel-LK rough plot  
'The rough plot of the story'
- (89) *Kime-no komakai bunseki*  
grain-NOM fine analysis  
'A fine-grained analysis'

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<sup>5</sup> In addition to the *lack of matter – lack of detail* analogy (which is partly grounded in haptic perception), fine-grained structures also require higher visual accuracy than coarse-grained structures and therefore imply a zooming-in of the “mental camera”.

#### 15.4. Observations and Explanations

In this chapter we have taken a brief look at embodiment from a cross-cultural perspective by examining three source domains and their metaphorical scope in German and Japanese. The results, summarized in table 1, can be broken down into the following observations:

- All metaphors except (Ia) occur in both languages.
- Cross-linguistic variance still occurs, but is more likely to be encountered at the specific level of linguistic realization rather than at the general level of embodied experience.
- As (Ia) shows, not all primary metaphors are instantiated cross-linguistically.

How can we account for these results? First, there is the almost identical scope of all three source domains in German and Japanese. Why is it that two genetically unrelated languages have so many metaphors in common? As stated above, this result was anticipated and is straightforwardly answered by the choice of source domains. Since our focus in this chapter is on the relation between embodiment and culture, all three source domains were chosen from a set of properties that directly pertain to the level of embodied experience. Based on contemporary research (e.g. Grady 1997a, 1997b; Lakoff and Johnson 1999; Kövecses 2005), Yu points out that “primary metaphors derive directly from our experience and very often from our common bodily experience and therefore are more likely to be universal, whereas complex metaphors are combinations of primary metaphors and cultural beliefs and assumptions and, for that reason, tend to be culture-specific” (Yu 2008: 248). In other words, metaphors are located on a spectrum somewhere between being *directly based* and being *only very indirectly based* on embodied experience. And since the source domains considered in this chapter are directly embodied, and given the universal nature of human physiology, it is hardly surprising that we ended up almost exclusively with cross-linguistically viable metaphors, many of which are primary.

Still, this is not to say that cross-linguistic variance is a non-issue. To illustrate this point, consider (Ic). The metaphor INSTENSITY IS WEIGHT is present in both German and Japanese. Yet, in Japanese it is only applicable to the domain of ABSTRACT BURDENS while in German it is applicable to a much wider range of phenomena. This is also reflected on the linguistic level by the use of *schwer* (heavy) as an augmentative marker. Another obvious example of variance is metaphor (Ie). Again, RESPECT/DIGNITY IS WEIGHT is found in both languages. But as soon as we consider the level of linguistic expression,

we notice that the metaphor is much more prominent in Japanese than it is in German. While these are two of the more obvious cases, it should be noted that none of our examples yield exactly the same results on the level of linguistic realization. This, too, is to be expected. While it is true that the human potential for embodied experience is the same across cultures, “[u]niversal embodiment *can be overridden* by either socio-cultural context (experiences) or cognitive processes (cognitive preferences)” (Kövecses 2005: 293). Unsurprisingly, this “override” becomes more evident, the closer we get to the specific levels of concrete cultural practice and linguistic realization. It is for this reason that even primary metaphors are not inevitably universal (as shown by Ia): “[T]he bodily basis of metaphors is only part of the total experiential basis. It can account for the motivation of a metaphor but does not license its actual selection. The actual selection of a metaphor depends to an important extent on its cultural basis” (Yu 2008: 254).

In sum, then, the data from German and Japanese presented in this chapter is consistent with current research on the topic of embodiment and culture: Source domains directly rooted in embodied experience are likely to have a similar scope cross-culturally, while still retaining variance at the more specific levels of the metaphorical spectrum.

	metaphor	type	German	Japanese	comments
<b>(I)</b>	<b>The weight scale: heavy and light</b>				
(Ia)	EFFORTFUL ACTIVITY IS HANDLING HEAVY OBJECTS	primary	yes	no	
(Ib)	ABSTRACT BURDENS ARE PHYSICAL BURDENS	correspondences	yes	yes	
(Ic)	INTENSITY IS WEIGHT	entailment of (Ib)	yes	yes	wider scope in German
(Id)	IMPORTANCE IS WEIGHT	primary	yes	yes	
(Ie)	RESPECT/DIGNITY IS WEIGHT	entailment of (Id)	yes	yes	more prominent in Japanese
<b>(II)</b>	<b>Edge properties: sharp and dull</b>				
(IIa)	Synaesthetic mappings	primary (?)	yes	yes	
(IIb)	UNPLEASANT INTENSITY IS SHARPNESS	primary	yes	yes	
(IIc)	PRECISION IS SHARPNESS	primary	yes	yes	
(IId)	INTELLIGENCE IS SHARPNESS	entailment of (IIc)	yes	yes	
<b>(III)</b>	<b>Surface properties: smooth and rough</b>				
(IIIa)	ABSTRACT REFINEMENT IS SMOOTH...	correspondences	yes	yes	
(IIIb)	GOOD DEVELOPMENT IS SMOOTH...	correspondences	yes	yes	
(IIIc)	DEGREE OF DETAIL IS GRANULARITY	primary	yes	yes	

TABLE 1



## Concluding Remarks and Prospects

The main purpose of this thesis was to show that the V2s under consideration are inherently meaningful. It was argued that their contribution to the compound can only be fully appreciated when considered as part of a complex lexical network that subsumes both grammatical V2s and their simplex counterparts. The five case studies elucidated the structure of these networks. All five verbs under analysis were shown to have a basic image schematic meaning at the root of their highly polysemous structure. Mechanisms of semantic extension such as metaphor, metonymy, and image schema transformation “latch onto” these basic spatial schemas to yield bundles of naturally interrelated meaning variants. Thus, we were able to present evidence for the motivatedness of individual senses in accordance with general principles of cognition. In particular, the senses of the V2 turned out to be metaphorical extensions into abstract domains based on the same image schematic structures as the senses of the simplex.

Given the results of the case studies, I have argued that the metaphorical motivation of the respective V2s has important “syntactic” implications (chapter 14). Their peculiar “argument structure” properties were reframed as profiling phenomena and explained in terms of salience. The proposed account holds that certain participants of the relation profiled by the V2 are too abstract, and therefore not prominent enough, to overtly appear as subject or object nominals. Based on Langacker’s (e.g. 1991, 1995) treatment of “raising” constructions, it was speculated that the absence of these abstract participants might best be analyzed as an active zone phenomenon (14.6.3.). Furthermore, the so-called *lexical vs. syntactic* distinction – a dominant paradigm in the study of Japanese V-V compounds – was fundamentally called into question and the contours of an alternative usage-based account were sketched out in terms of schematicity and frequency effects (14.7.).

Finally, we have observed some striking cross-linguistic similarities throughout the thesis. The parallels between DERU and *out*, AGARU and *up*, or KAKARU and German *an* come to mind. It seems that certain conceptual mappings, especially those pertaining to primary metaphors, tend to be less language-specific than others. In chapter 15 this was investigated by comparing the metaphorical scope of three source domains – *weight*, *edge properties*, and *surface properties* – in Japanese and German. The results suggest that directly embodied source domains such as these are likely to be mapped onto a

similar (though not necessarily identical) set of target domains across different languages due to the universal nature of basic bodily experience.

In conclusion, then, we have presented a psychologically realistic account of the semantic structure of image schema verbs, shown the inextricable relation between simplex and V2, and argued in favor of a meaning-based approach to some long-standing syntactic questions. Yet, a study such as this has its limitations, and in many respects we have merely scraped the tip of the iceberg. Two issues in particular deserve to be singled out. (I) The complete story of image schema verbs should undoubtedly include a historical account of their polysemy, based on diachronic corpora. The present thesis has taken a predominantly theoretical perspective on polysemy, and while I believe that the arguments presented are sound and coherent, they should by all means be checked against a broad empirical basis – ideally by tracing the process of semantic extension and grammaticalization from the earliest written sources to the present day. (II) One of this thesis' most serendipitous discoveries is probably the salience-based nature of “argument selection”. Two major avenues for further research present themselves: First, the pursuit of an active zone account regarding the profiling properties of grammatical V2s. Secondly, the role of conceptual autonomy, discourse context, and frequency effects in the case of non-grammatical compounds. And last but not least, the schema-based alternative to the traditional *lexical vs. syntactic* dichotomy will require backing in the form of copious amounts of quantitative data. I hope to have laid out the basic theoretical groundwork here, so that future studies may tackle these issues.

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Abbreviations:

BLS = Proceedings of the Annual Meeting of the Berkeley Linguistics Society

CLS = Papers from the Regional Meeting of the Chicago Linguistic Society

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