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INTRASTATE CONFLICT AND SOCIAL SPACE IN A CRITICAL REALIST PERSPECTIVE

A Quantitative Analysis of the Formation of Non-State Actors and of Profiles of Violence in Asia and Oceania

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Contents

List of Figures

List of Tables

Chapter 1

Introduction

Armed groups are a constitutive element of intrastate political conflict. Their internal organization, their goals, and the means of violence at their disposal strongly influence conflict dynamics. Recent examples include the rise and advance of the so-called 'Islamic State' in Syria and Iraq, the peace process between the Colombian government and the 'Fuerzas Armadas Revolucionarias de Colombia–Ejército del Pueblo' (FARC), or the defeat of the 'Liberation Tigers of Tamil Eelam' (LTTE) in 2009.

Despite the pivotal role of armed groups, actions taken amid conflict can always be attributed to individuals. This is most evident in cases where few commit large-scale attacks such as in the 2016 bombings in Brussels, but also applies more generally. In the end, it comes down to individuals who behave in certain ways; who, for instance, voice specific demands or operate the trigger of a gun.

Although the practice of ascribing agency to groups is widespread in media and research alike, group agency is a phenomenon that has astonishingly aroused very little academic interest. One reason for this might have to do with the widespread focus on more practical issues, such as the collection of quality data or the development of highly specialized statistical models to make sense of it. Top journals dedicated to the study of intrastate conflict only seldom publish articles that lack an empirical analysis of a highly specific question. This has pushed more foundational issues of ontology and theory development into the background. We might attribute this to the growing maturity of the field: Having left issues of ontology behind, research can now dedicate efforts to developing and applying sophisticated methods to complement our understanding of the various specific phenomena related to intrastate conflict.

The present analysis argues that contemporary conflict research is not as mature as it may appear. The empiricist philosophy of science, in which most current conflict research is rooted, does not provide a solid foundation for applied empirical research. Rather, many of its basic assumptions are probably wrong. Conflict research can thus greatly profit from taking a step back and investigating what exactly contemporary methods presuppose in terms of ontology.

The main aim of the current analysis is to place the study of political conflict upon a sound footing. Departing from the position of critical realism in the philosophy of sciences, a comprehensive analysis of social ontology, and a close examination of existing research, the present analysis brings forward new concepts of political conflict and non-state conflict actors and argues in favor of more rigorous theoretical reasoning.

The second part of the present analysis focuses on a phenomenon, which—in light of the state of research—appears most relevant to the study of intrastate conflict: Non-state conflict actors. On grounds of the social ontology developed in the first part, the second part specifically addresses what non-state conflict actors are, how and under what circumstances they emerge, and how they act. The analysis shows that under certain circumstances our intuitive tendency to ascribe agency to collectives is justified.

In demonstrating how the occupation with philosophy of science, social ontology, and theory is of immediate value for empirically-oriented research, we put the entirety of its developed concepts to use. This analysis presents original data on intrastate political conflict and non-state conflict actors in Asia and Oceania as well as makes use of geographically disaggregated data on socio-economic, demographic, and geographical structures. Testing the developed theory in a statistical analysis illustrates that the path pursued does not result in a completely different style of

research that loses all points of contact with current research practices. In contrast, it aims to show that an explication of often-implicit ontological assumptions can contribute to our understanding of intrastate political conflict.

1.1 Recent Advances in the Study of Intrastate Conflict

Given the empirical prevalence and policy relevance of intrastate conflict it is not surprising that academic research has gone to great lengths to explain its causes and dynamics. These efforts have led to notable advances in recent years. Specifically, two trends are discernible that pertain to the availability and precision of data and the investigation of the causes of intrastate conflict (Cederman and Gleditsch 2009; Gleditsch, Metternich, and Ruggeri 2014; Wencker, Trinn, and Croissant 2015).

A first trend is the improvement of the tools of measurement. As a result, the amount of information on conflictive processes has increased at an enormous pace. This is reflected in an extension of the empirical scope of conflict databases. Since its origins in the work of Wright (1942), Richardson (1960) and the Correlates of War Project (Singer and Small 1972; Small and Singer 1982) which mainly focused on highly-violent conflicts, the view has since then been broadened to include conflicts below the level of war (Themnér and Wallensteen 2014; Wallensteen and Axell 1993) and non-violent campaigns (Chenoweth and Lewis 2013). The Minorities at Risk Project (Gurr 1993, 2000) has collected data on ethno-political conflicts. Conflict research in Heidelberg has added data from a more qualitative-oriented perspective (Croissant, Schwank, et al. 2009; Croissant and Trinn 2009; Croissant, Wagschal, et al. 2010; Pfetsch 1991a; Pfetsch 1991b, 2001, 2006; Pfetsch and Billing 1994; Pfetsch and Rohloff 2000a,b; Rohloff 2007; Schwank 2006, 2007, 2012; Schwank and Trinn 2010). This improvement is part of a greater development. Going beyond a country-year perspective on conflicts, researchers recently localize conflicts more precisely than ever before. The Armed Conflict Location & Event Data Project (ACLED) and the Georeferenced Event Dataset (GED) have pushed the boundaries of data precision by collecting event data (Buhaug 2010; Buhaug and Lujala 2005; Raleigh and Hegre 2010; Schrodt and Hall 2006; Sundberg and Melander 2013). In a similar move, a recent fundamental revision of the definition and measurement strategy of the Heidelberg approach has recently increased the spatiotemporally resolution of its data (Schwank, Trinn, and Wencker 2013; Trinn 2015; Wencker, Trinn, and Croissant 2015). Disaggregation has likewise improved our understanding of actors in intrastate conflicts. One focus has been to refine our knowledge about the geographic location of ethnic groups (Cederman, Buhaug, and Rød 2009; Cederman, Wimmer, and Min 2010; Weidmann, Rød, and Cederman 2010; Wimmer, Cederman, and Min 2009). Another focus lies on a more detailed analysis of dyadic configurations and more precise data on non-state conflict actors (Cunningham, Gleditsch, and Salehyan 2009b; Fjelde and Nilsson 2012; Gent 2011; Salehyan, Gleditsch, and Cunningham 2011).

Evidently, the increase in data availability has not been restricted to the field of conflict research. More and more information on economic, societal, and political systems has become available. This has led to a second trend: The analysis of a large variety of explanatory variables with predominantly quantitative methods. With regard to the explanation of the onset, incidence, recurrence, and duration of conflict, researchers have examined almost every conceivable phenomenon of reality reasonably connectable to intrastate conflicts: From immanent characteristics and dynamics of conflicts to the political, socioeconomic, demographic, and geographic structures of the affected countries and their neighbors, and from the attributes of individual leaders and of non-state groups to the international system (Dixon 2009; Newman and DeRouen 2014). Although the debate is far from settled, a consensus with regard to at least some explanatory factors has emerged. Among them are unsurprising factors such as population size and recent conflict but also unstable and weak state institutions, a large dependency on oil exports, and the existence of horizontal inequalities.

1.2 Shortcomings and Aims

In spite of these impressive improvements with regard to data and analysis, four significant shortcomings remain. The first two shortcomings are more general in nature and pertain to the concepts that underlie empirical research and the formulation of theory. The latter two shortcomings

relate to our understanding of the processes leading to the emergence of intrastate violent conflict and our understanding of conflict dynamics.

A first shortcoming relates to the concepts that underlie data collection projects. The recent debate has been concerned mainly with the collection of quality data and measurement issues (Salehyan 2015; Spagat et al. 2009; Weidmann 2014b). As important as these considerations are, what scholars refer to is only the tip of the iceberg. The debate is primarily concerned with operational definitions, i.e. detailed measurement strategies, that provide the tools for measuring the object under investigation. What such definitions do not tell us, however, is what the object *is*. In other words, real definitions are needed. Developing reliable indicators is evidently an important task. Nevertheless, it is only a second step in complete conceptualizations of empirical phenomena. Equally important is to specify the ontology of political conflict. This is even more true considering we know from Sambanis (2004) that underlying concepts affect causal inference.

While data collection has progressed significantly, definitional, operational, and empirical disagreements between data projects remain. This tension among datasets makes it necessary to investigate the nexus between data and the multifaceted reality, which is provided by concepts. If ontological core characteristics are left out of conceptualizations, there is no way to assess the validity of indicators. In this perspective, the current evaluation of data collections has lost sight of a pivotal issue.

This shortcoming applies, a fortiori, to the concepts and data projects on non-state conflict actors (NSCA). Although the apparent surge of intrastate conflicts since the end of the Cold War has led to a better recognition of the role of non-state actors in conflicts, conflict actors have attracted far less attention than conflict measures to date. As a result, most definitions underlying quantitative research on conflict actors remain shallow due to the needs of coding reliability and the amount of data to be processed (Cunningham, Gleditsch, and Salehyan 2009a; Harbom and Sundberg 2009; Pearlman and Cunningham 2012). Rather than discussing constitutive attributes of non-state actors, existing research primarily focuses on indicators and works with operational definitions. Consequently, causally relevant properties such as regulative processes within actors remain poorly understood.

While quantitative research often lacks elaborated concepts and can be criticized for a one-dimensional focus on measurement, qualitative research seldom fulfils the prerequisites for comparative analyses. Qualitative researchers usually focus on single or few NSCAs and characterize these in greater depth, e.g. by analyzing dynamics within non-state actors or focusing on characteristics of individual members (cf. Dudouet 2012; Gates 2002; Harpviken 2013; Humphreys and Weinstein 2008; Weinstein 2007). Typical research methods comprise interviews and field studies. Since qualitative research typically involves rich descriptions of few cases, it often lack universal definitions and quantifiable indicators. There exists no single conceptualization and operationalization which is suitable for quantitative and qualitative research alike, i.e. which convincingly combines a valid and concise definition with a conceptualization suitable for extensive comparison.

We can thus conclude that data availability on intrastate conflict, conflict actors, and explanatory variables has greatly increased and has improved our understanding of conflict dynamics. At the same time, however, most definitions of political conflict and conflict actors lag behind this level of sophistication. Rather than discussing constitutive attributes, existing research primarily focuses on indicators. From this derives the first aim of the present analysis: *The first aim of the present analysis is to provide definitions of 'political conflict' and 'non-state conflict actor' that go beyond immediate observables. Both concepts should offer a systematic hierarchy of attributes and indicators and thereby offer a solid point of departure for the development of theories and measurement strategies.*

Closely related to the first shortcoming, there exists a second one with regard to the construction of theories. It is deeply linked to the dominance of the empiricist paradigm in conflict research as described by Newman and DeRouen (2014, p. 4):

> Since the 1990s civil war studies has been driven by empirical, especially quantitative, approaches, which reflect a growing concern with methodological rigor and testable hypotheses. According to the positivist empirical approach, scholars can generate rigorous explanatory theory through observation and testing on a range of questions related to the causes and the nature of civil war. The quantitative and econometric approaches are at the heart of this academic renaissance and some of the key debates in civil war studies have reflected this approach.

At first glance, this does not seem to pose a problem. And it is certainly true that careful observation based on reliable indicators is of utmost importance for successful empirical research. However, the lack of adequate concepts and the one-dimensional focus on methods rather than

the ontological underpinnings of our investigations leaves current conflict research rather theory-deficient.

The most frequently cited article in the study of intrastate conflict provides an example of a theory merely reduced to catchwords. Based on regression analysis of more than ten highly aggregated proxy variables, Fearon and Laitin (2003) argue that the conditions that favor insurgency—for instance, the weakness of government institutions, the possibility to hide, or foreign support—have the greatest explanatory value pertaining to the onset of civil war. The grievance mechanism, on the other hand, is dismissed as an unlikely cause for civil war.[1] This finding is based on an analysis which features a tremendous gap between highly aggregated data on structures (macro-level) and the theoretical arguments referring to individuals (micro-level) or groups (meso-level). Aside from the fact that the theoretical and empirical foci do not match, the different levels of analysis remain poorly defined and relations between levels are not adequately discussed. Moreover, the possible interplay of seemingly rival mechanisms is only poorly addressed. It is not necessarily either grievance-inducing factors *or* conditions that favor insurgency which explain the onset of civil war. These shortcomings are a direct result of a lack of clarity with regard to levels of analysis and causal processes.

It is true that the gap between theoretical and empirical foci is closing due to more disaggregated data. However, despite progress with regard to the formulation and empirical testing of micro-level mechanisms (Humphreys and Weinstein 2008; cf. Weidmann 2014a), current research remains theory-deficient. It suffers from what Sørensen (1998, p. 238) observed with regard to sociology in general:

> "There has been enormous progress in what we can do with data, and in the sophistication of mathematical and statistical tools (...). Nevertheless, quantitative sociology remains very theory-poor. In fact, the mainstream has regressed rather than progressed."

Piling up empirical evidence in these variable-centered approaches or 'garbage-can regressions' (Achen 2005), conflict research is in danger to lose sight of more general discussions of theoretical approaches. What is missing is a comparative approach that focuses not only on measurement, but also on theory. From this derives another aim of the present analysis: *The second aim of this thesis is to systematize, clarify, and criticize existing explanatory approaches of the onset of intrastate political conflicts.*

The two shortcomings described thus far are rather general. They are, however, related to two more specific shortcomings pertaining to our understanding of specific conflict-related phenomena. The first of these exists with regard to the study of processes leading to the emergence of intrastate violent conflicts. There is an abundance of research that investigates what structural conditions contribute to the 'onset' of political conflict; the latter widely equated with a conflict passing a certain threshold of deaths. What is missing, however, is a comprehensive theory that explains both why individuals bind together in groups to fight against the government, and also how these groups achieve to act coherently based on their beliefs and volitions. On the one hand, our lack of understanding is a result of a poor comprehension of the concept 'group' and what it means to act collectively. On the other hand, this lack of knowledge can be attributed to the existence of underspecified theories that do not adequately capture processes of group-formation.

What exactly are 'groups' and how do they stand in relation to individuals? Are they aggregates of individuals who act and think alike? Or is it adequate to attribute genuine beliefs, aims, and tactics to groups? Can we even say that groups *act*? Although these questions seem to stand at the center of the study of intrastate violent conflict, current research has not yet adequately addressed them. Even studies that go beyond the highly aggregated level of war and specifically focus on conflict actors (Cunningham, Gleditsch, and Salehyan 2009b; Harbom, Melander, and Wallensteen 2008) take groups as the main units of analysis and do not choose to problematize or legitimize this approach. Brubaker (2004, p. 7) has coined the term 'groupism' to denote this view:

> Yet despite its apparent centrality, the concept of "group" has remained curiously unscrutinized in recent years. There is, to be sure, a substantial social psychology literature addressing the concept (Hamilton et al. 1998; McGrath 1984), but this has had little resonance outside that subdiscipline. Elsewhere in the social sciences, the recent literature addressing the concept "group" is sparse, especially by comparison with the immense literature on such concepts as class, identity, gender, ethnicity, or multiculturalism—topics in

[1] "The *mechanism* that gives rise to nationalist contention in modernist arguments is state or societal discrimination along the lines of cultural difference, which is thought to create the grievances that motivate rebellions. Grievances are difficult to measure independently of our knowledge of the actions we are trying to explain (rebellions, civil war), but measures of average levels of discrimination are feasible" (Fearon and Laitin 2003).

> which the concept "group" is implicated, yet seldom analyzed on its own terms. "Group" functions as a seemingly unproblematic, taken-for-granted concept, apparently in no need of particular scrutiny or explication. As a result, we tend to take for granted not only the concept "group," but also "groups"—the putative things-in-the-world to which the concept refers.

Brubaker's view applies to the field of conflict research as only few studies investigate the formation of groups (see Humphreys and Weinstein 2008; Schlichte 2009a; Staniland 2011; Weinstein 2005, 2007). The dominant strategy is to either take groups as givens or to refer to individuals and abstain from referring to groups. A brief overview of the three explanatory approaches dominating conflict research substantiates this argument.

The *economic perspective* entertains individualist arguments. It assumes actors to maximize individual benefits and approaches the question of group formation according to the well-known collective action problem. Collier (2000a, p. 99), who is a typical representative argues: "The free-rider, coordination, and time-consistency problems together pose formidable obstacles to rebellions motivated purely by grievance. (...) The remaining strategy for a rebel leader is to rely upon greed." From this stems a profound skepticism with regard to group formation based on *collective* aims.

A second school completely abstains from arguments pertaining to the micro-level but focuses on *opportunity structures*. As Collier, Hoeffler, and Rohner (2009, p. 3) argue: "Factors that are important for the financial and militarily feasibility of rebellion but are unimportant for motivation decisively increase the risk of civil war." These arguments resemble ecological arguments. Strictly speaking, they do not make any nomological statements with regard to individual participation within groups, as they neither state a micro-mechanism nor elaborate on any relations between different levels of analysis such as the collective action problem.

A third school, which studies the link between ethnic groups and conflict, originated with Gurr (1993, 2000) (cf. Horowitz 1985). The characterizing feature of this school is that it specifically addresses the influence of structures on individual motivations. We can denote it as the *moderate collectivist* approach. Among the three perspectives, it takes the link between individuals and groups most seriously. This is plainly discernible from the following statement by Stewart (2008, p. 11):

> "The motivation of the participants is clearly at the root of any violent situation. (...) [T]he majority of internal conflicts are organised group conflicts—they are neither exclusively nor primarily a matter of individuals committing acts of violence against others. What is most often involved is group mobilisation of people with particular shared identities or goals attacking others in the name of the group. While young men may fight because they are unemployed, uneducated, and have few other opportunities, they also generally fight out of loyalty to a group (sometimes an ideology or a cause)."

More recent research by Cederman, Gleditsch, and Buhaug (2013), Cederman, Weidmann, and Gleditsch (2011), and Stewart (2008) has pushed the limits of this approach and contributed to our understanding of actors in intrastate conflict (cf. Østby 2013). In conjunction with better data on horizontal inequality and ethnic groups, we gain a more adequate picture of how inequality between ethnic groups is linked to the onset of political violence. As will turn out, the moderate collectivist perspective is most adequate as a point of departure.

However, even in this strand of research we find a tendency to assume rather than explain groups. The focus is more on why groups engage in violence rather than why individuals bond together in groups. This might appear to be hair-splitting, but as the discussion in chapter 4 aims to demonstrate, there is a difference not only between individuals and groups, but also between individual and collective action.

Taken as a whole, conflict research has insufficiently addressed the constitutive and causal links between the levels of individuals and groups. From this, we can derive our third aim: *The third aim is to develop a theoretical framework that clearly separates the micro-level of individuals and the meso-level of groups and elaborates on the processes through which individuals bond together to form groups.*

By turning away from the formation of groups and focusing our view on the measurement of conflict intensity we can identify a fourth shortcoming, which pertains to the analysis of patterns of violence. This deficit points to the nearly ubiquitous one-dimensionality in operationalizing conflict intensity via battle-related fatalities.

The large majority of databases on violent conflict exclusively focuses on consequences of violence at the expense of the employed means. Among these datasets are the Correlates of War project (COW) (Sarkees and Wayman 2010; Small and Singer 1982); the Center for Systematic Peace (CSP) (Marshall 2014); the Uppsala Conflict Data Program (UCDP) (Uppsala Conflict Data

Program 2015); and the data presented in Fearon and Laitin (2003). In this group, CSP is the most differentiated since it uses a large number of indicators. The remaining three projects only consider fatality figures. The only exceptions are the Minorities at Risk project (Gurr 2000) and the Political Instability Task Force (PITF) (Marshall, Gurr, and Harff 2014), both of which cover issues pertaining to means and consequences.

The dominance of one-dimensional approaches to the measurement of conflict intensity—which, from the empiricist's perspective, equals the definition of conflict intensity—blurs important characteristics of conflict dynamics. An exclusive focus on fatality figures precludes an understanding of what we can denote as 'profiles of violence', i.e. the patterns of conflict intensity that emerge from the conflictive interaction of non-state conflict actors and the government in intrastate conflict. With this in mind, the present analysis derives its fourth aim: *The fourth aim is to develop and implement a multidimensional and multi-indicator approach of conflict intensity that allows the investigation of how conflicts are fought.*

1.3 The Root of the Problem

The shortcomings of current conflict research with regard to concepts and theories are symptoms of a more fundamental problem: The dominance of the empiricist paradigm and an almost utter neglect of philosophy of science in conflict research. The rise of empiricism has certainly much to do with technical innovations that have facilitated the application of quantitative methods—first and foremost regression—and the increasing availability of data that has made such analyses feasible (Clayton 2014). Interestingly, however, empiricism's rise to power has largely come about without any scholarly debate. We can identify a complete lack of discussion on issues related to the philosophy of science in conflict research. While debates on the ontological and epistemological underpinnings of everyday research have been present in economics (Lawson 1997, 2003) and international relations theory (Wendt 1999), similar debates are virtually non-existent in conflict research. There has to date only been a single article discussing critical realism and conflict (Korf 2006). This is not to say that alternatives to the dominant empiricist paradigm are completely absent (see, for instance, Jabri 1996; Jackson 2004; Jackson and Dexter 2014; Kaufman 2001; Mundy 2011; Wilmer 2002). Nonetheless, the field is characterized by a stark imbalance in favor of sophisticated statistical approaches and a widespread neglect of basic issues of ontology, epistemology, and causation.

Important further still is to address how returning to discussions of such basic issues could contribute to conflict research. One might argue that we should leave philosophy to the philosophers and proceed on our path of both identifying the often-slight gaps left in the literature and allotting the most attention to explanations of highly specific phenomena. In the end—one might say—conflict research has come a long way. Although we must postpone more thorough discussions on the advantages of a critical realist approach and the shortcomings of empiricism to chapter 3, we can offer a brief idea here as to the reasons why we should care about the philosophy of science.

First, a specific philosophy of science is—at least implicitly—part of every scientific work. Thus, every scientific work in conflict research (most often tacitly) follows certain assumptions with regard to ontology. Unfortunately, these assumptions often remain unclear. The economic theory of civil war as laid out by Collier and Hoeffler (1998) provides an example, which is representative of the larger school of rational choice theories. The authors' explanation of civil wars builds on the fundamental nomological assumption that individuals maximize their individual economic wealth. Depending on the authors' position in the philosophy of science, we can interpret this in two ways: The concept of a rational actor might either be a rather unrealistic assumption, which nonetheless allows for the generation of good predictions; or it might be thought to be a highly accurate description of individual decision-making. These two different interpretations of the rational actor—as mere tools or as attempts to adequately describe reality—are instances of an instrumentalist and realist interpretation of theories, respectively. Following instrumentalism, concepts and theories are no more than useful instruments to formulate expectations about empirical patterns. Hypotheses might "have 'assumptions' that are wildly inaccurate descriptive representations of reality, and, in general, the more significant the theory, the more unrealistic the assumptions" (Friedman 1953, p. 14). Put plainly, 'whatever fits the data best, is a good theory'. In contrast, the realist camp holds that concepts refer to real objects. In this view, adequate theories refer to causal mechanisms that exist 'out there'. Concepts and theoretical mechanisms

are not exclusively constructs of the researcher, but also exist independently from our speculations. Most probably, we can regard David Collier and Anke Hoeffler as instrumentalists as they are prominent figures in both the economic *and* the feasibility approach. The fact that one set of authors proposes significantly different theories at the same time is a good indicator of an instrumentalist position. But although we might infer the authors' position, it is not clearly explicated. This vagueness with regard to fundamental questions is widespread in research on intrastate conflict. Whereas methods are often and rightfully discussed in length, the ontological and epistemological stance almost always remains implicit or briefly mentioned without discussion. This complicates interpretation and criticism, thereby impeding scientific progress. An explication of ontological and epistemological underpinnings does not *add* anything to an analysis but rather elucidates otherwise implicit premises. Debating ontological, epistemological, and methodological foundations should thus be considered responsible scientific practice.

Second, a discussion of the rather abstract arguments dominating the philosophy of science does not unnecessarily complicate research regarding 'hands-on' phenomena such as conflict, but can rather provide practical guidance on how to interpret concepts, theory, and methods. For instance, whether we take an instrumentalist or a realist stance affects how we deal with inconsistencies within and among theories (Popper 1994; cf. Albert 2012). As discussed above, the individualist and the moderate collectivist approach are incompatible with regard to how they treat structural influences on individual decision-making processes. Upon confrontation with empirical results from two incompatible approaches, an instrumentalist can accept the underlying incompatibilities as unproblematic. In the end, he or she might say, theories do not refer to reality and, as long as they allow for pre- or retrodiction, they are acceptable. From a realist perspective, in contrast, such incompatibilities are not acceptable. If theories are to be adequate models of real world processes, they cannot include contradictory statements. In the realist perspective, an incompatibility entails that at least one of the positions is not adequate (cf. Sayer 2010, pp. 44–49).

Critical realism also affects how we interpret results and how we do research. In applying this to the example at hand, theories on the onset of intrastate war that build on the assumption of individual wealth-maximization fared rather well in large-n statistical analyses (cf. Blattman and Miguel 2010). From an instrumentalist perspective this renders the rationality assumption feasible. From a realist perspective, this remains doubtful: The power to pre- or retrodict, on the one hand, and the empirical adequacy of the concepts leading to these results, on the other hand, are not separable. Theories are not simply useful to generate empirical expectations; they are either true or false. And to judge empirical adequacy, instruments have to be valid.

Finally, we might dispel the neglect of fundamental issues as a temporary trend. However, of notable importance is, first, that such an argument does not absolve us from our responsibility to address these issues. Second, there are no signs that the tide will turn. In contrast, the "gap between (1) positivist, cross-national, and especially quantitative approaches and (2) qualitative, case study, and critical approaches seems as wide as ever, and possibly widening" (Newman and DeRouen 2014, p. 8).

1.4 How to Address the Shortcomings

Based on the foundations of a critical realist philosophy of science, the present analysis addresses all four identified shortcomings and what has been identified as their root by developing a coherent conceptual, theoretical, and empirical approach to study the formation of non-state actors and emerging profiles of violence in intrastate political conflict in Asia and Oceania. Firmly rooted in the critical realist philosophy of science, the present analysis draws on original concepts of political conflict and non-state conflict actors, a theory that details the complex relationship between individuals, groups, and social structure, and highly detailed data on inequality, demographic, economic, and geographic characteristics of subnational units, profiles of violence, and armed groups, to explain how inequality leads to the formation of conflict actors and how opportunity structures determine profiles of violence in intrastate conflict.

The proposed argument is empirically tested in a comparative analysis of non-state actors and dynamics of political conflicts. Given the considerable efforts needed to collect disaggregated data, the present analysis focuses on Asia and Oceania. From a comparative perspective, a focus on this world region seems to offer most explanatory leverage. There are democratic, autocratic, and hybrid regimes; monarchies, military and one-party dictatorships; federal, decentralized, and unitary systems; societies with very large and very small populations as well as high and low

population densities; ethnically and religiously homogenous and heterogeneous societies; predominantly Buddhist, Hindu, Muslim, and Christian countries; capitalist, post-communist, and communist systems; as well as very poor and exceedingly rich nations. The region can thus be considered to be a 'microcosm' of the societal diversity in the world.

The analysis finds that non-state conflict actors most likely form in those regions, where individuals are disadvantaged in multiple dimensions and along ethnic lines as well as where demographic and natural factors make group formation feasible. Once groups have emerged, the organization of non-state actors and their immediate strategic environment influence the level of violence we see in intrastate conflict.

To finally arrive at this conclusion and to address the aims of this analysis, the following steps are taken:

Before delving into the substantial discussion, chapter 2 provides us with the context of contemporary conflict research. Having discussed the broader lines of research above, the chapter systematically summarizes reviews of existing approaches to the explanation of intrastate political conflict. Since the systematic review is centered on variables and less on theory, this complements the discussion of explanatory approaches in chapter 7. It likewise allows for the derivation of a set of explanatory and control variables for the theoretical discussion in chapter 8 and the empirical analysis in chapter 9.

Chapter 3 presents the ontological position of critical realism. To carve out implications for empirically-oriented research, it specifically demarcates critical realism from the position of empiricism, which is dominant in contemporary conflict research. The chapter identifies a major difference with regard to the definition of causal powers: While empiricism equates causal laws with the constant conjunction of events, critical realism urges us to derive causal powers from an analysis of the structure of things. This justifies the importance of concepts with regard to the formulation of theories and the development of classifications. Moreover, it provides arguments against instrumentalism. The chapter likewise identifies too narrow a focus on the formative influences of structure on agency (the 'diachronic downward perspective') in the works of Archer (1995) and Bhaskar (1978). Although the argument in itself is sound, it fails to address what is described as the 'synchronic perspective', namely, an elaboration on the constitutive rather than the temporal relationship between individuals, groups, and social structures.

Chapter 4 develops such a synchronic account based on the concept of intentionality. It argues that shared intentional states are the single most decisive elements in defining groups and social structure, as well as in delineating individual and collective agency. This understanding motivates the definitions of political conflict and non-state conflict actors in chapter 6. Based on the notion of emergence, chapter 4 develops arguments as to why structure is partly independent from individuals. The arguments complement the diachronic perspective and further substantiate approaches that integrate formative influences of structures on individual decision-making processes (which are discussed in 7 and developed in chapter 8). With regard to agency, the chapter proposes that although individuals are responsible for their behavior, they might very well act on the volitions of collectives. This enables the resolution of tensions between the individual and the group-level in the explanation of conflict behavior.

Chapter 5 elaborates on the methodological implications of the ontological and epistemological position of critical realism. It discusses the construction of adequate definitions, classifications, and explanations guiding the subsequent analysis.

Chapter 6 develops definitions of 'political conflict' and 'non-state conflict actor' that go beyond immediate observables. Both concepts offer a systematic hierarchy of attributes and indicators and thereby offer a solid point of departure for the development of theories and measurement strategies. Based on a critical realist approach, the definitions recognize the nature of conflicts and collective conflict actors as structure and processes.

Chapter 7 shifts the focus from concepts to theory. It identifies two core nomological components in theories on intrastate conflict: The first relates to enabling, constraining, and forming effects of structures on individuals. The second deals with the theory of action to explain individual and collective participation in violence. Based on how these two nomological components are fashioned, three explanatory approaches are identified: the individualist, the collectivist, and the moderate collectivist approach.

Chapter 8 develops a theory to explain the circumstances under which non-state conflict actors emerge and what determines the dynamics of intrastate violent conflict. Drawing on the research on "horizontal inequality" (Cederman, Weidmann, and Gleditsch 2011; Gubler and Sel-

way 2012; Østby 2008, 2013; Stewart 2008), the theory systematically elaborates on different levels of analysis along a modified version of the macro-micro-macro model (Coleman 1990; Esser 1993). Referring to emergence and downward causation, the theory stands in stark contrast to the economic perspective with its exclusive focus on material incentive structures and problems of collective action (Humphreys and Weinstein 2006; Kalyvas 2006; Lichbach 1998). The advanced theory clearly distinguishes between a synchronic, constitutive relationship between levels and diachronic, causal relations. For instance, a shared belief in group membership is not *leading to* group formation but rather *is* a group. The shortcoming of a widespread neglect of processes of group-formation is addressed by specifically focusing on non-state conflict actors. Selectively drawing on socio-psychological and philosophical research provides empirically tested micro-mechanisms and justifies the group perspective, respectively. The theory thus neither exclusively focuses on groups, i.e. people sharing a collective identity, nor exclusively on non-state actors, i.e. organized collective actors, but rather addresses the formation of groups and of collective subjects as two distinctive steps.

Chapter 9 employs a comparative approach to test the theoretical arguments empirically. It relies on spatially and temporally highly disaggregated data on social structure, non-state actors, and conflict dynamics. To assess "horizontal inequalities", the analysis makes use of the Integrated Public Use Microdata Series (IPUMS), the world's largest individual-level population database, which holds spatially disaggregated microdata from census records (Minnesota Population Center 2013). From the individual level data it develops a genuine measure of inequality that allows the assessment of inequality on an unprecedented level of detail. Information on socioeconomic, demographic, and geographic features, i.e. those structural characteristics that are denoted as 'opportunity structure', is collected from satellite and census data. This extends far beyond the usual country-year approach in terms of accuracy and measurement validity. To analyze the formation of non-state actors, the author presents the Disaggregated Conflict Actor Dataset (DISCA), a new database specifically collected for the present analysis. The coded indicators are systematically deduced from the definitional attributes of non-state conflict actors developed in chapter 6. Building on scientific publications and media reports, the database holds information on some 80 non-state conflict actors with regard to organizational features (foundation, disbandment, identity, aims, internal organization), radius of action (headquarters, territorial control), and cooperation between actors. In contrast to other databases (Cunningham, Gleditsch, and Salehyan 2009a; Harbom and Sundberg 2009), the data is dynamic and captures changing features of actors over time. Moreover, it decouples actors from conflicts so that the formation of actors is not equated with conflict onset. Information on patterns of violence on a subnational level is available from the new DISCON dataset as developed by Trinn, Wencker, and Schwank (2016). It builds on the broad yet differentiated and integrative concept of conflict and a multi-dimensional and multi-indicator approach to intensity as developed in chapter 6. This improves our abilities to recognize and classify conflictive phenomena, to capture conflict transformation, and to arrive at a valid measurement of intensity. The DISCON dataset comprises spatio-temporally disaggregated data on 181 violent and non-violent interstate, intrastate, and substate conflicts in Asia and Oceania from 2000 to 2014. The violent conflicts are disaggregated into more than 6,300 region-month intensities based on about 31,600 individual indicator assessments, which measure the deployment of weapons and personnel, the numbers of fatalities and refugees, and the amount of conflict-related destruction. The multi-dimensional measurement of conflict intensity, implemented for the first time, allows for the analysis of profiles of violence in a comparative perspective.

Chapter 2

State of Research

This chapter offers a systematic review over the state of research.[1] The aims of the chapter are twofold. First, it contextualizes the arguments forwarded in this analysis by systematically summarizing existing approaches. Second, it allows to derive a list of standard variables to be considered in the development of the theoretical in chapter 8 and the empirical analysis in chapter 9.

Systematic reviews differ from most extant literature reviews in that they are based on explicit methodological procedures to provide a representative and comprehensive comparison of the literature. They allow to map the state of research, uncover the overall popularity of concepts and indicators, identify time trends in the literature, as well as evaluate the explanatory power of specific variables.

Generally, two types of systematic reviews can be discerned (cf. Cooper 2010; Pigott 2012): *Research syntheses* comparatively assess empirical results pertaining to a specific phenomenon to carve out general findings. *Theoretical reviews* comparatively assess theories concerning the explanation of a specific phenomenon to uncover differences and similarities pertaining to underlying assumptions, concepts, and nomological statements.

Theoretical reviews in the field of conflict research usually rely on less systematic procedures to compare the explanatory value of variables. They do not detail systematic procedures to search and select studies, to retrieve theoretical arguments from the studies, and to synthesize the results. Rather, existing theoretical reviews summarize results by selectively drawing on what they regard as valid research.

Section 2.1 presents a research synthesis. Due to its empirical focus, the section takes a variable-centered approach. The basic idea is that a variable is considered to have explanatory value if it systematically covaries with conflict onset.

We need not necessarily have access to the raw data used in the studies under review. Where original data is not provided or synthesizing original data would require extensive recoding, research syntheses can draw on aggregated statistical measures such as the statistical significance or the direction of fit of coefficients. Under the assumptions that the statistical tests under investigation were properly conducted and the covariates were carefully selected, such syntheses should give an unbiased estimate of covariance based on partial regression coefficients. If these assumptions are regularly violated in the studies under review (Achen 2002, 2005; Schrodt 2014), this likely affects the accuracy of summarizing approaches.

The research synthesis presented in the following is not a meta-analysis. Although not implied by the literal sense of the word 'meta-analysis', this subtype of research syntheses is—since the first meta-analysis by Pearson (1904)—reserved for a very specific method: research syntheses employing statistical methods to combine results from similar studies on distinct samples in order to enlarge sample size (Dixon 2009, p. 707). Meta-analyses—though not generally inapplicable in the social sciences—are not found in conflict studies. This is due to the fact that existing quantitative research articles deal with same global sample and largely even the same dataset (Schrodt 2014; Wencker, Trinn, and Croissant 2015).[2]

[1] Parts of this chapter are also included in a working paper (Trinn, Schwank, and Wencker 2016).

[2] The fact that a great majority of existing research relies on the same conflict dataset is problematic. We know that differences across databases a fairly large (Sambanis 2004) which seems to imply that the debate on how to measure conflict is not settled. This underlying disagreement on what constitutes political conflicts is one of the reasons why the present analysis tests hypotheses based on a newly introduced dataset.

Civil War	**Internal Armed Conflict**
Political Instability, Polity IV	Ethnic heterogeneity
*Regulation of Participation, PolityIV**	*Political Instability, PolityIV*
Region: Middle East and North Africa	*GDP change in %**
Years since change >3 on Polity index	Linguistic component of ehet
*GDP change in %**	Oil exports of GDP
Anocracy, Dummy	1990s, Dummy
Partially Free Polity, Freedom House	Ethnic Fractionalization
Neighbor at war, dummy	*Regulation of Participation, PolityIV**
Rough terrain	Ethnolinguistic Diversity
1960s, Dummy*	*Years since change >3 on Polity index*
Polity IV, squared*	Ethnic Fractionalization, squared
New State	Cold War, Dummy*
Median regional polity2 value*	Share of largest ethnic group*
Ethnic dominance	Country has de facto autonomous region
*Share of population in military forces**	*Share of population in military forces**
Region: Western Europe and United States*	Religious component of ehet
No. of neighbors at war	*Neighbor at war, dummy*
Presidential system*	Ethnolinguistic diversity, squared
	Region: Middle East and North Africa
	Primary commodity exports of GDP, squared

Table 2.1: Robust indicators in models with civil war and internal armed conflict as explananda (own figure based on Hegre and Sambanis (2006)). Shown are all indicators with a significance of $\leqslant 0.05$ (one-sided test); * = negative coefficients; *italics* = robust pertaining to both dependent variables.

Research syntheses of quantitative studies have limits that go beyond the immediate question of how we should aggregate results of individual studies. These limits are discussed in more detail in chapters 5 and 8. At this point, it suffices to state that research synthesis provide guidance but are not in themselves sufficient to identify adequate explanations. Nonetheless, those variables that are identified as 'valuable' should be included or at least be discussed within an adequate theoretical framework . In addition, adequate indicators should be included in the statistical analysis to allow for robust and valid inference.

Section 2.2 presents existing theoretical reviews. Taken together, these reviews add up to a detailed picture of the present state of conflict research. As it turns out, however, none of them systematically compares theoretical mechanisms. Consequently, this analysis presents its own comparison of explanatory approaches in chapter 7 after the criteria of adequate theories are have been developed in chapters 3 - 5.

2.1 Research Synthesis

For social science research in general and conflict research in particular research syntheses are rare. In the field of conflict research, two studies systematically compare a large number of explanatory variables: Hegre and Sambanis (2006) and Dixon (2009).

Hegre and Sambanis (2006) conduct a sensitivity analysis of empirical results on civil war onsets.[3] They take 88 indicators from the literature, group them based on 18 categories of independent variables, and investigate the robustness of statistical inferences by systematically comparing results of some 4.7 million logistic regressions with varying model specifications for two dependent variables.[4] They identify 20 and 22 variables as robustly related to the onset of civil war and internal armed conflict, respectively. These include two core variables which are added to almost all models on civil war onset: the size of the population and GDP per capita. The remaining variables are listed in table 2.1, ordered by the level of significance.[5]

[3] Strictly speaking, a sensitivity analysis is not an instance of a research synthesis. Hegre and Sambanis (2006) do not summarize results of existing studies but rather re-estimate models including indicators from existing research.

[4] Indicators are grouped in categories to avoid multicollinearity. Only one of multiple possible indicators per category is included in each estimated model.

[5] The reliability of sensitivity tests has been cast into doubt by Plümper and Traunmüller (2016). Hence, the results should be interpreted with care.

Hegre and Sambanis (2006) identify seven indicators that are robustly related to the onset of civil war and internal armed conflict: political instability, the regulation of participation, a regional dummy for countries in the Middle East and North Africa, the proximity of a regime change, GDP growth, a neighboring country at war, and the size of the military forces. However, the explanatory value of variables derived from the Polity Index should be interpreted with care because some of its indicators are endogenous (Vreeland 2008).

A comparison of results for the two specifications of the phenomenon to be explained reveals differences. Whereas eight indicators of ethnic composition are robustly related to the onset of internal armed conflict, only one, i.e. ethnic dominance, is robustly related to civil war onset. Thus, the ethnic composition seems to be related to the outbreak of conflicts of lower intensity, while not playing an important role with regard to the outbreak of high-intensity conflict (Hegre and Sambanis 2006).

Dixon (2009) systematically reviews the results of 47 quantitative studies on civil war and intrastate conflict onset. His sample comprises 203 different independent variables from 64 regression tables. The selection process is rather ad hoc: "The studies reviewed in this paper were found using JSTOR, Academic Search Complete, Digital Dissertations, and recent conference papers" (ibid., p. 708).

All in all, Dixon identifies high scholarly agreement on the conflict-inducing effects of the following factors:

- Large population
- Status as an oil exporter
- Poverty
- Low economic growth
- Recent conflict
- Anocratic regimes
- Regime instability

Although this list of seven factors constitutes the central finding of the paper, the inclusion criterion is not sufficiently specified. It is a "subjective measure of confidence, determined by the number of authors who have evaluated the variable, the significance levels found by these authors, and the generality of the authors' dependent variables (that is, more weight is given to studies of civil war than ethnic war or low-level civil conflict)" (ibid., p. 719). The lack of a systematic procedure to identify the studies under review and the non-transparent definition of 'degree of consensus' are the central drawbacks of the approach.

Due to the drawbacks of the existing approaches, Trinn, Schwank, and Wencker (2016) have compiled a dataset that comprises the results of 110 articles published between 2000 and 2015 in a number of high-ranking academic journals.[6] In contrast to Hegre and Sambanis (2006), our review relies on the genuine statistical results of the papers under analysis. In comparison to Dixon (2009), we review more than twice as many articles. Moreover, the 'subjective measure of confidence' is replaced with a more clearly defined method to derive the explanatory value of variables.

Beyond this extension in scope in comparison to Dixon, we do not count statistically significant findings in the original studies but rather draw on the distribution of positive and negative coefficients irrespective of their significance. Leaving aside statistical significance as an evaluation criterion and including all variables rather than only those of theoretical interest in the original studies mitigates the effects of p-value 'hacking' and selective reporting. Under the condition that a variable has been tested often enough, we are able to identify which variables are robustly related to conflict across different research designs.

The analysis includes 244 'analytical units', i.e. unique configurations of dependent variable, the period and space under investigation, and the dataset used. AU are not equal to individual regressions analyses. If models investigate the same phenomenon and dependent variable stemming from the same dataset in the same period and space, we subsume these models under a single AU. This aggregation of similar regression models within articles mitigates the risk of artificially bloating the number of cases. We consider this reasonable since many of the included

[6] The included journals scored at least with a rank of 45 on the list of high-impact political science journals provided by Giles and Garand (2007): International Organization, American Political Science Review, American Journal of Political Science, International Security, European Journal of International Relations, Journal of Conflict Resolution, Journal of Peace Research, International Interactions, Conflict Management and Peace Science, Security Studies. Political Geography had to be omitted due to practical issues, whereas the American Sociological Review was added to the sample. For a study to be included, it had to compare at least five cases and had to investigate the onset, incidence, duration, or recurrence of violent intrastate conflict. Applied methods or the theoretical framework did not serve as selection criteria.

models are not independent in the sense that they use similar or even identical data. Due to our aggregation, models are counted as different cases only if specifications substantially vary in the sense described above.

For each analytical unit, the predictors and outcomes are classified according to a taxonomy. Different operationalizations of identical or sufficiently similar phenomena are subsumed under a single variable.

In order to arrive at a set of 'consensus determinants' of violent intrastate conflict, we synthesize regression results by drawing on the sign test (Borenstein et al. 2009). This method tests whether the number of negative and positive coefficients for a variable significantly differs from a binomial distribution with a probability of success of 0.5. We attribute explanatory power to a variable if a binomial test rejects the null hypothesis of a random distribution with the usual p-value of 0.05. To gain enough statistical power for our test, we require a variable to be tested in at least six analytical units. Since we are not interested in a specific explanatory variable but rather in testing the explanatory value of all included variables, we have to consider the problem of multiple hypothesis testing. To account for this, we apply the Holm-Bonferroni correction to adjust p-values. Since we are agnostic as to whether the variables under scrutiny have a positive or negative influence on the phenomena under review, we perform a two-tailed test.

The main drawbacks of the sign test are that it neither allows to estimate effect sizes nor takes into account sample sizes (ibid., p. 326). Moreover, unlike genuine meta-analyses, it does not enhance the statistical power of the original studies by pooling observations. Although we are aware that superior methods of synthesizing studies exist, we consider the sign test the best available option in view of our study design for three reasons.

First, comparing effect sizes across studies is complicated by varying variable and model specifications across studies (Becker and Wu 2007). Synthesizing effect sizes would thus require extensive recoding. Moreover, multivariate model specifications differ with regard to the included predictors so that individual coefficients are not directly comparable (ibid.).

Second, studies in conflict research repeatedly analyze the same population. Consequently, pooling these studies would not significantly increase the sample size, which is a key motivation of meta-analysis. We partly account for a lack of independence between studies by aggregating the results of regressions in 'analytical units', as explained above. Although this does not solve the issue of overlapping or even identical samples across studies, our procedure allows for uncovering the robustness of effects given different study designs. Consequently, we do not consider our approach a genuine 'meta-analysis'.

Third, other methods provide no viable alternative. Vote counting, i.e. synthesizing studies by counting significant positive and negative as well as non-significant coefficients, is generally discouraged (see, e.g. Borenstein et al. 2009, pp. 251–255). Hedges and Olkin (1980) show that the power of vote counting might even decrease with a growing number of studies under review.

Our synthesis reveals four imbalances in quantitative conflict research: a one-dimensional focus on conflict onset as the dependent variable, a dominance of quantitative operationalizations of conflict via death figures, a clustering of independent variables on the level of structures, and an almost complete neglect of social variables referring to health and education. Apart from these imbalances, the systematic review identifies seven core variables that seem to be linked to conflict.

Quantitative conflict research almost exclusively focuses on the onset of violent political conflicts (161 of 244 analytical sets). Investigation into the incidence (63), duration (13), or recurrence (7) of intrastate conflict together only account for about a third of the analyses. This lends further relevance to our goal of studying conflict dynamics. Quantitative comparative conflict research has to date almost exclusively focused on the explanation of specific conflict-related related events such as onset, incidence, or recurrence. What has been largely neglected, however, is the way conflicts are fought as expressed in a closer look on the intensity of conflict. The present analysis fills this gap by carving out profiles of violence and analyzing variation in conflict intensity in chapter 9.

Concerning operationalization, more than four out of five analyses regarding all dependent variable types rely on quantitative thresholds in the form of the number of deaths in a specified period. Qualitative operationalizations are still largely neglected. Nonetheless, the improvement in the availability of information on conflicts worldwide made it easier for researchers to employ more sensitive thresholds and to identify and code conflicts of lower intensity. Lowering the threshold from 1,000 (Singer and Small 1972; Small and Singer 1982) to 25 battle-related deaths per year, the Uppsala Conflict Data Program (2015) has greatly influenced quantitative-comparative

research and provided the most widely used operationalization of conflict in contemporary analyses.

Nonetheless, even lower thresholds do not address the problem of a one-dimensional focus on fatality figures which is prevalent in conflict research. Developing and applying a more substantial definition and a multidimensional measurement of conflict intensity (cf. ch. 6), we addresses this shortcoming.

Moreover, by equating onset with the passing of a certain fatality threshold, conflict onset and conflict escalation cannot be clearly separated. From the perspective of a critical realist understanding of political conflict as an incompatibility of intentions, the passing of a fatality figure constitutes an *escalation* rather than the onset of a conflict. A realist definition of political conflict and of conflict actors as developed in chapter 6 allows to focus on the 'real' onset of political conflict.

A third imbalance exists with regard to independent variables. The most common approach is to find causes for intrastate conflicts in the realm of the structural characteristics of nation states. While this is especially true for the study of conflict onset and incidence, analyses of conflict recurrence dominantly test variables referring to characteristics of, and the time since, the last conflict. As was to be expected, conceptually endogenous conflict characteristics, such as the conflict item, intensity, and actors, are of special interest in explaining the recurrence and duration of conflicts. More importantly, however, factors located on the individual level (e.g. biographical data on leaders) have scarcely been used in the reviewed analyses. This is remarkable in view of the facts that agency-centered approaches form the dominating theoretical framework for explaining violent intrastate conflicts. This finding thus supports the view—presented in the introduction and further elaborated in chapter 7—that there is a significant gap between the theoretical and the empirical focus of explanatory approaches.

More frequently analyzed but still rare are variables on the group level, e.g. the exclusion of specific populations from political power or the strength of armed non-state actors. Interestingly, however, in qualitative intensity analyses, a large share of the independent variables used belong to this type possibly signaling a certain proximity between more qualitative approaches within the realm of quantitative research and actor-focused explanations. This might have to do with a lack of adequate data allowing for quantitative analysis of group level variables.

The present analysis addresses these gaps by putting an emphasis on the level of individuals and groups. First, it includes the most disaggregated individual-level data as a source to compute its inequality score. Second, it introduces a database that holds time-variance information on characteristics of non-state actors. Both are presented in chapter 9. In consequence this closes the gap between the theoretical and empirical focus that is characteristic of contemporary quantitative research on intrastate conflict.

The last imbalance pertains to the type of variables used. Whereas socioeconomic indicators are frequently considered in analyses, social variables referring to health and education are rarely used. These variables, however, are central as they are arguably among the most important determinants of life satisfaction. By including a large variety of health- and education-related variables in the measurement of horizontal inequality (e.g. the availability of electricity or a toilet, literacy, and educational attainment) the present analysis closes this gap.

Apart from these four imbalances that are addressed in the present analysis, the systematic review identifies 388 distinct independent variables which were analyzed 2,525 times. The sheer quantity of different variables shows that research seeks to be precise as well as innovative, putting to use nearly every conceivable phenomenon of reality reasonably connected to intrastate conflicts. However, only about a fourth (100) of the variables were employed in more than five analytical units and just 23 in more than 20 analytical units. Although this variation is to be welcomed, it reduces the statistical power of the sign-test.

Figure 2.1 presents the results of our synthesis with regard to the explanatory value of variables. The points indicate the share of positive coefficients of the respective independent variable in the analytical units under review. The shape of the points indicates whether the p-values adjusted using the Holm-Bonferroni method lie below $p = 0.05$ or not. The confidence intervals provide insight into the certainty of this estimate not taking into account multiple hypothesis testing.

Our results show that the onset of conflict seems to be positively associated with the log of population size, ethnic fragmentation, the status as an oil exporting country, the 'anocracy' regime type, regime change, mountainous terrain (log and linear), the relative size of ethnic groups, si-

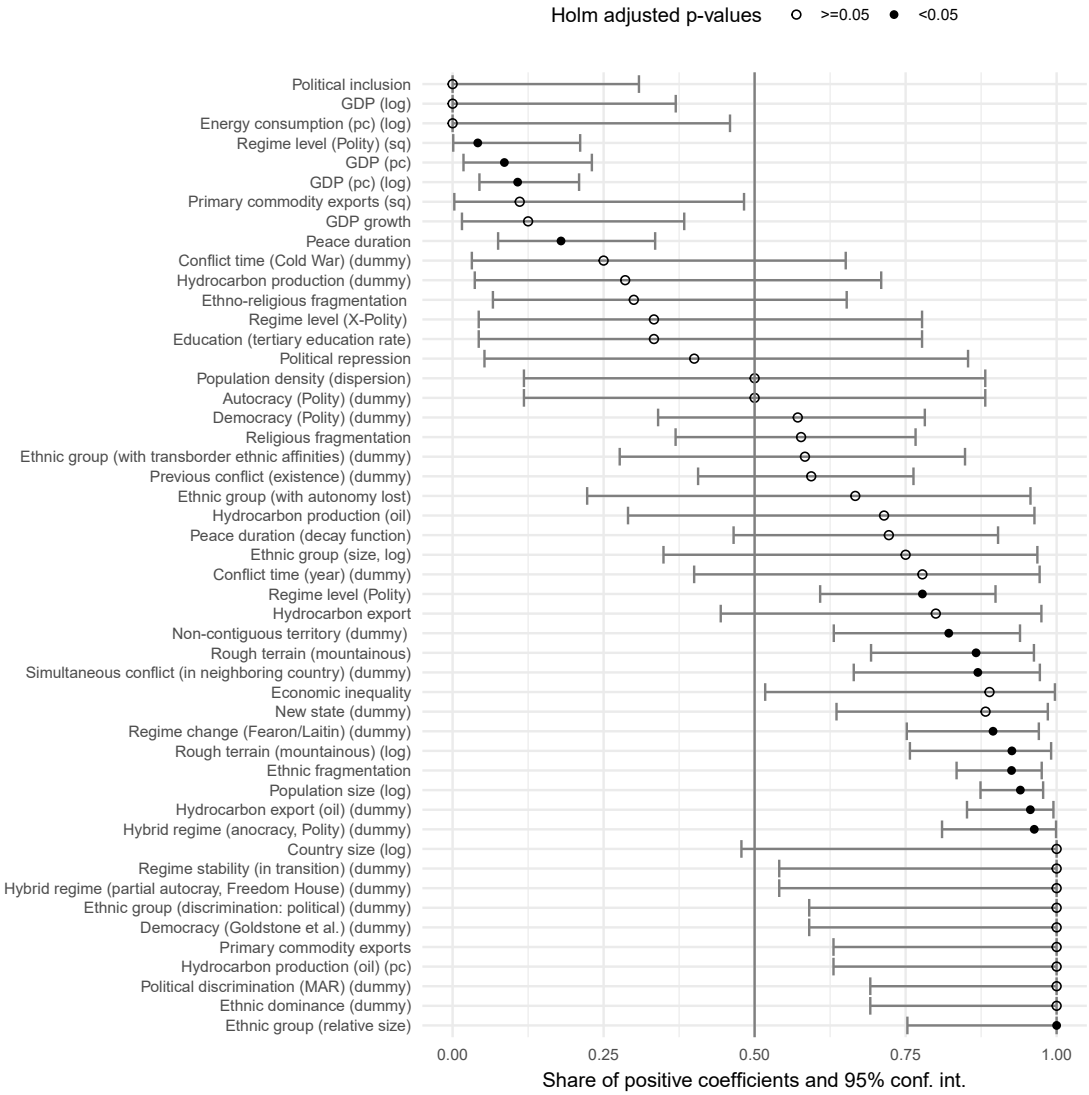

Figure 2.1: Results of sign test for 49 explanatory variables synthesizing 161 analytical units. Points indicate the share of positive coefficients. The shape of points indicates whether the p-values adjusted using the Holm-Bonferroni method lie below p = 0.05. Horizontal lines indicate 95% confidence interval for sign-test not taking into account multiple hypothesis testing.

multaneous conflicts in neighboring countries as well as non-contiguous territory. Conversely, GDP per capita (log and linear), the squared regime level, and the length of peace appear to have conflict-inhibiting effects.

We can thus state that countries that are young, ethnically fragmented, characterized by relatively large excluded populations, or populous are more probable to experience conflict onset. Pertaining to the economic and political system, poor economic performance and dependence on oil, as well as unstable regimes increase the propensity of conflict. With regard to geography, the existence of rugged terrain or non-contiguous territory as well as neighboring countries in conflict increase conflict risk. The same seems to be true when the last conflict ended only recently.[7]

2.2 Theoretical Reviews

We now turn to theoretical reviews, i.e. those works that summarize the state of conflict research from a more or less theoretical point of view. Each of the three reviews presented in this section pursues a different way to structure the field of research.

Kalyvas (2007)—making no claim to be exhaustive—differentiates three categories of explanatory approaches following three "distinct styles of research" (ibid., p. 417): The 'economic style of research' rooted in the field of development economics and primarily focusing on the conflict-inducing role of the abundance of natural resources, the 'international relations style of research' primarily conducted by IR-scholars highlighting the role of nationalist aspirations and inter-ethnic conflict, and the 'comparativist style of research' pursued mainly in sociology and comparativist political science explaining the emergence of intrastate conflict via lacking state capacity. The criterion to differentiate the approaches is the type of variable doing the primary explanatory work. For each school of research, Kalyvas presents various mechanisms linking the respective independent variables to civil wars and discusses methodological issues. While typical explanatory variables are loosely linked to three schools of analysis, Kalyvas does not present a systematic theoretical comparison.

Bussmann, Hasenclever, and Schneider (2009) differentiate three 'analytical perspectives' subsumed under the terms 'identity', 'institutions', and 'economy'. The three perspectives broadly correspond to three mechanisms of coordination: legitimacy, coercion, and interest, respectively (cf. Wendt 1999). For each analytical perspective, the authors present typical explanatory variables, causal mechanisms, empirical results, and discuss methodological issues. The approach is quite similar to Kalyvas' in that it primarily differentiates approaches along the explanantia.

Blattman and Miguel (2008) structure their review along two explananda: conflict between parties, on the one hand, and formation of and individual participation in collective conflict actors, on the other. Focusing on accounts based on rational choice theory, they systematize the myriad of explanations for these explananada by highlighting two types of formal economic theory.[8] The first type, i.e. contest models, represent the equilibrium between two parties in dependence of macro-economic variables such as the distribution of wealth as well as the availability of means to fight. According to the model, each of the parties decides to either take part in the legal economy or to fight in order to maximize wealth. The second type of models focuses on asymmetric information and commitment problems making war a reasonable choice for the conflict parties. Individual participation in collective actors can be explained via individual incentives; either positive incentives such as pecuniary interests or negative incentives such as threat and punishment by leaders. Apart from these approaches that model conflict as interaction between unitary collective actors, Blattman and Miguel stress the need to explain individual participation in collective actors. In contrast to Kalyvas and Bussmann et al., Blattmann and Miguel focus more strongly on theoretical mechanisms. Their summary, however, remains focused on formal economic theory.

Each of the three articles provides a good overview over the state of the art of conflict research. Taken together, they add up to a detailed picture emerging from the different angles on the field of research. By each citing more than 80 publications, the overviews are generally broad.

As a trade-of, however, all lack a detailed account of theoretical mechanisms. This shortcoming pertains to a lesser degree to Blattman and Miguel (ibid.), who identify basic arguments typical for

[7] As mentioned above, the finding with regard to anocracies as measured by Polity might be an artifact (Vreeland 2008).

[8] The authors focus on a narrow version of rational-choice theory by predominantly looking at cost-benefit calculations of individual and collective actors related to material interests. However, some wider approaches within rational-choice-theory that include non-material goods are also discussed.

a specific strand of research. Kalyvas (2007) and Bussmann, Hasenclever, and Schneider (2009), on the other hand, seem less interested in detailing and comparing theoretical accounts.

A strategy to characterize explanatory approaches in more detail is pursued by Ross (2004). He restricts his review to a specific type of independent variables, i.e. natural resources, and summarizes the results of a restricted sample of 14 cross-national econometric studies based on their coverage, their operative variables, and their findings. While this twofold restriction allows Ross (ibid.) to summarize findings and compare approaches in more detail, he primarily focuses on issues of operationalization, data collection, and statistical results.

2.3 Summary

Systematic reviews provide guidance in the vast field of research on intrastate conflict by summarizing the literature on grounds of consistent methodological procedures. This chapter discussed two types of systematic reviews: research syntheses and theoretical reviews.

Research syntheses by Dixon (2009) and Hegre and Sambanis (2006) as well as a new analysis with original data by Trinn, Schwank, and Wencker (2016), revealed four imbalances characterizing current conflict research: a one-dimensional focus on the onset of violent conflict, narrow operationalizations of conflict via death figures, a unilateral focus on variables on the macro-level at the expense of individual- or group-level factors, and a neglect of social variables.

The present analysis addresses all of these issues. To cope with the focus on conflict onset and the related issue of a narrow operationalization via death figures, this study presents a theory (ch. 8) and an empirical analysis (ch. 9) of conflict dynamics based on a multidimensional measurement of conflict intensity (ch. 6). It likewise casts doubt on the common practice of operationalizing the onset of conflict by what is actually violent escalation. A realist definition (ch. 3) of conflict allows clearly separating both. Complementing research on the impact of structural variables, the present analysis discusses how individuals, groups, and structures are constitutively related (ch. 4), how they causally affect each other (ch. 8), as well as empirically analyses individual-level data and original dynamic data on non-state conflict actors (ch. 9). Drawing on census data likewise allows including information on health and education.

From the results of the research syntheses we can furthermore conclude that an empirical analysis should at least control for the size of the population, economic development and the status as an oil exporter, previous and neighboring conflict, the political regime, the size of ethnic groups, and non-contiguous territory and mountainous terrain to evade problems of omitted-variable bias.

Apart from these variables, the debate on what variables influence the onset of intrastate conflict is far from settled. This is astonishing since research designs—specifically those that match the selection criteria of the above-presented research syntheses—do not differ significantly from one another and, specifically in the recent years, predominantly make use of a single source for the dependent variable: the UCDP dataset. Making use of new sources of data, the present analysis 'brings in some fresh air' into the field of research.

The overview over theoretical reviews shows that current conflict research is divided into different schools. There is, however, no clear consensus on how to structure the research field with regard to theory. This seems to originate in a too strong focus on explanantia (Bussmann and Schneider 2007; Kalyvas 2007) which goes together with a lack of detailed accounts of theoretical mechanisms.

Those theoretical reviews that do focus on mechanisms are narrow with regard to their theoretical (Blattman and Miguel 2008) or empirical scope (Ross 2004). In line with the second aim of this thesis, this leaves us in need of broad review of explanatory approaches that focuses not on variables but on theory. Such a review is presented in chapter 7.

Chapter 3

Critical Realism in Philosophy of Science

When we know what a thing is we know what it will tend to do, if appropriate circumstances materialize.

(Bhaskar 2008, p. 230)

Amidst all this confusion and tumult in the haunted house of philosophy, workaday researchers carry on calmly with their routines. Models are run, ethnographies are written, interviews are conducted, and archives are scanned. Some of the work is very good. Knowledge seems to grow. But no one really knows how or why. Except perhaps Roy Bhaskar.

(Gorski 2013, p. 663)

Critical realism is both a hypothesis on the nature of the natural and social world, as well on how we gain knowledge thereof. Critical realists stand between theorists of empiricism, who assume that all our knowledge derives from observed patterns of regularity, and those of interpretivism, who emphasize that our perception of reality is unique in that it is in large part a product of our own construction. Balancing both perspectives, critical realists argue that the natural and social world exists apart from our own individual perception of it. Moreover, we are able to understand it fairly well even though our perception remains imperfect and our knowledge always fallible.

The critical realist perspective influences the way to define terms, construct theories, and conduct empirical analyses by taking a specific stance regarding ontology, epistemology, and methodology. Ontology deals with the question of what exists. A social ontology, i.e. an ontology that focuses on the objects of investigation in the social sciences, answers two questions: (1) What entities populate the social world? (2) How are these entities characterized? The answers to these questions guide the conceptualization of agents and structure. Epistomology, i.e. the study of knowledge (episteme), deals with the "nature, sources and limits of knowledge" (Klein 2005). A specific epistemological position usually answers the following questions: (1) What does it mean to know something? (2) How and to what extent can one know something? Methodology is the study of methods, i.e. instruments or techniques that are applied by scientists to gather knowledge about the objects of interest. Methods describe specific ways to perform research. Methodology has these methods as its object and primarily deals with the question of what kind of methods are adequate to arrive at knowledge about a certain entity.

Critical realism can broadly be situated between the two paradigms of empiricism and interpretivism (cf. Gorski 2013; Maxwell 2012; Moses and Knutsen 2012).

Classical (or British) Empiricism was most systematically stated by David Hume (Radcliffe 2008). At its core lies the epistemological statement that all human knowledge of the external world is based on observation (cf. Markie 2015; Moses and Knutsen 2012; Salmon 1989). Everything we know about things external to us grounds on our experience and is thus *a posteriori*.[1]

The fact that our knowledge of the external world is mediated by sensory experience makes empiricists at least skeptical toward the existence of unobservables (Wendt 1999). If our knowledge of the world is restricted to what we know from sensory experience, then we cannot make

[1] While empiricists rule out a priori knowledge about the external world, they accept *a priori* knowledge pertaining to analytical statements such as 'a triangle has three sides'.

statements about the state of the world beyond our perception. The epistemological position of empiricism thus heavily influences its ontological stance (Bhaskar 1978). In the empiricists' view, the world consists of perceived facts (also compare section 3.2).

From this springs a specific approach to methodology that has the systematization of knowledge gained from observation as its primary objective. Causality, in the empiricists' view, does not exist in the external world but is a product of imagination resulting from successive sense-perception. Consequently, adequate explanation should refrain from statements regarding unobservables or at least understand such talk as merely instrumentally useful (Friedman 1953). As further elaborated in section 5.2, an adequate empiricist explanation takes a deductive-nomological form: regularities are subsumed under a 'law', i.e. an abstract statement of a universally valid regularity.

Interpretivism emphasizes the difference between the natural and the social world. It argues that social entities differ from the objects studied by physics, chemistry, and the like in that they are socially constructed (Berger and Luckmann 1966). Consequently, human beings are not independent observers of the social world but deeply entangled in it.

This contrasts with the position that social science should be modeled according the ideal of the natural science (cf. Comte 1853). Instead, interpretivists aim to 'de-naturalize' the social (Krell 2003). Radical interpretivism would even extend its critical view to the natural sciences (Feyerabend n.d.). Here, the list of entities regarded as socially constructed reaches far into the realm of the natural sciences (Hacking 1999).

Epistemologically, interpretivism argues that observation is never unbiased but rather heavily influenced by subjective understanding. Knowledge is relative and might differ between individuals, members of different cultural groups, and might change over time. Ideas mediate our understanding of the world.

Pertaining to scientific progress, interpretivism questions the unbiased position of the researcher accumulating and systematizing knowledge. Instead, it highlights that a researcher's view is always theory-laden (Gergen 1982; Kuhn 1962).

Taking account of the subjective dimension of the constitution of reality and its perception, interpretivist methodology in the social sciences adheres to the methods of *verstehen* which center on subjective meaning to explain social interaction (Weber 2008). Typically, interpretivists argue in favor of qualitative methods, such as discourse analysis, that allow for the discovery of the subjectivist dimension of knowledge generation.

Critical realism stands in between the empiricist and the interpretivist camp. It combines ontological realism and epistemological relativism. The former claims the existence of natural entities independent of our perception and of social entities mostly independent of our *own individual* perception. The (social) world is *inter*subjectively constructed (Searle 1995) but it exists 'out there'. Thus, the social world is not entirely different for each of us or open to interpretation to our liking. Consequently, it is possible to assess statements to be more or less adequate. With interpretivism, critical realism shares the view that there exists a sphere of reality beyond the immediately observable. But where the former highlights the subjectivist nature of our perception, as well as the construction of meaning detached from external reality, the latter problematizes how exactly the external world and individual perception are linked. From this results a view of an almost 'object-like' character of the social world.

At the same time, critical realism rejects the empiricists focus on sense-perception as one-dimensional and specifically refutes the concept of causality as constant conjunction. Instead, it regards causality as a property of objects contingently producing events.

Epistomological relativism states that we do not observe reality directly, but rather from a specific point of view. People are not 'blank slates' and perception is not reducible to physical sensations. This pertains to scientific investigations and our everyday perception alike.

Critical realism thus accepts the double hermeneutics in social science research: the objects under investigation in the social sciences are constructed and the process of our understanding involves interpretation (Giddens 1984). Yet, the fact that our perception is always mediated does not preclude attaining knowledge of the external social world. While statements regarding the social world can be rendered as either true or false, we must measure the truth value of our statements along with the inherent uncertainty they contain, as knowledge is always fallible (Popper 2007).

Methodologically, critical realism endorses the analysis of the deeper structures of reality. Where interpretivism might go as far as to even neglect that any direct access to reality is possible,

	Empiricism	Interpretivism	Critical Realism
Social Ontology	Skepticism regarding unobservable entities. Statements about what exists cannot reach beyond perception	Social phenomena are constructed via perceptions and (re)created by human practice	Social phenomena are inter-subjectively constructed and (re)created by human practice
Epistemology	Inductive generation of knowledge via sense-perception	Subjective interpretation of experience by observers who are part of the observed	Imperfect perception of social phenomena independent of specific observer
Methodology	Explanation of constant conjunctions via deduction from instrumental scientific laws	Explanation via understanding of subjective meaning	Explanation via reference to real causal powers emerging from the structure of things

Table 3.1: Paradigms of philosophy of science.

critical realism aims to formulate theories that correspond to external reality. The three positions of empiricism, interpretivism, and critical realism are summarized in table 3.1.

We argue in favor of a more conscious approach to the ontological and epistemological underpinnings of empirically oriented research. To do so, we draw on critical realism, which arguably provides the most viable and consistent approach in the philosophy of science.

Having localized the paradigm of critical realism relative to empiricism and interpretivism, this chapter summarizes critical realism, in general, and its arguments in the social sciences, in particular.[2] Bhaskar (2008, p. 56) summarizes his argument as follows:

> My overall aim, it will be remembered, is to argue that the ultimate objects of scientific understanding are neither patterns of events nor models but the things that produce and the mechanisms that generate the flux of the phenomena of the world. Scientists attempt to discover the way things act, a knowledge typically expressed in laws; and what things are, a knowledge (...) typically expressed in real definitions. Statements of laws, I have suggested, are statements about the tendencies of things which may not be actualized, and may not be manifest to men; they are not statements about conjunctions of events, or experiences. But in developing this theory I do not attach any great importance to the word or even the concept law'. Rather what is essential to the realism developed here is the idea that the things and mechanisms of nature, that constitute the intransitive objects of scientific theory, both exist and act independently of the conditions, normally produced by men, that allow men access to them.

As the quotation reveals, critical realism aims to describe the different layers of social reality—ranging from unobservable potential powers to directly observed empirical patterns—and the relation between these layers for the purposes of scientific research.

Section 3.1 further elaborates on these different layers describing the distinction between transitive and intransitive objects and the differentiation between the real, the actual, and the empirical. Section 3.2 presents the Humean account of empiricism and demarcates it from the critical realist conception. This account argues that laws cannot be regarded as constant conjunctions between events. Section 3.3 introduces an alternative account of causality. Overcoming the Humean focus on regularities, causal powers are defined as attributes of things that emerge from their internal structure. Section 3.4 applies critical realist thinking to the relation between structure and agency and carves out two kinds of macro-micro relations.

3.1 Critical Realism

Bhaskar (1978) introduces two important differentiations with two and three categories, respectively: First, he differentiates between 'transitive objects' and 'intransitive objects'. Second, he distinguishes 'the domain of the real', 'the domain of the actual', and 'the domain of the empirical'. Both differentiations are addressed in turn.

[2] The exact definition of 'critical realism' is disputed, especially concerning its demarcation from 'scientific realism' (Chernoff 2007; also see Tang 2011, footnote 5). Even within philosophy of science, 'realism' is a broad term (Kneer 2009). We will focus on the position of Bhaskar (1978, 1979) subsuming his 'transcendental realism' in the philosophy of science and his 'critical naturalism' in the philosophy of the social sciences under the term 'critical realism'. Apart from Bhaskar (1978, 1979), the basic assumptions of critical realism in the social sciences are summarized by Collier (1994), Gorski (2013), Hartwig (2008), and Outhwaite (1998). The implications of critical realism for the explanatory program are discussed by Albert (2012) and Archer (1998). Jackson (2011, pp. 72–111) discusses critical realism in international relations. More recent publications take on the discussion (see Archer et al. 1998; Danermark et al. 2002; Dean et al. 2006; Kneer 2009; López and Potter 2001; Maniacs 2006).

3.1.1 Transitive and Intransitive Objects

The distinction between intransitive and transitive objects lies at the heart of critical realism. Intransitive objects are those things, structures, mechanisms, and processes that exist independently of human activity, independently of our knowledge of them, and function independently of the conditions we produce to receive knowledge about them (Bhaskar 2008, pp. 12, 25, 56, 234). Transitive objects, in contrast, exist of our knowledge of the world: our thought patterns, scientific positions, concepts, theories, and methods (ibid., p. 11).

Apart from the skeptical empiricist position (cf. Wendt 1999, p. 52), the existence of intransitive objects appears obvious to us in everyday thinking and poses no immediate difficulties pertaining to natural objects. For example, the assumption that gravity would remain in force without anyone perceiving it or measuring it in an experiment is probably widely shared.

Entities analyzed in the social sciences, however, are different. Their very existence depends on mental representation and/or human practice (Berger and Luckmann 1966; Searle 1995). Consequently, it does not seem plausible to categorize social facts—such as sovereignty, money, or friendship—as intransitive entities.

However, social facts are often naturalized: Stable social facts are taken for granted and appear 'quasi-natural". They constrain our actions and exist independently of our individual perception of them (Durkheim 1982). Although social facts might be constructed collectively, they are not malleable individually. Social reality is dependent on human thought but independent of individual thought. In consequence, it seems plausible to *naturalize* social facts and regard them as intransitive objects.

3.1.2 The Real, the Actual, and the Empirical

A second differentiation that allows grasping the position of critical realism is between the domains of the real, the actual, and the empirical (Bhaskar 2008, pp. 35–52; cf. Collier 1994, pp. 42–45). The empirical comprises all that is perceived. In conflict research, for instance, we may directly observe clashes, troop movements, or peace talks.

The actual encompasses the empirical as well as all those events that are not observed. As conflict research continuously improves in terms of data quality and quantity, the actual and the empirical overlap more and more.

The real is the most extensive domain comprising all events, perceived and unperceived, as well as structures and generative mechanisms. These structures and mechanisms exist even though they might not lead to specific events. Applied to our example, we might infer a high escalatory potential of a conflict from the fact that it is fought about an indivisible good. In this case we have neither observed an escalation nor do we have any indication that an escalation has taken place unobserved. Nonetheless, we have identified an escalatory potential due to an analysis of the conflict's structure.

The relation between the actual and the empirical is a matter of the quality of our observation. Arguably, most current work in conflict research is dedicated to further closing the gap between what we can observe and measure, on the one hand, and what happens, on the other. While this is highly important, current research has focused less on the difference between the actual and the real. It is specifically in this regard that critical realism can contribute to an improved understanding of political conflicts.

Most importantly, causal mechanisms need to be regarded as independent from events (Bhaskar 2008, p. 36). In essence, the distinction allows accounting for the fact that events can be "out of phase" (ibid., p. 47) with mechanisms. For instance, although every averagely trained human is capable of finishing a half-marathon, few will actually do. Similarly, any functioning nuclear weapon is capable of inducing a chain-reaction and it holds this power independently of an actual explosion due to an induced chain reaction. Although almost none of the nuclear bombs ever constructed actually exploded, we can understand their causal powers and might even further improve their function without testing them.

This leads to an important point: The ultimate goal of science lies in the discovery of causal mechanisms beyond the sphere of empirical events. This is not to say that empirical analyses are futile; nor does it imply that we need not carefully scrutinize the way we collect data on empirical events. As Bhaskar (1978, p. 47) writes:

> The world consists of mechanisms not events. Such mechanisms combine to generate the flux of phenomena that constitute the actual states and happenings of the world. They may be said to be real, though it is

> rarely that they are actually manifest and rarer still that they are empirically identified by men. (...) We are not doomed to ignorance. But neither are we spontaneously free. This is the arduous task of science: the production of the knowledge of those enduring and continually active mechanisms of nature that produce the phenomena of our world.

The tripartite understanding of reality allows us to carve out one of the main implications of critical realism for practical research: The guiding principle of science is to uncover the structures and processes bringing about the powers and abilities of things beyond what actually happens. This also links the three domains to the intransitive/transitive divide. The transitive concepts and theories of a science should correspond to the intransitive structures and mechanisms in the domain of the real. Put plainly, scientific ideas should mirror reality, which, in turn, is more than what can be immediately observed.

We can now summarize the position of critical realism in terms of two claims. First and foremost, all critical realists accept the ontological position of broader philosophical realism: ontological realism. A natural and social world exist out there independent of our individual knowledge (Kneer 2009, p. 11; Tang 2011, p. 24; Bhaskar 2008, p. 12; Byrne 1998, p. 37). This does not necessarily entail that all things are *reducible* to physical entities.[3] However, materialist entities have *ontological priority* (Tang 2011, 217f) over social facts. Everything that exists either purely consists of or ontologically depends on material matter.

The *independence claim* states that the external world exists independently of human perception. Questions of epistemology and ontology need to be kept separate. In contrast, empiricism and interpretivism emphasize epistemology. The former does so by arguing that all we can be sure of is what we perceive, while the latter states that what we see is largely constructed. This leads to deep ontological skepticism. Critical realism builds instead on the idea of an observer-independent reality. Only if the world exists independently of our perception of it can we reject the claim that ontology can be reduced to epistemology (Bhaskar 2008, pp. 5, 26–35). Its acceptance itself is thus a prerequisite to distinguishing between ontology and epistemology. To collapse both spheres would be to commit the epistemic fallacy. This constitutes the topic of the next subsection.

3.2 A Critique of Humean Empiricism

In order to carve out the position of critical realism, it helps to demarcate it from Humean Empiricism. We focus on the notion of causality as it lies at the heart of explanation and is thus of greatest importance for the conceptual and empirical analysis in subsequent chapters. Most importantly, critical realism rejects the idea that causality can be defined as a constant conjunction of events. In contrast, it favors a mechanistic approach arguing that causal power emerges from the intrinsic structure of an entity.

The following first presents the general idea of critical realists' criticism of Humean empiricism. Subsequently, the discussion is narrowed down to the issue of causality.

3.2.1 The Epistemic Fallacy

The general idea of critical realists' criticism of Humean empiricism is that the latter reduces questions regarding the state of being to questions of how to obtain knowledge. The main target is the Humean idea that since we are not able to gain knowledge of anything but of individual sensations, we have to arrive at a concept of being via sense-perception. Two quotations elucidate this position:

> There is no impression nor idea of any kind, of which we have any consciousness or memory, that is not conceived as existent; and it is evident, that from this consciousness the most perfect idea and assurance of being is derived (Hume 2012, p. I.II.VI).
>
> [S]ince all our perceptions are different from each other, and from every thing else in the universe, they are also distinct and separable, and may be considered as separately existent, and may exist separately, and have no need of any thing else to support their existence. They are, therefore, substances, as far as this definition explains a substance. Thus neither by considering the first origin of ideas, nor by means of a definition are we able to arrive at any satisfactory notion of substance; which seems to me a sufficient reason for abandoning utterly that dispute concerning the materiality and immateriality of the soul, and makes me absolutely condemn even the question itself. We have no perfect idea of any thing but of a perception. A substance is entirely different from a perception. We have, therefore, no idea of a substance (ibid., p. I.IV.V).

[3] Just because intransitive objects exist apart from our *individual* perception and idea of them does not entail that they are reducible to physical particles. For instance, social facts such as 'democracy' or 'conflict' have an existence apart from their material constituents although they would cease to exist without any materialist entities on which they supervene.

In these passages, discussing the existence of an immaterial soul, Hume recommends abandoning the inquiry into the quality of observer-independent entities, as these are not perceivable. He transfers the inquiry into the nature of the being of the world to an inquiry based on our perceptions. Put differently, Hume substitutes questions of ontology with questions of epistemology, which Bhaskar (2008, p. 26) describes as *epistemic fallacy*: "the view that statements about being can be reduced to or analyzed in terms of statements about knowledge; i.e. that ontological questions can always be transposed into epistemological terms." Put plainly, the Humean view does not take account of entities beyond our perception.

From this emerges an ontology that is wholly centered on events. Hume is a realist pertaining to the empirical, as well as an anti-realist pertaining to the domain of the real (including causal mechanisms) and intransitive entities.[4]

In contrast, critical realism argues that the realm of knowledge is logically and temporally prior to the realm of being (ibid., pp. 29–30). Critical realists' arguments against the Humean position are most clearly stated and bear the greatest consequence for methodology in the context of causality. This is the topic of the following section.

3.2.2 Causality and the Status of Theories

What does it mean to say 'A caused B'? The question of causality lies at the heart of scientific explanation. Broadly speaking, we can distinguish between correlational and mechanistic approaches to causality (Bhaskar 1978; Elster 1989; Gerring 2005, 2010; Glennan 1996; Harre 1970, 1972; Hedström and Swedberg 1998; Reiss 2009). This subsection discusses the origin of correlational approaches in Humean empiricism (cf. Maniacs 2006; Millican 2009). Subsection 3.2.3 then presents a realist critique.

For Hume, causality lies in the repeated experience of spatially and temporally close objects: "the constant conjunction of objects constitutes the very essence of cause and effect" (Hume 2012, p. I.IV.V). Causality *is* that we repeatedly perceive A shortly before and spatially close to B. Causality is thus an idea derived from successive sense-perceptions and not a property independent of human thought (Collier 1994, pp. 7–12, 74–75; Lorkowski n.d.; Bhaskar 2008, pp. 23–26, 54; Hartwig 2008, p. xvi). This implies—against the mechanistic approach defended here—that we cannot grasp causality by exclusively examining the potentially causing entity. There is no such thing as a causal mechanism. Instead, we have to experience cause *and* effect and we have to do so repeatedly.

Hume (2012, p. I.III.XIV) derives his idea of causality from more abstract epistemological arguments:

> What is our idea of necessity, when we say that two objects are necessarily connected together. (...) [A]s we have no idea, that is not derived from an impression, we must find some impression, that gives rise to this idea of necessity, if we assert we have really such an idea. In order to this I consider, in what objects necessity is commonly supposed to lie; and finding that it is always ascribed to causes and effects, I turn my eye to two objects supposed to be placed in that relation; and examine them in all the situations, of which they are susceptible. I immediately perceive, that they are contiguous in time and place, and that the object we call cause precedes the other we call effect. In no one instance can I go any farther, nor is it possible for me to discover any third relation betwixt these objects. I therefore enlarge my view to comprehend several instances; where I find like objects always existing in like relations of contiguity and succession.

In this passage, Hume argues that since all our knowledge is rooted in sense-perception we need to derive our account of causality from it. His account of causality bases on the idea of *contiguity in time and space* and *temporal succession*.

Turning his view to mental processes, he describes how the mind links successive sensations to form an idea of causality via the resemblance of the various occurrences. The psychological processes that lead to the idea of causality are purely based on experiences which "make their passage into the mind by the common channels of sensation or reflection" (ibid., p. I.III.XIV). In the same section, Hume explicitly renounces the idea of causality as an inherent power of objects. It reads as a direct refusal of mechanistic accounts.

> [T]he supposition of an efficacy in any of the known qualities of matter is entirely without foundation. This presumption must encrease upon us, when we consider, that these principles of substantial forms,

[4] Current research has not agreed upon whether Hume is to be read as an anti-realist. Four interpretations exist (cf. Hakkarainen 2007, pp. 282–293): (1) Hume denied the existence of intransitive entities, (2) Hume allows for the existence of intransitive entities; (3) Hume was skeptical about intransitive entities and refrained from a statement on the reality of intransitive objects; (4) Hume has changed his view over time and thus needs to be interpreted periodically. All four interpretations are still debated (cf. Hakkarainen 2007; Kail 2008; Loeb 2008; Malherbe 2008; Millican 2009; Price 1940).

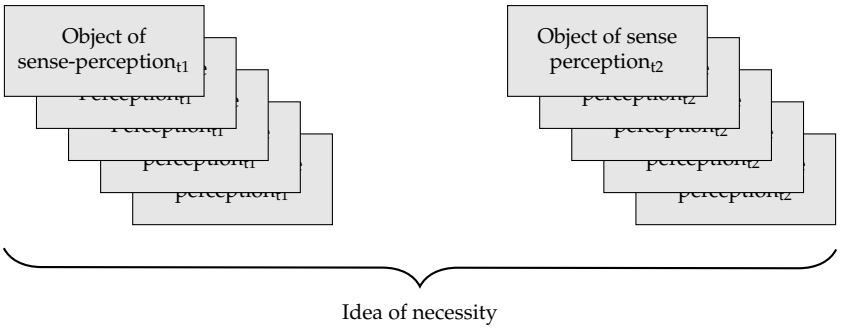

Figure 3.1: Hume's concept of causation.

> and accidents, and faculties, are not in reality any of the known properties of bodies, but are perfectly unintelligible and inexplicable. (...) [T]he ultimate force and efficacy of nature is perfectly unknown to us, and that it is in vain we search for it in all the known qualities of matter.

This culminates in his two definitions of cause:

> We may define a CAUSE to be 'An object precedent and contiguous to another, and where all the objects resembling the former are placed in like relations of precedency and contiguity to those objects that resemble the latter.' If this definition be esteemed defective, because drawn from objects foreign to the cause, we may substitute this other definition in its place, viz. 'A CAUSE is an object precedent and contiguous to another, and so united with it, that the idea, of the one determines the mind to form the idea of the other, and the impression of the one to form a more lively idea of the other' (Hume 2012, p. I.III.XIV).

The first of the two definitions gives an account of the objects of sense-perception happening in succession, while the second elaborates on the processes of the mind that link these successive sensations to form the idea of causality via the resemblance of the various occurrences.

Figure 3.1 illustrates both definitions. We perceive the conjoined occurrence of like objects where the individual instances are independent from one another. Our mind then forms the idea of necessity. Both definitions of cause thus work in conjunction. Causality is reduced to the repeated succession of sense-perceptions that are spatially and temporally close. Where conjunctions are constant, i.e. appear repeatedly, individuals begin to see the connection between events (cf. Millican 2009).

This inductive reasoning, that causality is a product of our imagination resulting from successive sense-perception, lies at the very bottom of the empiricist account of causality. And it is this idea of causality that underlies the empiricist methodology dominant in current research. It underlies all methods aiming to infer causality exclusively by observing the co-occurrence of hypothesized causes and effects.

The Humean definition of causality is clearly at odds with the mechanistic approach since Hume's view is anti-realistic as far as causal power is concerned.[5] Causality is not defined as a mind-independent property, but as something psychologically ascribed to objects of sense-perception. The following presents the critical realist critique of the Humean argument. It makes an argument about the world beyond our perception even though perception is our exclusive entrance to the external world.

3.2.3 The Transcendental Argument

Until this point, we have set out the broader positions of critical realism and Humean empiricism. This subsection presents arguments against the Humean account of causality.

[5] In the context of causality, we find a similar debate on the correct interpretation of Hume's writings as above. Some argue that Hume proposed the existence of causal powers as intransitive objects (cf. Strawson 2002), i.e. inherent in objects apart from regular succession or the perception thereof. Others argue that he is to be understood as anti-realist (cf. Millican 2009). A third position claims that he takes a middle ground as skeptic or agnostic about the world beyond sense-perception (Kail 2008). We follow the interpretation of Hume as being non-realist toward the idea of causal power ("the Old Hume interpretation" (Millican 2009)), as it appears to me as the most plausible position. In addition it aligns with the critical realist critique and—in more pragmatic terms—facilitates a clearer understanding of both positions. Consequently, we exclusively rely on Hume's *A Treatise of Human Nature* to illustrate his argument, while proponents of the "New Hume interpretation" often rely on his *Enquiry*.

One argument in favor of the critical realist approach is a transcendental argument brought forward by Bhaskar (2008).[6] Departing from a widely accepted statement P (minor premise), it is shown, that another claim Q needs to be true for the uncontroversial claim P to be possible (major premise). The conclusion then establishes the truth of the more controversial claim Q (see Fig. 3.2) (Bhaskar 1979, pp. 5–11; McWherter 2012, p. 224).[7]

Major Premise: Only if Q then P
Minor Premise: P

Conclusion: Q

Figure 3.2: The structure of transcendental arguments (adopted from McWherter (2012, p. 224).

Bhaskar's uses this argumentative figure to establish that causal laws are irreducible to human perception (intransitive) and regularities of events (structured) (cf. Bhaskar 2008, pp. 20–26; cf. McWherter 2012) (see Fig. 3.3). From the transcendental argument follows a very fundamental ontological fact about the world: the distinction between real objects, events, and our perception. The argument is ontological, not epistemological, in that it asks 'how must the world be for science to be possible?' instead of 'what can we know of the world?' (Bhaskar 2008, p. 13; Bryant 2011, p. 43).

The argument departs from a widely shared minor premise: i.e. "(i) that men are causal agents capable of interfering with the course of nature and (ii) that experimental activity, the planned disruption of the course of nature, is a significant feature of science" (Bhaskar 2008, p. 44). The argument thus requires us to accept that in experiments, scientists are not passive observers, but trigger the mechanisms of interest under the conditions of closure. Setting up an experiment is a causal interference in the world that is necessary for a certain sequence of events to occur. (cf. ibid., pp. 1, 21, 23, 43–44). Moreover, for the argument to be valid, experiments need to be considered important for science. This minor premise is arguably widely shared, although it seems to primarily focus on the scientific practice in the natural sciences. Before proposing an extension of the argument below, however, we proceed with the original argument.

The main argumentative step establishes that for the minor premise to be true, we must necessarily accept that causal laws exist even when they are not experienced and are not manifested in events (ibid., pp. 19, 25–26, 42). This contrasts with the Humean view that laws are defined as (experienced) constant conjunctions. Neither a constant conjunction nor the occurrence of any event is necessary for causal laws to exist. If, for instance, no atomic bomb had ever exploded, we could still theorize about its causal power to induce a self-propagating chain reaction. There is no constitutive relation between empirical regularities and causal laws.

Indeed, causal laws are often 'out of phase' (Bhaskar 1979, p. 35) with events. This is because in open systems, i.e. outside the experimental setting, mechanisms interfere and counteract each other and, consequently, sequences of events do not occur in a regular fashion (Bhaskar 2008, pp. 46, 84). Experiments, in contrast, take place in 'quasi'-closed systems where external influences on the working of the mechanism under analysis is precluded as good as possible so that processes can be observed in isolated fashion (cf. Collier 1994, pp. 33–34). Experimental closure is thus a means to make causal laws visible via the regularity of events. If open and closed systems were completely different, we would not be able to derive any meaningful insight from experiments (Collier 1994, pp. 34–36; McWherter 2012, p. 205). If open systems were similar to closed systems, experiments would be redundant (McWherter 2012, p. 205). The transcendental argument establishes that causal power and mechanisms are at work in open and in closed systems alike, although in the former they may exist without being realized. And experiments only make sense if findings remain valid outside the experimental setting.

[6] For a detailed re-construction the transcendental argument see McWherter (2012), Collier (1994, pp. 31–41), Bryant (2011, pp. 42–52), and Clarke (2010a). For a critical discussion see Kaidesoja (2015) and the debate in Clarke (2010b), Elder-Vass (2015), McWherter (2015), and Ylikoski (2015)

[7] The general form of the argument is deductive because the conclusion necessarily follows from the premises. However, the argument puts 'the cart before the horse' because central interest lies not on establishing the truth of the conclusion but rather of the major premise.

Major Premise: Only if (1) causal laws exist independently of our concepts, ideas, and perception of them (intransitive), and (2) causal laws are distinct from and possibly out of phase with patterns of events (structured), experiments are intelligible

Minor Premise: Experimental activity is intelligible

Conclusion: Causal laws are intransitive and structured.

Figure 3.3: Bhaskar's transcendental argument (own figure adapted from Bhaskar 2008, pp. 20–26, 42; cf. Clarke 2010a; McWherter 2012).

We can turn around the argument to refute the "misidentification of causal laws with their empirical grounds" (Bhaskar 1979, p. 12). If we accept that experimenters are able to trigger a certain sequence of events in experiments and belief in the empiricist definition of causal laws as constant conjunctions, it follows that scientists create rather than discover causal laws (Bhaskar 2008, pp. 23–24). "[I]t lies within the power of every reasonably intelligent schoolboy or moderately clumsy research worker to upset the results of even the best designed experiment, but we do not thereby suppose they have the power to overturn the laws of nature."(ibid., p. 24). Consequently, if the existence of laws hinged on regularities and regularities can be influenced to the liking of the experimenter, statements about laws would become arbitrary and lose their scientific significance.

3.2.4 The Transcendental Argument in the Social Sciences

The transcendental argument departs from the minor premise that experiments play a significant role in scientific research. Arguably, this applies only to a limited extent to social science research where experiments are seldomly conducted due to financial, practical, or ethical reasons. This section, however, argues that a critical realist ontology remains valid for observational studies as well.

First of all, experiments do play a role in the social sciences (cf. Dunning 2012). Natural experiments allow insight into causal relations because some natural process assigns units of observation (quasi-)randomly into treatment and control group. Thus, experimental closure cannot only be obtained by active intervention but also by selecting cases in which the natural course of events led to a quasi-experimental setting. What counts as a natural experiment depends on whether assignment is independent of confounding variables.

The very act of qualifying natural experiments as specifically meaningful for scientific inference and as superior to less focused observation presupposes that some causal relation exists that does not directly translate into empirical patterns. Natural experiments only make sense if causal relations are somewhat hidden in empirical patterns. Qualifying a certain course of events as a natural experiment presupposes assumptions about the causal structure under analysis; where this causal structure cannot be inferred from the course of events itself. Hence, the act of qualifying a natural experiment as insightful requires assumptions that go beyond mere observation.

Although natural experiments are without doubt helpful for causal inference, they play a minor role in practical research. The general line of reasoning, however, can be extended to observational research by showing that widely employed and accepted strategies of causal inference presuppose knowledge about causal structures that cannot be extracted from observation alone. Put differently, the following argues that current methodological practices require us to accept a real definition of cause.

In comparative observational research, causal inference–at least within the empirical-analytical framework–always involves conditioning to decrease confounding bias: To isolate the statistical relation between two variables, we account for factors that might blur this relation. Examples are the selection of control variables in multiple regression or the stratification of data in matching techniques (Morgan and Winship 2007). Case selection strategies likewise follow this logic by selecting cases that are particularly (dis)similar (Mill 1882). Qualitative Comparative Analysis ap-

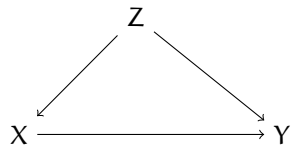

Figure 3.4: Directed acyclic graph representing a causal model with a cause X, an effect Y, and a confounder Z.

plies conditioning by performing set-theoretic methods (Ragin 1987). All these approaches have in common that the very process of isolating a relation requires us to know from what other processes we need to isolate the effect. To more clearly illustrate this point, we can draw on recently influential strategies of causal inference: the potential-outcome framework presented by Holland (1985), Neyman (1923), and Rubin (1974) and Pearl's (2000) 'modern analysis of causation'. Pearl (ibid.) develops an extensive formal logic describing how we can identify causal relations from observational data based on causal models. For our purpose, a very simple example conveys the logic.

Figure 3.4 illustrates the notion of confounding by means of a directed acyclic graph (DAG). The DAG illustrates a hypothesized causal model between three phenomena: a cause X, an effect Y, and a confounder Z. For instance, X might stand for the indicator of a barometer, Y for bad weather, and Z for atmospheric pressure. Assuming this causal structure, we can derive from the model that controlling for Z allows identifying the causal effect of X on Y. In our example, controlling for atmospheric pressure would reveal that there is no causal relation between the indicator of a barometer and the weather. Had we not included Z in our causal model we would have inferred a relation between the indicator of a barometer and the weather.

Statistically speaking, conditioning on certain variables simply produces different estimates than what we would gain from an unconditioned view. Put differently, our estimate of the relation $X \rightarrow Y$, e.g. a regression coefficient, varies depending on Z. As Simpson's paradox (Simpson 1951) illustrates, we can even manipulate the estimate at will by choosing Z.

If we accept that conditioning to reduce confounding bias is an important scientific practice, take into account the variability of estimates in dependence of the chosen covariates, and understand causal relations as constant conjunctions, it follows that whoever determines the choice of covariates at the same time determines causal relations. Were causal laws constant conjunctions and constant conjunctions in the form of conditional probabilities derived from observational data are at the discretion of researchers (by choosing Z or by selecting cases), we would have to admit that causal relations are relative to what we belief to be our causal model. This implies a subjective and relativist view of causal relations.

All approaches that base causal inference on a strategy of controlling for confounders necessarily require the formulation of causal models representing a belief in causal relations governing the phenomenon under analysis. Thus, whether we regard an estimate as scientifically relevant, i.e. whether we think that it reveals to us true facts about the world, hinges on our justification of the set of chosen covariates. But this justification is not something we can derive from the data. At its core, confounding is not a statistical concept (Pearl 2000). Causal models always refers to objects beyond our data. Causal inference based on conditioning requires us to accept that causal laws cannot be reduced to constant conjunctions. The very motivation of creating artificial closure through careful case selection or conditional probabilities only makes sense if we accept causal relations to be more than correlated events. Hence, the intelligibility of quasi-experimental approaches and conditioning strategies requires us to accept arguments that refer to ontological relations beyond the actual.

The modern strategies of inference have made their way to philosophy and thus to more fundamental investigations of the notion of cause. Woodward (2003, p. 59) draws on the notion of manipulation to define causation:[8]

> "A necessary and sufficient condition for X to be a (type-level) direct cause of Y with respect to a variable set V is that there be a possible intervention on X that will change Y or the probability distribution of Y when one holds fixed at some value all other variables Z_i in V.

[8] According to the above definition, we here focus on direct causes in contrast to total causes (see Woodward 2003, pp. 45–61).

This definition conveys the same basic logic as as the more methodologically oriented approaches by Holland (1985), Pearl (2000), and Rubin (1974). The causal relation between X and Y somewhat depends on a set of variables Z which lie on alternative causal paths between the hypothesized cause and the hypothesized effect. We have seen above that the identification of the causal relation $X \rightarrow Y$ hinges on controlling for Z. Knowing Z is necessary to identify the direct causal relation $X \rightarrow Y$. However, Woodward even goes one step further. Transferring methodological insights to a philosophical definition of causes he *defines* causes as existing relative to a set of variables, i.e. relative to Z.

The identification of Z, however, lies beyond the possibilities of the presented approaches. We cannot infer the set of confounding variables with the same techniques, i.e. by re-applying the strategy of identifying $X \rightarrow Y$. This would only move rather than solve the problem leading to a circular argument. The adequacy of Z cannot be judged based on the strategies of causal inference themselves. The fact that the manipulationist framework provides no answer on what constitutes causation disqualifies it as a real definition of causation. Clearly, the manipulationist approach to causation is very useful in showing how we might think of causation in actualist terms. It does not, however, define *what causation is*.

To sum up, the transcendental argument rejects the view that causality is an idea derived from or defined by constant conjunctions. We have argued that it is necessary that causal power exists apart from our perception and concepts by investigating the premises of experimental scientific analysis and conditioning strategies in comparative empirical research. Holland (1985), Pearl (2000), Rubin (1974), and Woodward (2003) provide guidance on how to retrieve evidence of causal relations from observational data. However, all statements about causal relations derived from applying these approaches remain conditional on ontological assumptions that lie beyond these approaches. The approaches are thus methodologically but not ontologically informative. Causality is more than an idea derived from constant conjunctions. This surely complicates research practice. Pragmatic considerations, however, should not be among the prime criteria to guide our research. To the contrary, scientific progress hinges on adequate and congruent positions in ontology, epistemology, and methodology. What is needed is an ontological investigation of causation. This constitutes the aim of the next section.

3.3 The Causal Power of Things

An adequate concept of causality is of paramount importance as causal statements not only form the core of theories, but also constitute the main object to be discovered or tested in methodological approaches. In the following, we present a critical realist account of causality as well as investigate the concept of theory.

From what has been argued above, we can surmise that causality should *not* be defined based on events (the Empirical) or objects of sense-perception (the Actual). Moreover, if causal laws were unconditional statements about regularities, there would be no or very few candidates for such laws in the social sciences since constant conjunctions are an absolute exception in open social systems. If causal powers were to only exist in closed systems, they would be meaningless with regard to open social systems. The alternative is to understand causal statements not as empirical statements but as statements about stable dispositions of objects or systems (Bartelborth 2007), as 'normic' or 'transfactual' statements (Bhaskar 2008, p. 82) existing in open and closed systems alike.

Given the importance of the term, the definition of 'causal powers' in Bhaskar (ibid.) is rather vague.[9] It basically rests on four concepts: structures, powers, tendencies, and generative mechanisms (Collier 1994, cf.). In order to obtain a clearer and reduced account of causality, we simplify and clarify this terminology in the following.

[9] In retrospective, Bhaskar (1979, p. 187) spoke of the ambiguity and lack of clarity in his demarcation of terms as a way to make his research program more accessible: "So one gives, as it were, a multiplicity of routes into the new network, in the hope that the reader will get a feel for it. Here again, though, when the shades of night fall, one ought to be able to see how the different terms 'hang together'."

3.3.1 Structures, Natural Kinds, and the Role of Concepts

Causal powers found on 'structures' (e.g. Bhaskar 2008, pp. 15, 36, 37, 46, 234).[10] As the term 'structure' is not explicitly defined in *A Realist Theory of Science*, we can define it here as "a set of relations between elements that has some measure of coherence and stability" (Bernardi, González, and Requena 2006, p. 162). This seems to be compatible with Bhaskar's use of the term in the context of atomic structures (Bhaskar 2008, p. 164; cf. Bhaskar 2008, p. 69).

Since structures belong to the domain of the real and are distinct from events (Bhaskar 2008, pp. 25–26, 42, 96), we cannot describe the structure of an entity by referring to events. Indeed, it is just the opposite: We should derive implications about the behavior of objects from an analysis of their structure. This implies that conceptualization precedes the formulation of theory and careful definitions are essential parts of causal inference.

Intrinsic structure define natural kinds. Natural kinds are groups of things that share causal properties (Bartelborth 2007, pp. 94–95). Thus, natural kinds are things behaving similarly in similar situations. They are 'natural' because the kinds reflect observer-independent similarities. If we are to divide the world according to natural kinds, we are not to project our interest upon it. Instead, classifications of natural kinds aim to mirror the real structure of the world.[11]

Natural kinds allow for both the differentiation between dissimilar entities as well as for the aggregation of like entities (Bhaskar 2008, p. 229). Consequently, the "justification of our systems of taxonomy, of the ways we classify things, of the nominal essences of things in science thus lies in our belief in their fruitfulness in leading us to explanations in terms of the generative mechanisms contained in their real essences. Not all ways of classifying things are equally promising; because not all sets of properties individuate just one and only one kind of thing" (ibid., p. 201). Natural kinds are thus of great importance for the process of classification.

3.3.2 Power and Tendencies

When investigating the causal powers of an entity, we are not primarily interested in the entirety of possible acts that entity is able to perform, but rather in what it 'tends' to do. Gurr (1974, p. 317), for instance, differentiates between 'capacity for violence' and 'need for violence'. He argues that while all men biologically possess the capacity for violence, this does not pertain to the need for violence. While the capacity for violence may be biologically given, the need for violence would denote a specific disposition. To capture these disparities, we can differentiate between 'power' and 'tendency'. Power describes the entirety of all actions an entity is able to perform in virtue of having a specific structure (Bhaskar 2008, pp. 222, 229).

A tendency, on the other hand, is an exercised power.[12] Referring back to our example, all men have the power to act violently; nevertheless, few actually have the tendency to do so.

3.3.3 Generative Mechanism

Researchers in the social sciences increasingly call for the identification of causal mechanism'. In discussions and reviews, the call for mechanisms is often expressed in breadth with the warning not to equate causality and correlation. If mechanisms provide a cure to the problems of correlational analyses, their meaning should be made clear. However, in spite of–or even perhaps due to–the popularity of the term, a clear definition is amiss Smith (2006). Hedström and Ylikoski (2010) and Gerring (2010), for instance, identify nine or ten different definitions of mechanism, respectively.[13]

[10] In his definition of causal power, Bhaskar draws on Harre (1970) and Harré and Madden (1975) who speak of 'powerful particulars'.

[11] The realist interpretation of natural kinds is disputed: "The concept of natural kinds, as just circumscribed, is entirely non-committal as to the issue of scientific realism. Natural kinds are created by a corpus of laws irrespective of whether these laws are interpreted merely as useful but fictitious unifiers or are thought to refer to a theory-independent reality" (Carrier 1993).

[12] Bhaskar (2008, pp. 40, 88, 221, 223) introduces two different meanings of the term tendency. The differentiation between both, however, remains rather obscure, rendering it analytically deficient. Collier (1994, p. 125) argues that the difference between the two meanings of tendency is "in degree only". Due to the unclear demarcation of the terms, we will drop the differentiation between the two types of tendencies. Against Fleetwood (2011), however, we do not regard power and tendency synonymous.

[13] Interestingly, Gerring criticizes the lack of clarity pertaining to the definition of the term but does not offer a solution or new definition. This is particularly problematic as Gerring (2010, p. 1506) has a strong opinion with regard to the role of mechanisms: "specifying and testing causal mechanisms is a universal goal, but not a requirement, of causal analysis."

Mechanisms play a pivotal role in the critical realist approach to explanation. They describe how structural characteristics of things lead it to possess certain powers and tendencies. Thus, structures and mechanisms are not synonymous (Collier 1994, p. 62). Structure describes a set of relations among constitutive elements defining natural kinds. Mechanisms describe how powers and tendencies emerge from the interaction of related elements. They delineate those particular features of structures on which certain dispositions supervene.

When it comes to explanation, we would add two specifications: First, in causal explanation, representations of mechanisms should refer to *tendencies* rather than the broader category of powers. While it is certainly of interest how powers come into existence, an explanation must refer to those powers actively exerted in the respective situation. These are usually the far more interesting questions in scientific research.

Second, outside the experimental setting, multiple mechanisms interfere with one another and thus might cancel out or reinforce each other. This is one reason why tendencies do not necessarily lead to certain events. Explaining phenomena thus includes a discussion of how different mechanisms interact.

By breaking up sequences of events in ever more detail, we might come closer to mechanisms. But these *are* not mechanisms. Such an approach to mechanisms easily leads to an infinite regress. What counts as an adequate explanation for some, might be regarded grossly oversimplified for others. Moreover, simply describing processes ever more precisely does not preclude us from mistakenly depicting correlations for causation. Adequate explanation needs to refer to the inner working of objects bringing about tendencies and possible interactions of such objects. Hence, mechanisms are constitutively tied to objects and *not* descriptions of sequences of events.

A complete explanation that draws on mechanisms necessarily involves the following four steps:

1. identification of entities involved
2. analysis of internal structure of the involved entities
3. identification of mechanism that detail how tendencies emerge from the structure
4. analysis of interaction of tendencies.

This, in turn, again emphasizes the great importance of comprehensive concepts. They are an indispensable part of every adequate scientific explanation.

In summary, we adopt the following definitions:

- Structures describe the arrangement of particles within a single entity.
- Powers describe the entirety of natural possibilities of an entity to act. They emerge from an entity's internal structure.
- Tendencies denote those powers that are exercised, active, and primarily at work due to a specific state of process of the underlying structure of the respective entity.
- Mechanisms describe those processes or states of structures that bring about tendencies.

Causal connections exist in the domain of the Real. Once actualized, they might lead to events in the domain of the Empirical, although an empirical regularity is neither a necessary nor a sufficient condition to speak of a causal power. These events might then be observed by researcher in the Actual. Hence, critical realism argues that causal powers should not be reduced to empirical regularities.

3.3.4 Causality in Critical Realism and Empiricism

Having now described the critical realists' approach to explanation, what difference does it make? To conclude this discussion and make the differences more explicit, we can now refer back to the empiricist perspective.

Interestingly, Hume (2012, p. I.III.XIV) somehow 'anticipated' the argumentation of critical realism. He formulated a self-critique, which bears great similarity to the account of causal powers as attributes of entities. The passage is of great interest, as it presents Hume's 'answer' to the critical realist account to causal explanation.

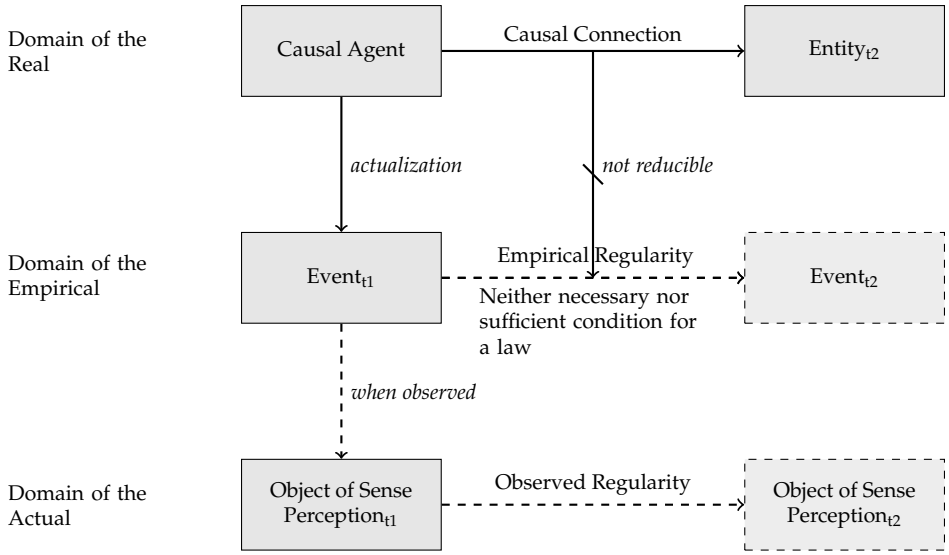

Figure 3.5: The critical realist approach to causation.

> What! the efficacy of causes lie in the determination of the mind! As if causes did not operate entirely independent of the mind, and would not continue their operation, even though there was no mind existent to contemplate them, or reason concerning them. Thought may well depend on causes for its operation, but not causes on thought. This is to reverse the order of nature, and make that secondary, which is really primary. To every operation there is a power proportioned; and this power must be placed on the body, that operates. If we remove the power from one cause, we must ascribe it to another: But to remove it from all causes, and bestow it on a being, that is no ways related to the cause or effect, but by perceiving them, is a gross absurdity, and contrary to the most certain principles of human reason.
>
> I can only reply to all these arguments, that the case is here much the same, as if a blind man should pretend to find a great many absurdities in the supposition, that the colour of scarlet is not the same with the sound of a trumpet, nor light the same with solidity. If we have really no idea of a power or efficacy in any object, or of any real connexion betwixt causes and effects, it will be to little purpose to prove, that an efficacy is necessary in all operations. We do not understand our own meaning in talking so, but ignorantly confound ideas, which are entirely distinct from each other.

In Hume's view, critical realists make claims about entities that are not perceivable. More specifically, Hume criticizes that critical realists falsely attribute causal powers to things that are not perceivable *per se* but rather solely exist as successive sense perceptions. Following the critical realists' critique of Humean empiricism, however, we have argued above that questions of causality cannot be reduced to regularities. Instead, causality is a tendency of objects. Constant conjunctions are neither a necessary nor sufficient condition for a causal power to exist.

This is certainly not to say that empirical regularities are of no value in the process of scientific discovery. On the contrary: the identification of laws often starts with the observation of empirical regularities. However, where the empiricist stops with the identification of constant conjunctions, the critical realist might take them as one possible point of departure to investigate in mechanisms and tendencies of the object in question. An identification of causal powers thus does not stop at—nor does it necessarily involve—observation, but rather always involves the theoretical work of conceptualizing the entity of interest (Bhaskar 2008, p. 169). Most importantly, causality and regularities are not equated. Researchers necessarily need to go beyond both that which is perceived and that which happens.

What is then the goal of scientific analyses in the social sciences? First and foremost, it should not be the 'identification of laws'. This is because the notion of law—widely understood as "general and unexceptional connections between specified characteristics of events" (Hempel and Oppenheim 1965, p. 139)—is deeply linked to constant conjunctions. And even if we accepted the aim of searching for laws, we would not expect to find any in the social sciences.

An alternative would be to introduce long lists of boundary conditions for a specific law to hold. This, however, would lead to conceptual stretching of the term 'law' and would put a lot of weight on the respective conditions (cf. Woodward 2003, p. 183).

Rather, we should abstain from the search for laws and instead focus on the identification of causal powers in the sense aforenamed.[14] With regard to the implications of this proposition for practical scientific research, we would like to highlight two consequences of critical realist ontology. These two points will serve both to summarize and condense statements and findings made thus far into an applicable research process.

- Critical realist ontology emphasizes the importance of comprehensive conceptualizations of the objects under investigation. Concepts are not just useful heuristic devices. Based on systematic empirical observation, adequate concepts correspond to the real observer-independent entities. Concrete requirements for adequate real definitions are developed in chapter 6.
- Valid conceptualizations and classifications give an understanding of the causal properties of the objects under investigation. Statements of laws refer to the mechanisms that generate tendencies. Valid explanations of events refer to the combined effects of the mechanisms and tendencies of the involved objects. The conditions of what counts as an adequate explanation are elaborated in section 5.2.

3.4 Critical Realism in Social Science

The discussion thus far has addressed critical realism without a specific focus on the social sciences. This section sets out critical realism in the social sciences (cf. Archer 1995; Bhaskar 1979; Collier 1994; Lawson 1997; Outhwaite 1987). The main focus in this subsection, and most of the following chapter 4, rests upon what constitutes the objects under investigation in the social science—individual intentions, social facts, and social structures—and how they are related.

In anticipation thereof, critical realism does not make a fundamental distinction between the explanation of social and natural phenomena (Bhaskar 1979, p. 3). This does not imply that social scientists should blindly emulate the natural sciences: the double-hermeneutic is an integral part of the social sciences (Giddens 1984). An alternative would be to argue for a purely hermeneutical approach. This, however, would be just as inadequate as to emulate the natural sciences, as the objects populating the social world are not exhaustively characterized by the meaning human beings assign to it (Bhaskar 1979, pp. 149–150; cf. King 1999).[15] Most importantly, an approach purely focusing on individual subjective meaning would deprive the social sciences of the possibility to objectively analyze, compare, and criticize interpretations. If the social world were wholly subjective, it would lack any objective basis, which might constitute a point of reference for the scientific debate.

We follow a via media: Specific procedures are needed to take the "non-natural surplus" (Bhaskar 1979, p. 27) of social objects into account. As will be shown in chapter 4, intentionality is the single most important constitutive element separating the natural and the social world. Consequently, a modified—though not radically different—scientific approach to the study of social facts is needed. As in the natural sciences, the objects under investigation in the social sciences are intransitive: They exist independently of our individual researchers' perspective. Surely, social facts, such as a conflict or a specific norm, might depend on mental representations. Once they exist, however, such instances of social facts can be analyzed like objects. Thus, although the objects in the natural and the social sciences radically differ in how they are made up, both are objects that can be scientifically studied by referencing to powers, tendencies, and mechanisms (ibid., pp. 24–26).

Most fundamental for explanations in the social sciences is the definition of and the relation between structure and agency. The following subsection 3.4.1 defines both terms. Subsequently, section 3.4.2 discusses an argument in favor of the independent existence of a social structure. Finally, section 3.4.3 comprises a critical discussion of this argument. There we argue that an account of social facts should be based on a broader notion of intentionality that not only includes activity, but also intentional states of mind.

[14] In the above discussion, we attempted to avoid the term 'law'. Regarding the cases in which it was used, this was due to terminological consistency with the cited works.

[15] Bhaskar (1979) primarily attacks the 'Winchian paradigm' (cf. Winch 1959) as representative of the hermeneutic tradition. The discussion continues today with King (1999), who consequently criticizes Bhaskar's discussion of Whinch as inadequate.

At the most basic level, the reality of social objects justifies the unity of method in the social and natural sciences. If social objects are real just like molecules, natural and social sciences share fundamental commonalities. To establish the reality of social objects, Bhaskar (cf. 1979, pp. 31–32) takes the following argumentative steps.

1. Human agency as intentional activity presupposes social structure.
2. Social structure is irreducible to intentional agency and vice versa.
3. Social structure and individual agency stand in a mutual causal relationship.
4. Therefore social structure and intentional agency are autonomous from one another and both real.

In the following, we discuss these arguments in detail.

3.4.1 Definition of Agency and Structure

Before reaching further elaboration on the notion of agency in section 4.5, we can define agency here as the performance of intentional action (Davidson 1963).

The notion of structure is ubiquitous in social science and thereby remains one of the latter's fundamental concepts (Sewell 1992). Its definition requires more elaboration. Fundamentally, structure refers to "a set of relations between elements that has some measure of coherence and stability" (Bernardi, González, and Requena 2006, p. 162). This reveals three fundamental properties of structures: Structures (1) consist of elements, (2) that are related (3) with a certain amount of permanency. Transferring this definition to the realm of the social, we can define social structure as the entirety of stable patterns of relations between positions. Scott (2011, p. 145) expresses this with great clarity[16]:

> To talk of the 'structure' of a society is to refer to recurrent patterns of activity that endure over considerable periods of time, despite a continuous turnover in the particular people undertaking them. A social structure is the enduring pattern of arrangement among the individual members of a group; it is the anatomy of a population considered as a social body. (...) Individuals can be said to occupy positions' or places within a social structure, and so a social structure is a set of connections among positions rather than simply among the individuals who occupy them.

The quote explicates an important distinction between appearance and constitution of structure. When talking *about* structure, one refers to 'patterns of activity'. This is how we perceive structures: As manifested in what people do. Patterns of activity, however, *are* not structure. At any point in time, social structures exist independently of practices.

In its essence, the term social structure denotes relatively stable arrangement of related social positions. Positions describe slots in the social structure to which specific powers and liabilities are attached through shared acceptance in society.[17] By occupying positions, individuals have—with or without their knowledge—the position-related powers at their disposal. This is not to say that it would be false to speak of a 'structure' to describe relations between individuals. Specific individuals and the way they were related, i.e. a *specific* inter-individual structure, can be of great explanatory value in the explanation of specific events. Likewise, fleeting relations (or non-permanent structures) might exist and be of explanatory value in certain situations. However, it would be more adequate to investigate into the mechanisms governing specific types (or natural kinds) of social structures, as well as to generalize generative mechanisms over and above individual cases. This has to do, primarily, with the relative independence of structures from individuals to which we turn now.

The continuous existence of social structures rests on the fact that positions endure even if persons change (Bhaskar 1979, p. 52; Sayer 2010, p. 63). In addition, single persons might occupy different social positions (Blau 1977, p. 28). It is even conceivable that positions endure without individuals occupying them. For example, in the short period between the assassination of President John F. Kennedy and the inauguration of Lyndon B. Johnson aboard Air Force One, the social position 'President of the United States' persisted unoccupied. Even in this—admittedly short—period of time, it was possible to analyze the position of the President, its powers and liabilities, and to characterize its role within the wider structure of the political system of the United States.

[16] For a discussion of the notion of social structure from a critical realist perspective see Bhaskar (1979), Collier (1994), Lawson (1997), Porpora (1989), and Sayer (2010).

[17] This definition of positions as institutional facts will be further elaborated in chapter 4.

Another example is provided by the position of the deceased North Korean President Kim Il Sung as 'eternal president'. Even after his death in 1994, Kim il Sung still 'occupies' the position of eternal President.[18] Thus, although positions, to be endowed with certain powers and liabilities, are ontologically dependent on the existence of individuals—in the given examples, the American or North Korean people still believing in the position of the President—the existence of positions is not dependent on the fact that they are occupied. Conversely, the same individuals might hold multiple positions. For instance, part of a description of the structure of the German government might refer to Angela Merkel and Sigmar Gabriel as Chancellor and Vice Chancellor, Chancellor and Federal Minister for Economic Affairs and Energy, or as leaders of governing parties. The same individuals occupy several positions. Likewise, as Merkel and Gabriel will leave their positions at a certain point, they are interchangeable. Others take their place and might instantiate the same social structure. Radcliffe-Brown (1940) makes a similar point:

> Throughout the life of an organism its structure is being constantly renewed; and similarly the social life constantly renews the social structure. Thus the actual relations of persons and groups of persons change from year to year, or even from day to day. New members come into a community by birth or immigration; others go out of it by death or emigration. There are marriages and divorces. Friends may become enemies, or enemies may make peace and become friends. But while the actual structure changes in this way, the general structure may remain relatively constant over a longer or shorter period of time.

We can conclude that, to a certain degree, positions are independent from their occupants.

Thus far, we have predominantly elaborated on positions and the notion of permanency. Relations, however, are at least equally important. By analogy with the differentiation between specific structures and 'positional structures', two types of relations can be discerned: Relations between intentional subjects and relations between positions, respectively.

Relations between intentional subjects are at least constituted by mutual awareness. In other words, a specific social relation exists where intentional subjects, those being either individuals or groups, take each other into account. An experimental setting modeled after the prisoner's dilemma provides an illustration: In a situation without direct interaction, each individual takes the prospective decision of the respective other into account in order to minimize punishment for himself.

Just as positions remain abstract from specific individuals, relations between positions can be rendered abstract from concrete interaction or the 'taking account of each other'-view of relation. *Relations between positions* rather denote typical kinds of associations held between positions. Examples of such relations are domination and subordination. The position of German Chancellor, for instance, is bestowed with the right of direction over the ministers. This serves as an instance of a relation of dominance and can take many concrete forms ranging from overruling a minister in a cabinet decision to his or her dismissal. To a certain degree, the position of Chancellor is defined by the fact that it stands in a relation of dominance vis-à-vis the members of cabinet.

This leads to the necessary differentiation of two types of relations: Relations can either be *constitutive* for the related objects or they can be *contingent* (Bhaskar 1979, p. 54; Sayer 2010, p. 61; Albert 2010b; Esfeld 2002; Schützeichel 2008). We can apply this distinction to specific and abstract relations alike. For example, two cyclists who are riding along one another and who are not part of a team—an instance of an inter-individual relation—are contingently related. Each cyclist would remain what he is, a cyclist, if he was riding alone. In contrast, the relation between landlord and tenant—an instance of a relation between positions—is constitutive. The properties of being a landlord and of being a tenant mutually depend on one another. The existence of constitutive relations entails irreducibility with regard to those properties that depend on these relations. We cannot understand the position of a landlord by disjoining him from his structural embedding. In contrast, one can very well understand what it means to be a cyclist from an atomist perspective. Constitutive relations thus imply irreducibility of the properties to which they give rise.[19]

Weaving these concepts and definitions together allows for the development of an adequate understanding of social structure. This thesis follows a nomothetic understanding of social science, aiming to carve out natural kinds and descriptions that are generalizable to a certain degree. Consequently, a nomothetic understanding of science should predominantly focus on a more abstract view of structure: As relatively persistent relations between positions. In contrast, Idio-

[18] The constitution of North Korea reads: "Under the leadership of the Workers' Party of Korea, the Democratic People's Republic of Korea and the Korean people will uphold the great leader Comrade Kim Il Sung as the eternal President of the Republic and carry the revolutionary cause of Juche through to completion by defending and carrying forward the idea and achievements of Comrade Kim Il Sung" (Democratic People's Republic of Korea 2009).

[19] This argument is an instance of a synchronic argument and will be further debated in subsection 4.4.1.

graphic explanations might very well refer to specific relations between specific individuals. In the explanation of specific events, these might even be preferable as they are more precise. Now that we have a basic understanding of agency and structure, we can proceed to the question of how both are interlinked.

3.4.2 Relation between Structure and Agency

The relation between structure and agency is the subject of extensive debate in the social sciences (cf. Elder-Vass 2010; Giddens 1984; Kühn and Lorenz 2011; List and Spieckermann 2013).

An influential argumentative figure to describe the relation between structure and agency is what we denote as the *diachronic downward perspective*. This argument is expressed in the Transformational Model of Social Activity (Bhaskar 1979, pp. 39–47) and the morphogenetic approach (Archer 1995). The argument tries to establish the independent existence of structure from agency via reference to the structure's pre-existence. The argument stresses the temporal sequence in the relation of structure and agency and is thus *diachronic*.

Furthermore, the argument departs from the widely acknowledged point that agency exists. In accordance with our above definition, agency can be described as intentional behavior. Following the argumentative figure of transcendental arguments (only if Q then P, see subsection 3.2.3), it is then argued that individual agency must necessarily presuppose the social structure:

> [T]he real problem appears to be not so much that of how one could give an individualistic explanation of social behaviour, but that of how one could ever give a non-social (i.e., strictly individualistic) explanation of individual, at least characteristically human, behaviour! For the predicates designating properties special to persons all presuppose a social context for their employment. A tribesman implies a tribe, the cashing of a cheque a banking system. Explanation, whether by subsumption under general laws, advertion to motives and rules, or redescription (identification), always involves irreducibly social predicates (Bhaskar 1979, p. 35).

Put succinctly, social action never happens in a vacuum. To communicate people rely on the institution of language. Acting within a society happens within existing written and unwritten rules. Even the act of breaking with existing conventions only becomes intelligible with an understanding of existing conventions. Agency not only draws on the social structure created previously, but happens within institutions that were often shaped over long periods of time. Society is "always ready made" (ibid., p. 42) and "pre-exists the individual" (ibid., p. 42). Thus, agency happens within structures that are beyond the immediate influence of individuals, structures that have been created before individual intentional action happens. Accordingly, social structure is always formerly present where agents intentionally act. As Bhaskar (ibid., p. 42) notes, this not only entails that structure is a logical premise, but also that it pre-exists intentional agency: "[I]f society is always already made, then any concrete human praxis, or, if you like, act of objectivation can only modify it; and the totality of such acts sustain or change it." Although structures enable or constrain intentional actions, actors need not necessarily be aware of that fact. It is not necessary to have an adequate picture of the social world for the social world to exist. In addition, the outcome of our actions may not be intended. Nevertheless, structures may endure, enable, and be dependent upon our actions, even without our awareness of the fact that we reproduce this *specific* structure.

Following the logic of the transcendental argument, the independent existence of structure follows from the above premises as an analytical truth. If individual intentional action exists, and social structure is a necessary condition for its existence, then social structure must also exist.

A possible objection against the independent existence of structure from agency would be to posit that both terms do not refer to different things, i.e. that either structure could be reframed in terms of agency or vice versa. If we could define—and thereby reduce—social structure to individual intentional agency, then the notion of structure would be epiphenomenal. In view of the widely shared assumption of methodological individualism, this seems the most credible threat to the *diachronic downward perspective*, as well as to any other argument that builds on the relation between structure and agency. Any multilevel argument would become tautological. The independent existence of structure from agency is important as for something to bear causal power it must exist. As argued in the introduction to this chapter, explanations referring to things 'as if' they would exist do not count as genuine explanations in the critical realist tradition.

We have seen above that structure can be regarded as objectified, or as having an object-like external status despite being mind-dependent. Structure constrains and enables individual agency in a way that cannot be reduced to the latter. At the same time, structure is activity-dependent. For

structures to exist, they must be reproduced. It is a rather obvious fact that social structure cannot not exist without individuals (Bhaskar 1979, pp. 47–50). In other words, social structure cannot be ontologically independent of individual agency in a sense that structure would exist without individuals. This, however, does not contradict the pre-existence of structure before agency. For the structures that pre-exist a specific intentional act at time t were (intentionally or unintentionally) created by intentional agency at t_1. Consequently, temporal pre-existence of structure and the ontological dependency of structure on individuals are compatible positions.

From this discussion emerges an important point: The relation between structure and agency can be conceived of in two different ways. The *diachronic perspective* investigates the relation between structure and agency over time. A diachronic argument necessarily relies on temporal sequences. It focuses on the dependence of agency at time t on structure at time t_{-1} and the reconstruction of structure at t_{-1} through agency. The *synchronic perspective*, in contrast, investigates how structure and agency are related at any instance of time. The most prominent advocates of the diachronic perspective in critical realism are Bhaskar (ibid.) and Archer (1995). The synchronic perspective, in contrast, has received much less attention. Following this gap in the literature, chapter 4 specifically addresses the synchronic relation between structure and agency.

3.4.3 A Synchronic Perspective on Agency and Structure

This section sharpens the critique of the diachronic perspective and thereby links it with the following chapter that develops an alternative approach. The main problem with the diachronic perspective lies in its exclusive and narrow focus on activity dependence. More appropriate, however, would be to not found structures on activity in the sense of goal-directed behavior, but rather on *intentional states of mind*.

The diachronic perspective underscores the importance of activity in the colloquial sense of 'people doing something'. We can focus on the formulation of the diachronic perspective in Bhaskar (1979) to illustrate this point, as it has been very influential in the subsequent debate (Archer 1995; Collier 1994; Lawson 1997). Here, Bhaskar (1979, p. 44) formulates a quite restrictive definition of intentionality as "the feature that persons are material things with a degree of neurophysiological complexity which enables them not just (...) to initiate changes in a purposeful way, to monitor and control their performances, but to monitor the monitoring of these performances and to be capable of commentary upon them." This definition of intentionality is rather narrow and focuses on goal-directed behavior and individual reflection (cf. ibid., pp. 104–105). Specifically addressing the question of how structures are (re-)produced, Bhaskar ([1979] 2005, p. 192) affirms the idea of activity-dependence when he argues that structures are "carried or transported from one space-time location to another only in or in virtue of human praxis". And praxis, in turn, "typically consists in causally intervening in the natural (material) world, subject to the possibility of a reflexive monitoring of that intervention" (ibid., p. 91).[20]

What is lacking in the diachronic perspective is that it precludes an understanding of structural persistence in the absence of activity. As activity can be spatiotemporally localized, making it a necessary condition in the existence of structure insinuates that structures cease to exist in the absence of activity. The argument that is elaborated in detail in the following chapter does not do away with a concept of activity. It does, however, found the concepts of social structure and social action on the broader concept of intentionality. It thereby adds to the debate that it is not activity or goal-directed behavior, but rather *intentional states of mind* that carry social structures over time. While the *emergence* of social structure might necessarily rely on activity, it is not activity that sustains it over time. Indeed, What mind-states carry structures over time are. Thus, where the emergence of institutions may hinge on activity, the existence, reproduction, and possible change of social institutions does not.

Two examples illustrate this argument. For instance, a social structure such as a conflict might exist even in the absence of specific activities. Without question, some form of activity has to occur for conflicts to emerge. Both conflict parties must become aware of the fact that they are *in conflict*, meaning that only through reciprocal action can conflict occur. Moreover, conflicts are

[20] Bhaskar has been criticized for his narrow definition of activity (Benton 1981). The critique, however, did not focus on the notion of activity *per se*. Bhaskar has subsequently conceded that the continuous existence of a structure is not necessarily dependent on *specific* activities. Power structures, for instance, might exist even without being manifest in observable conflict (Bhaskar [1979] 2005, p. 192; cf. Outhwaite 1987). They are not exclusively reproduced by activities in which superior position enforce their will in the face of opposition. Although this is an improvement, it is not a major retreat from the statement that structures always ground on activity.

often manifesting in specific conflict measures (whether these are perceived by researchers or not). Nonetheless, neither the logical necessity that reciprocal activity instantiates conflicts as shared intentional states, nor the empirical fact that conflicts are manifest in specific actions constitutes the *enduring existence of conflict* hinges on activities. A conflict might well exist and endure as an *incompatibility of intentions* without the conflict parties acting upon the incompatibility. Someone who argues that activity is a necessary condition for the enduring existence of conflict would be forced to accept that conflicts cease to exist in between two actions. This is undoubtedly not the case. Thus, activity creates and transforms conflicts and makes them perceivable to observers. It does not, however, constitute conflicts.

Sovereignty, as another example, is inherently relational and as such provides an adequate example for a social structure. One cannot think of sovereignty as an intrinsic property of an individual. The fact of being sovereign necessarily depends on the acceptance of others. At times, however, a sovereign might not exercise his sovereignty, e.g. by giving orders or making rules. This does not mean, however, that the person is no longer sovereign. Sovereignty may further exist under the condition that those who obey maintain the intention to carry out the sovereign orders.

If my interpretation of Bhaskar is accurate, then his approach needs a modification. Specifically, his stance requires further explanation for the *synchronic existence* of social institutions as intentional states without the occurrence of an activity. Here, we follow Mandelbaum (1955, p. 306): "Ideologies and banks and marriage systems do not exist unless there are aggregates of individuals who think and act in specific ways, and it is only by means of establishing the forms of their thoughts and their actions that we can apprehend the nature of the societal organization in which they live, or that we can corroborate or disallow statements concerning this organization." Thus, Bhaskar's account needs to include a clearer notion of intentionality; a notion that entails acting *and* thinking, or activity *and* intentional states. This requires a broader definition of the term 'intentionality'. It should not be reduced to purposeful action, but also include intentional states of the mind. Social action always includes intentionality, but not inversely. The following section thereby aims to establish a broader account of intentionality.

3.5 Summary

Although a philosophy of science is at least implicitly included in every scientific work, it is hardly ever discussed. Conflict research has to date completely abstained from discussing these foundational questions. This is problematic since one's position in philosophy of science has concrete consequences on how research is done and results are interpreted.

Critical realism is a fallibist position in philosophy of science. Situated between empiricism and interpretivism, critical realism puts ontology first. Based on a transcendental argument, it argues that the external world exists independently of our perception and that social phenomena—although inter-subjectively constructed—exist independently of our individual perception of them. Critical realism identifies uncovering powers of the objects under observation as a main scientific goal. Against empiricism, it argues that our transitive concepts and theories need to correspond to the intransitive structures and mechanisms in the domain of the real. Scientific ideas should mirror reality, which lies beyond and is distinct from that which is immediately observable and, even more so, from that which is actually observed. Even without regularity we might infer causal mechanisms, powers and tendencies from the objects of observation.

Against instrumentalism it argues that concepts and theories are not merely useful tools, but are only adequate if they indeed correspond to real observer-independent entities. Parsimony is thus not an end in itself. Rather, the complexity of definitions and explanations is a function of the complexity of the objects and mechanisms to which they refer. Moreover, causality and regularity are not to be equated. Finally, the development of adequate theories—even apart from very specific empirical puzzles—is an end in itself in scientific investigations and may well reach beyond a concrete research question. We can derive three implications that find concrete expression in the structure of the present analysis.

First, a thorough discussion of concepts elucidating the essential nature of the objects under investigation is a *sine qua non* in every scholarly work. Consequently, section 5.1 develops generally applicable but simultaneously specific criteria to evaluate concepts from a critical realist's perspective. Based on these criteria, chapter 6 then discusses existing concepts as well as develops

the main concepts of interest in the present analysis: political conflict, non-state conflict actor, and the natural and social space.

Second, the way we classify objects under investigation should mirror natural kinds and not our immediate pragmatic interest. We classify the objects under observation in this analysis via specification of their essential properties as is done in classifications of political conflicts, non-state actors, and the macro-level in sections 6.1, 6.2, and 6.3, respectively. Furthermore, it is reflected in the DISCON database as well as the Non-State Actor Database. As these essential properties ideally constitute the causal powers of objects, such an approach should yield greatest explanatory value.

This leads to the third point: Rather than postulating constant conjunctions, theories should elaborate on the causal powers of things that are not reducible to but nonetheless often reflected in systematic covariation of events. This approach finds expression in chapter 8, which develops the link between social structure, individual intentionality, the formation of groups, their tactical decisions, and the emergence of profiles of violence.

With regard to the relation of structure and agency in the social sciences, the critical approach underlines what we have termed the diachronic downward perspective: Although structure ontologically depends on agency, the latter pre-dates the former. Thus, although structure without agency is unthinkable, as without persons there would be no social structure, agency always takes place within existing structures. "People cannot communicate except by utilizing existing media, produce except by applying themselves to materials which are already formed, or act save in some or other context. Speech requires language; making materials; action conditions; agency resources; activity rules" (Bhaskar 1979, p. 43). Structures as relations between positions enable and constrain activity. This is the core of the critical realist account of structure and agency. The constitutive element of social structure as well as of groups is found in an account of collective intentionality. This constitutes the topic of the next chapter.

Chapter 4

Intentionality, Positions, and Collective Action

This chapter develops a synchronic account on the relation between individual subjects, collective subjects, and structure in the social world. It elucidates how social facts found on intentionality. Bringing together different approaches from philosophy and the social sciences, it defines fundamental concepts underlying a critical realist approach to explanation.

The key term of this section is 'intentionality'. Intentionality separates the natural and the social world. While the natural world exists independently of human intentions, the very being of the social world depends on them. Brute and institutional facts are the key objects in the respective spheres (Searle 2010, p. 10; cf. Searle 1995, pp. 120–125; Rawls 1955). An example of a brute fact is that the sun emits photons. Money is an example of a social fact. If all people were to vanish from the world, the sun would still shine; money, however, would cease to exist. Focusing on the social world, we can identify two key concepts: institutional facts and social action. Whereas institutional facts stand for the synchronic perspective, social action allows for the understanding of the diachronic interplay of structure and agency. Together, both concepts transcend the narrow focus on activities that was identified above as a deficiency of some critical realist approaches the laster chapter. Institutional facts are powers the very existence of which is constitutively dependent upon the fact that they are collectively recognized. Intuitive examples are sovereignty, the police, and money, but also friendship and marriage. Thus, if we if we speak of institutional facts, we do not speak about physical objects, e.g. the paper of a money bill, *as physical objects*. Rather, we speak of these objects as institutional facts, i.e. as objects that have a certain status and certain powers due to the fact that they are collectively recognized as having such a status and the related powers. This chapter shows how the concepts 'collective' and 'group' on the meso-level as well as the concept of 'social position' and hence 'social structure' on the macro-level can be derived from the notion of institutional facts. The term social action denotes all intentional acts by individuals or collectives involving more than one person. Every social action is comprehensively defined by the involved agent, i.e. individuals or collectives, their goals and beliefs, and their behavior. Non-intentional behavior or non-social behavior are not covered in the following analysis. Collective action is a subtype of social action which describes joint actions by individuals sharing a common goal.

The synchronic account provides a solution for the deficiencies of the diachronic perspective discussed in section 3.4 by replacing the notion of activity-dependence with intentionality. The discussion on the independent existence of social structures by Bhaskar (1979) and subsequently Archer (1995) revealed a widespread ambiguity regarding the differentiation between constitutive and causal arguments within the context of relating structure and agency. Causal relations are those between cause and effect, which implies a temporal lag. Constitutive relations, in contrast, denote the very entities that essentially define a thing at any point in time. Both types of relations need to be clearly separated. Institutional facts and collective intentionality stand in a constitutive relation of supervenience. At any moment in time, institutional facts—and consequently social positions and social structures—constitutively depend on shared intentions. There is no 'temporal lag', for instance, between the state of affairs among a number of individuals sharing the belief in the meaning of a white flag as a symbol of surrender, on the one hand, and the very power of that flag to indicate the discontinuation of resistance, on the other. Institutional

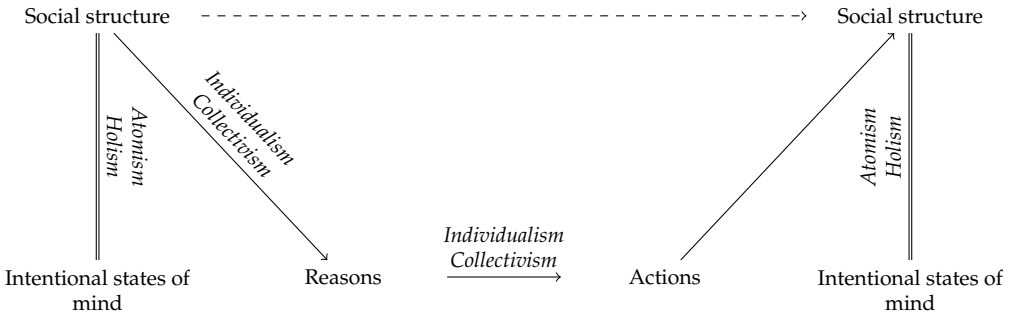

Figure 4.1: Constitutive and causal relations in the macro-micro-macro model.

facts are the central concept to describe synchronic relations in the social world. They define relational states among individuals such as, e.g., relations of superiority and inferiority, and between individuals and material objects such as the white flag. Reference to an adapted version of the notion 'institutional fact' advanced by Searle (1995) allows the understanding of relative positions in social structures as well as the powers and duties that are attached to these positions at any point in time. Structures, however, do not remain static. This is where causal relations characterized by temporal sequencing and social actions come into play. The concept of social action enables an investigation of diachronic relations and thereby elucidates the processual nature of the social. Structural states are brought into being, effectively altered, and perceivable through the ongoing stream of communications and actions by individual and collective actors. The diachronic view investigates these processes that alter and re(create) the objects that make up the social world.

Institutional facts and social action are deeply interrelated. Social action influences institutional facts, inasmuch as it can create, alter or reproduce (but not constitute) them. Inversely, institutional facts influence social action, for (at least any goal-directed) social action always takes existing institutional structures into account. Consequently, the processual and the structural dimensions of the social world are inherently linked. Social structure presupposes collective intentionality and social action, which in turn presupposes relations. However, although both are ontologically entangled, they are analytically distinguishable.

Applying the classes of synchronic and diachronic relations to the now-classical macro-micro-macro model (cf. Coleman 1990; Esser 1993) allows us to discern three foci of social science explanations:

1. Constitutive relations between social structures and intentional states
2. Causal influence of structure on agency
3. Causal influence of agency on structure

In its original formulation, the macro-micro-macro model exclusively referred to causal relations between levels. The adaptation in figure 4.1 includes both perspectives. A double line indicates constitutive relations, while an arrow depicts causal relations.

The following four sections develop the synchronic account of the social world. Section 4.1 introduced the notion of intentionality and develops a taxonomy of different kinds of intentionality. Section 4.2 describes how we can understand social structure as emanating from collective intentionality. Section 4.3 discusses different approaches to define groups and ends with a definition of the term. Section 4.4 addresses the complicated issues of reducibility. Discussing the extent to which the macro-level is reducible to the micro-level, the section argues that an adequate understanding of individual intentions necessarily involves reference to related individuals and thereby social structure. The last two sections address the diachronic perspective. Section 4.5 sets out an understanding of individual and collective action. Section 4.6 argues that groups capable of collective social action can be regarded as collective subjects and thus as agents in their own right.

4.1 Individual and Collective Intentionality

This section describes the role of intentionality as a constitutive element of social reality. Intentionality is the capacity of the human mind to refer to objects external to it. Institutional facts and collective social action, i.e. cases in which individuals collaborate in actively achieving a shared goal, are based on a specific form of intentionality: collective intentionality. Collective intentionality is a state of affairs in which intentional states are shared among individuals. This might be in the form of collective recognition, as in the case of weak collective intentionality, or in the form of inter-individual cooperation, as in the case of strong collective intentionality. A broad concept of intentionality allows us to address the aforesaid desideratum: to substitute the constitutive attribute 'activity-dependence' with the more extensive attribute 'intentionality-relative' in the definition of social facts. This subsection develops such an account by taking the following steps.

Subsection 4.1.1 introduces the notion of intentionality and with it four different criteria to compare different types of intentionality. These criteria are the subject, content, object, and modus of intentional states. The section furthermore develops the concept of collective intentionality. Of particular importance is the fact that Searle defines collective intentionality via intentional content. According to Searle, collective intention is not necessarily qualified by the fact that it is shared between individuals. Instead, it is characterized by the fact that the content of the intentional mind state takes the form of 'we intend'. The section criticizes this approach. It argues that collective intentionality necessarily relies on shared intentions. For, only intentions that are actually shared between related individuals serve as an adequate foundation for social facts.

In conclusion, the argument refers back to the notion of social structure as a necessary prerequisite for individual agency. If social facts and social action rely on collective intentionality and if collective intentionality is necessarily relational, then agency requires structures. This is in line with a modified version of critical realism in the social sciences that has its very foundation in a relational concept of collective intentionality. Such an account serves as a foundation for the conceptualization of structures of inequality and collective agents, and further guides theoretical arguments about the interplay between both.

4.1.1 Intentional States of Mind

Intentionality is defined as the "capacity of the mind by which it is directed at, or about, objects and states of affairs in the world, typically independent of itself. (...) Intentional states are always *about* something, or *refer to*, something" (Searle 2010, p. 25). Intentionality not only comprises those states of mind that are colloquially described as intended, e.g. 'I intend to do more sports', but also "belief, desire, hope, and fear" (ibid., p. 25). In short, "intentionality is a name for the directedness or aboutness of mental states"(ibid., p. 26).

Intentional states have a subject, a content, an object, and a modus (cf. Schmid and Schweikard 2009, pp. 39–45). The *subject* is the bearer of an intentional state. For Searle (2010, p. 44), for instance, only individual persons can be subjects of intentional states. The *content* of an intentional state is the proposition that makes up the intentional state. For instance, the individual belief in rainfall has "I believe that it is raining" as its content.[1] Sometimes the content of an intentional state is just the representation of an object, e.g. in the intention "I admire Thomas Jefferson" (ibid., p. 27). The *object* is the entity to which an intentional state refers. In our first example, this is the state of affairs that it is raining. In our second example, it is Thomas Jefferson. However, not every intentional fact necessarily has an *existing* object as reference. An example is the belief 'unicorns exist'. The *modus* describes the intentional type or the psychological mode in which the intentional state of a subject is related to its content.[2] For example, one might *hope*, *believe*, or *fear* that it is raining. Symmetrical to these three examples, three different modi of intentionality are distinguished: practical (or conative), cognitive, and affective. Practical intentional states describe intentions or desires; cognitive intentional states encompass perception, memory, and belief; affective intentional states describe evaluations and emotions.

Different modi of intention exhibit different types of relation between the intentional state and the world. The differentiation goes back to Anscombe (2000) and his description of a man who

[1] We cannot restrict the notion to 'it is raining', since it makes a difference whether a belief is an I-belief or a we-belief. This does not refer to the subject but to the content of the intentional state.

[2] As intentional states are completely contained in mental representations and are not necessarily related to mind-independent states of affairs, the point of reference of the modus is the content of the intentional state and not the object.

goes shopping.[3] The first class of modi of intentional states includes representations of a state of affairs that is not yet the case but should be realized. This class has a *world-to-mind* relation of fit. To be satisfied, the state of the world must match the intentional state of mind. An example is an order. The world-to-mind relation relates to the practical modus of intentionality (Searle 2010, p. 15). The second class of modi of intentional states are descriptions of the world and are true if they are an adequate representation of any given existing state of affairs. These modi have a *mind-to-world* direction of fit. The mind must adequately represent the world. Examples are perceptions or beliefs as in the case of the detective. Accordingly, the mind-to-world fit relates to the cognitive mode. A third class of modi of intentional states encompasses those intentional states where the fit is presupposed. This is the case with affections such as pride or shame. If I am proud of something, I presuppose its existence.[4] Closely related to the modus of state of intentions is the idea that intentional ideas represent conditions of satisfaction (ibid., p. 29). Each intentional state represents a state of affairs that can be either true or false, in the case of mind-to-world direction of fit, or satisfied or frustrated, in the case of world-to-mind direction of fit.

In summary, intentionality describes the fact that mental states are about states of affairs or objects in the world. They can be differentiated via their subject, content, object, and modus and are characterized by a specific direction of fit.

4.1.2 Internalist and Externalist Collective Intentionality

With an understanding of intentionality, we can now turn to the specific characteristics of *collective* intentionality. Collective intentionality lies at the heart of social phenomena. Individual intentional states, as described above, are important in grasping the relation between individuals and the world. Collective intentionality, however, is the key to understanding social objects. Almost all forms of social phenomena, among them institutional facts and collective action, are collective phenomena and require collective intentionality (cf. Schmid and Schweikard 2009, pp. 45–46).

We can define collective intentionality both as a we-intention and thus, due to its content or as a state of affairs, a point at which a specific intentional state is shared among individuals. This section presents the definition via contents as advanced by Searle (1990, 1995, 2010). The account can be characterized as internalist because the collective intentional state is said to be entirely contained within individual minds. This entails that collective intentionality contains an intrinsic property and is thus an atomist position. This will be further elaborated in section 4.4. We will see that this account is inadequate, as inter-individual relations are a constitutive element and thus a necessary definitional attribute of collective intentionality. Consequently, subsection 4.1.3 will defend an externalist position. Due to the fact that Searle has been hugely influential in the debate on intentionality, as well as in highlighting the differences, the following briefly summarizes his approach before advancing an alternative view.

Searle (1990, 2010, pp. 47–48, 1995, pp. 23–26) defends a 'first-person plural' form of intentionality. If an intentional state is in the form of 'we intend', then it is a form of collective intentionality. Thus, collective intentionality is defined as 'collective' via its content.

Cases in which individuals share an intention and are mutually aware of their intentions (I-intentions plus mutual belief) are not cases of classic Searlean collective intentionality. This is mainly, because they do not capture an essential attribute of collective intentionality, namely cooperation. Despite the apparently pivotal importance of cooperation, Searle's definitions and examples remain rather ambiguous. In an illustrative example, Searle (2010, p. 48) argues that cooperation lies in "an obligation".[5] Later, Searle (ibid., p. 53) writes: "In order to engage in collective

[3] "Let us consider a man going round a town with a shopping list in his hand. Now it is clear that the relation of this list to the things he actually buys is one and the same whether his wife gave him the list or it is his own list; and that there is a different relation when a list is made by a detective following him about. If he made the list itself, it was an expression of intention; if his wife gave it him, it has the role of an order. What then is the identical relation to what happens, in the order and the intention, which is not shared by the record? It is precisely this: if the list and the things that the man actually buys do not agree, and if this and this alone constitutes a mistake, then the mistake is not in the list but in the man's performance (if his wife were to say: 'Look, it says butter and you have bought margarine', he would hardly reply: 'What a mistake! we must put that right' and alter the word on the list to 'margarine'); whereas if the detective's record and what the man actually buys do not agree, then the mistake is in the record" (Anscombe 2000, ğ32).

[4] Searle (2010, p. 32) argues that intentional states with a presupposed fit can be regarded as reduced to types of intentions with a specific type of fit. "Thus if one is proud to have won the race, then one must believe that one won the race and one must want to have won the race" (ibid., p. 32).

[5] Searle (ibid., pp. 47–48) describes two cases: In the first case, a number of business graduates, following the idea of the 'invisible hand', aim to benefit humanity by each trying to become as rich as possible. The graduates are mutually

behavior I have to believe (or assume or presuppose) that others are cooperating with me. And their cooperation will consist in their having intentions-in-action that specify the same goal as I have but need not specify the same means to the goal"[6] We can thus conclude that cooperation does not refer to actual empirical cooperation between two persons, but rather denotes a belief: the belief that others do their part (which may differ from my part) in achieving a specific collective goal. Combining both understandings of cooperation as moral obligation and as belief, we can see that cooperation should not be understood as an empirical relation between individuals, but merely as the individual (internalist, atomist) belief that others feel obliged to act accordingly. What is *real* is not the relation, but only the content of individual minds.

This leads to the conclusion that individual and collective intentionality are quite similar notions in the eyes of Searle (1990, pp. 406–407):

> "Anything we say about collective intentionality must meet the following conditions of adequacy:
> (1) It must be consistent with the fact that society consists of nothing but individuals. Since society consists entirely of individuals, there cannot be a group mind or group consciousness. All consciousness is in individual minds, in individual brains.
> (2) It must be consistent with the fact that the structure of any individual's intentionality has to be independent of the fact of whether or not he is getting things right, whether or not he is radically mistaken about what is actually occurring. And this constraint applies as much to collective intentionality as it does to individual intentionality. One way to put this constraint is to say that the account must be consistent with the fact that all intentionality, whether collective or individual, could be had by a brain in a vat or by a set of brains in vats."

All intentions, be they individual or collective, must be contained in individual minds (cf. Searle 2010, pp. 55, 60; Gilbert 1989). This explicitly refutes the existence of collective subjects and group minds. Collective intentional states always have individual persons as subjects. And since individuals might be mistaken in their intentions, they might hold a collective intention in the form 'we intend' without another individual having the same intent. Consequently, single individuals might have collective intentionality. The case of a single subject having the intentional state "we believe that unicorns exist" provides an example. As no one else holds this belief in the existence of unicorns, it is a case of mistaken collective intentionality. But it remains a state of collective intentionality, nonetheless. "But I could have all the intentionality I do have even if I am radically mistaken, even if the apparent presence and cooperation of other people is an illusion, even if I am suffering a total hallucination, even if I am a brain in a vat. Collective intentionality in my head can make a purported reference to other members of a collective independently of the question whether or not there actually are such members"(Searle 1990, p. 407).

The Searle's account of collective intentionality leads to the rather peculiar conclusion that individuals can create social facts. Social facts are based on collective intentionality and collective intentionality must—following Searle—be an internal state of individuals, or even a single individual. However, it seems rather strange to allow that the state of mind of a single individual constitutes a social fact. Rather, we should regard social facts as relational in the sense that they are constituted by real relations between real persons and do not exist as intentional states of individuals? Here we follow the critique of Meijers (2003, p. 179), who argues that collective intentionality is necessarily inter-individual and irreducible to individual minds:

> [States of collective intentionality] are relational states that have a foundation in the participating individuals. Having a foundation means that the intentional states are one-sidedly dependent upon two or more participants. In case these participants do not exist in the real world, there is simply no collective intentionality. There has to be somebody 'out there,' so to speak, for collective intentionality to be possible.

Collective intentionality simply must include relations between individuals. It is immediately clear that a hallucination is different from a perception in that the latter requires the existence of the observed object. The Searlean solipsist definition of collective intentionality cannot clearly distinguish between 'sharing' and 'believing to share' a collective intentional state. If there were

aware of their plans, but "there is no cooperation. There is even an ideology that there should be no cooperation" Searle (2010, p. 48). In a second case, all things are similar save one: This time, the graduates swear a pact to act as described. "In this case there is genuine cooperation and genuine collective intentionality even though it is a higher level of cooperation to the effect that there should be no lower level cooperation"(ibid., p. 48). In the first case, participation in the activity of benefitting humanity is voluntary, even after leaving business school. In the second case, participation is obligatory. This understanding of cooperation in activities has a strong normative dimension. Following this example, cooperation implies the obligation to participate in a certain activity.

[6] Intention-in-action and bodily movements are the two components of an action. The intention-in-action describes the psychological event that causes bodily movements. In addition, before the onset of an action, there sometimes exist *prior intentions* (ibid., pp. 33–35, 50–55).

only one person left on this world, the Searlean definition of collective intentionality might still apply.

Apart from the immediate difficulty of accepting Searle's internalist account, to do so would entail a grave consequence: An internalist view must exclude the possibility of collective subjects (cf. Schmid and Schweikard 2009, pp. 51–52). If intentional states are states of mind of individual persons and if intentional states are defining features of agents, the possibility of the existence of collective subjects is denied. In consequence, we will adopt an externalist and relational view.

4.1.3 Collective Intentionality as Shared Intentional States

A relationist approach is more adequate in capturing the essential features of social facts for two reasons. First, it is intuitively sound. Restricting the meaning of 'collective' in collective intentionality to the content of intentional states is not only counter-intuitive, but it also misses an important characteristic of social facts. It is precisely the fact that an intention—such as the belief in the value of money or in the legitimacy of a sovereign—is shared between a number of individuals that endow social facts with their status. Moreover, only a relationist account allows to demarcate cases of shared collective intentionality from cases where single individuals falsely hold we-intentions (Meijers 2003; Zaibert 2003). A definition that omits the dimension of subjects is not capable of differentiating both cases. An individual's false and solipsist we-belief in the existence of unicorns would be as much an instantiation of collective intentionality as a widely shared belief in the value of money. Consequently, relations between intending individuals must necessarily be included in the definition of collective intentionality.

How can we understand 'relation' in this relational account of collective intentionality? In the synchronic perspective, relations can be defined as a state of affairs in which two entities share a specific property. In the externalist and thus relational concept of collective intentionality, the relation exists in the fact that at least two individual subjects hold the same intentional state. The two related subjects of the collective intentional state need not necessarily be aware of that. For instance, two individuals, A and B, might share the belief that a third individual, C, is the supreme leader. The relation between A and B consists of the fact that content and object of the intentions of A and B are identical. Nonetheless, sharing intentional states is different from sharing intrinsic properties, such as in the case of hair color. Collective intentionality must involve relations, while having a specific hair color does not. The fact that A's intentional state counts as part of a collective intentional state depends on the existence of B's identical intentional state. Once B ceases to accept C as supreme leader, A's intentional state no longer constitutes a collective intentional state, but rather becomes an individual belief. Hence, the relation of sharing an intentional state is constitutive for collective intentionality. The constitutive status of relations for collective intentionality goes well with our focus on the synchronic relation. It is not the case that relations are created at some point in time *after* collective intentional states come into being. Collective intentional states and the relation are equiprimordial.

We can thus define collective intentionality as follows: *A collective intentional state is a state of affairs where at least two subjects share an intentional state that is similar in content and object. The property of an individual to have a collective intentional state is a relational property, because it constitutively depends on another individual sharing the same intentional state.*

If the notion of collectivity extends to the *subjects* of intentional states, what remains of the pivotal definitional attribute that the *content* of intentional states must be in the form of we-intentions? Is collective intentionality necessarily defined by collective *we*-intentions? As argued above, the reference to a plural 'we' in the content of intentional states loses its status as a constitutive attribute of collective intentionality. Rather, it becomes a criterion to differentiate two classes of collective intentionality: Intentional states in the form of shared I-intentions are instances of *weak collective intentionality*. Shared we-intentions are instances of *strong collective intentionality* (cf. Searle 2010, pp. 56–58).[7]

[7]Searle mentions these two kinds of intentionality in a rather short passage in Searle (2010, pp. 56–58), where he partly retreats from his position that 'We-Intentions' are a constitutive attribute of all forms of collective intentionality. In contrast to his earlier views in Searle (1995), Searle (2010, pp. 56–58) allows for cases of collective intentionality in the form of I-intentions. Although the concession is made in passing, it represents a far reaching consequence: In some cases, *collective recognition* is a sufficient criterion. And collective recognition in turn, means I-intentions that are shared between individuals. Thus, Searle drops the necessary condition that the content of collective intentionality in an individual mind is in the first-person plural and irreducible to I-intentions.

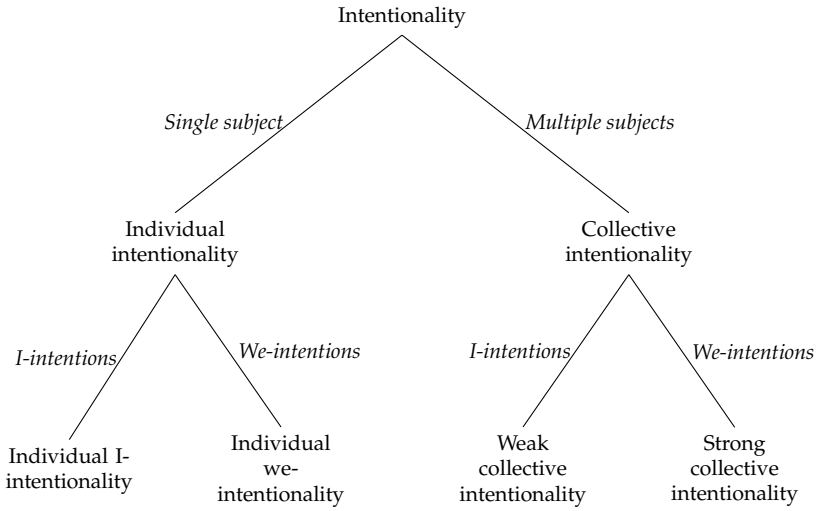

Figure 4.2: Categories of intentionality. Apart from being held by multiple subjects, all states of collective intentionality are similar with regard to their content, object, and modus.

In summary, the present analysis argues in favor of a *relationist and externalist account of collective intentionality*. The above discussion allows to develop a taxonomy of intentional states (see figure 4.2). An intentional state is defined via its subject, content, object, and modus. An individual intentional state is an intentional state that is uniquely held by a single subject. No other individual holds an intentional state that is similar with regard to content, object, and modus. If a similar intentional state is shared between at least two subjects, then it is a collective intentional state. Similarity with regard to content, object, and modus as well as the number of involved subjects is the criterion to differentiate the highest level in figure 4.2. On a second level, we can differentiate whether the *content* is in the form of a we-intention or an I-intention (footnote 1). This demarcates a weak form of collective intentionality from a strong form of collective intentionality. For the sake of comprehensiveness, we could analogously demarcate a weak individual intentionality and strong individual intentionality. The latter would count as collective intentionality in the Searlean sense.

4.2 Social Position and Social Structure

We are now in a position to describe a synchronic account of social positions and of social structure based on a relational notion of collective intentionality. Regarding figure 4.1, we can now progress to elaborate on the constitutive synchronic relation between intentional states of mind and social structure. As pointed out in section 3.4, a structure consists of a number of elements that are related with a certain amount of permanency. Social structure denotes a relatively stable arrangement of related social positions. And positions, in turn, describe slots in the social structure to which specific powers and liabilities are attached through shared acceptance in society.

4.2.1 Institutional Fact

As defined by Searle (1995, 2010), social positions are institutional facts. Whereas we abandoned the internalist conception of collective intentionality, Searle's account of institutional facts is perfectly compatible with the externalist definition and well suited to define social positions. Institutional facts are constitutively defined by attributes: collective intentionality and status functions.

With regard to the first attribute, institutional facts are most often based on weak collective intentional states. However, they can also take the form of strong collective intentional states. Institutional facts thus exist out of a number of people that share a specific intentional state. This intentional state takes a specific form: status functions. A status function is "a function that is performed by an object(s), person(s), or other sorts of entity(es) and which can only be performed in virtue of the fact that the community in which the function is performed assigns a certain status to the object, person, or entity in question, and the function is performed in virtue of the collective

acceptance or recognition of the object, person, or entity as having that status" (Searle 2010, p. 94; cf. Searle 2005, 7f, 2010, 58f, 94f). Thus, in the case that an entity were to perform a function, it would not be able to perform without being ascribed this specific function is called a status function.[8] Status functions "create and regulate power relationships between people" (Searle 2010, p. 106) by assigning positive powers such as rights and permissions as well as constraints such as duties and obligations (ibid., p. 9). The notion of powers bears close resemblance to the definition of 'Macht' by Weber (1921, p. 28): "Macht bedeutet jede Chance, innerhalb einer sozialen Beziehung den eigenen Willen auch gegen Widerstreben durchzusetzen, gleichviel worauf diese Chance beruht."[9]

Searle (1995, p. 41) summarizes his account as follows:

> [W]e need to show the continuous line that goes from molecules and mountains to screw drivers, levers, and beautiful sunsets, and then to legislatures, money, and nation-states. The central span on the bridge from physics to society is collective intentionality, and the decisive movement on that bridge in the creation of social reality is the collective intentional imposition of function on entities that cannot perform these functions without that imposition.

A system of institutional facts forms an institution.[10] Institution consist of a number of related constitutive rules that allow for the creation of institutional facts (Searle 2010, p. 10, 2005, cf.). Institutional facts are manifestations of institutions. For instance, the institution of white flags denotes the state of affairs that white flags in general are widely—at least in the Western hemisphere—understood as symbols denoting surrender. A specific white flag then constitutes an institutional fact.

The modified understanding of weak collective intentionality as shared I-intention is perfectly compatible with Searle's account of institutions and institutional facts: Institutions only make a difference if they are recognized by a sufficient number of individuals. The strength and the spatial extension of an institution are dependent on the number and location of those who create and sustain it. Where the belief in an institution vanishes, institutions likewise—and instantly—erode. Likewise, the construction of institutions is a demanding process, as it requires the creation of collective intentionality. This is why we cannot simply transfer institutions between different groups of people.

The main point to be derived from Searle's account for our discussion is that institutional facts are "intentionality-relative" (Searle 2010, p. 17). "As long as there is collective recognition or acceptance of institutional facts, they will work" (ibid., p. 106). This does not mean that institutional facts are unrelated to physical objects. Institutional facts may be codified, e.g. as the written articles of a constitution, they may be linked to specific symbols, e.g. the uniform of a police officer, or to specific people, e.g. Barack Obama. Institutional facts are thus ontologically Janus-faced: They often exist materially and, at the same time, as institutional facts qua collectively shared states of mind.

4.2.2 Social Position and Social Structure

The notion of institutional facts allows for a closer definition of social positions and social structure. Social positions are institutional facts (cf. Searle 1995, 2010). They constitutively depend on collectively-ascribed status functions and are built upon shared (weak or strong) intentional states of mind.[11] The fact that social positions constitutively ground on collective intentional states addresses the desideratum identified at the end of section 3.4: Positions are defined as intentional states and not through activity.

This can be demonstrated with the aid of the following example, which, while admittedly unrealistic, nonetheless proves satisfactory in illustrating the point of constitutive relations. Imagine

[8] The assignment of status functions continues in a vertical and horizontal dimension. On a higher dimension, a status function Y can become an object X to which other status functions can be assigned. Furthermore, institutional facts are linked horizontally.

[9] "The core notion of power is that A has power over S with respect to action B if and only if A can intentionally get S to do what A wants regarding B, whether S wants to do it or not" (Searle 2010, p. 151). In the present account, institutional facts necessarily involve deontic powers. This excludes collectively accepted facts that are not related to deontic powers *per definitionem*. A less restrictive account, which would not require institutions to be constitutive of certain powers, is advanced, e.g., by Tuomela (2013). An account that includes powers, however, is very suitable for a definition of structures. It allows us to understand structures as creating a system of super- and subordination between subjects based on their relative powers.

[10] For a critical perspective on this account see Tuomela (1997).

[11] For a critical account on the foundation of social (and institutional) facts in intentionality see Epstein (2014).

Bob is a police officer, i.e. Bob occupies the position 'police officer'. His position comes with the power of law enforcement, which *constitutively* depends on being accepted by a sufficiently large number of community members. While Bob has yet to arrest a single person, given no one in his community has knowingly violated the law, he still holds the power (sec.3.3). Imagine that one day, the entire community leaves earth and Bob behind in a spaceship. Bob, now himself alone in his community, still holds the powers of a police officer although spatial separation precludes its enforcement. As long as the community in the spaceship maintains its belief in the position of police officer, the powers remain and might be enforced upon the peoples return from space travel. In the case of an explosion of the spaceship, however, Bob's position *instantly* vanishes. Instantly, and not causally, since the relationship between the shared belief (collective cognitive intentional state) and the powers of Bob is constitutive. Even if Bob were to live his whole life under the illusion of being a police officer, his social position would have already vanished at the very moment of the spaceship explosion.

Grounding social positions on collective intentionality is not to say that material objects are irrelevant or that social positions are wholly subjective. Rather it is people who exercise the powers that are attached to certain positions, and material objects that gain certain powers through collective acceptance. Nonetheless, it is social acceptance that endows positions with powers and that converts certain material objects into more than they are simply due to their material properties.

This also entails that powers attached to positions and emerging from collective acceptance are spatiotemporally variable. A police officer, for instance, might be highly respected and hence could have more power in one society (or region, or city, or community) than he has in another. The powers of a police officer could similarly vanish over time if the degree of respect it commands among the community dwindles.

Apart from the *constitutive relation* between shared intentional states and institutional facts, a second type of relation can be identified: the relations that emerge from the *arrangement* of positions in a social structure. Here, the relation is not between certain individual characteristics and collective intentional states, but between social positions. The definition of 'Macht' by Weber captures this relational understanding quite well. The power to do that, which is attached to social positions, implies others who obey. Powers are thus relational properties that arise from the configuration of positions.

The root of social position in collective intentionality and the importance of relative positions can be illustrated with regard to inequality, a concept that plays a significant role in the theory developed in chapter 8. Inequality first and foremost denotes that two things are different in some regard. Inequality between individuals or groups exists with regard to an innumerable variety of categories: size or weight, wealth, education, political rights, and so on. Some of these characteristics certainly belong to the natural world and are intrinsic properties of individuals. However, even those criteria that are exclusively material (such as size or weight), often gain their social relevance through social ascription. This becomes even more evident when we progress toward categories such as wealth or political power. Situations in which wealth is measured by the amount of money in a bank account is not surprising, given money is a paradigmatic example of an institutional fact. The powers arising from wealth might appear as natural, and money is certainly among those institutional facts that most apparently have an object-like character. Without the public trust in money, however, wealth instantly vanishes. Precious metals, such as diamonds, do not gain their value primarily from their internal structure, but rather based on their collective acceptance as valuable. Another example is the sphere of politics. The social position of individuals in the sphere of politics is dependent upon the volume of rights and influence on politics and policies they are assigned. While these rights are written down, i.e. materialized, in constitutional or national laws, they can only be exercised—in fact, they only really exist—if the majority collectively recognizes these rights. In electoral political systems, for instance, individuals without the right to vote have—ceteris paribus—less possibilities to influence politics and policies than members of the electorate, while the latter have less influence on politics and policies than, e.g., members of parliament or ministers. The powers arising from wealth or political influence are primarily resulting from relative positions.

4.3 Groups

The above discussion has presented the synchronic relation between individuals and social structure. It has argued that individuals collectively produce institutional facts and thereby social real-

ity by sharing I-intentions with similar content and objects. The following section deals with the concept of 'group'. It concentrates on the following questions: If collective intentionality is inherently relational, to what extent does this include the formation of groups? How do collectives fit into the macro-micro-macro model of explanation? Should we regard groups as existent? Popper (1959), for instance, called such a view naïve:

> I shall first briefly mention two naïve theories of society which must be disposed of before we can understand the function of the social sciences. The first is the theory that the social sciences study the behaviour of social wholes, such as groups, nations, classes, societies, civilizations, etc. These social wholes are conceived as the empirical objects which the social sciences study in the same way in which biology studies animals or plants. This view must be rejected as naïve. It completely overlooks the fact that these so-called social wholes are very largely postulates of popular social theories rather than empirical objects; and that while there are, admittedly, such empirical objects as the crowd of people here assembled, it is quite untrue that names like 'the middle-class' stand for any such empirical groups. What they stand for is a kind of ideal object whose existence depends upon theoretical assumptions. Accordingly, the belief in the empirical existence of social wholes or collectives, which may be described as naïve collectivism has to be replaced by the demand that social phenomena, including collectives, should be analysed in terms of individuals and their actions and relations.

Based on the arguments of Albert (2010a,b), who bases his arguments on Simons (1987), the following investigates to what extent the notion of groups might indeed be a mere shorthand for an aggregate of individuals as Popper argues, or if it refers to existing social wholes. This section argues that—in line with the overall argument of this chapter—a group is characterized by the fact its members share the intention to be part of the group. Together with the argument of irreducibility developed in section 4.4, we will see that collective subjects exist and are in a sense more than the interrelated individuals. Likewise, agency by collectives is more than just plural agency. Before coming to this conclusion, the present section develops a definition of group that is based on collective intentionality and demarcates groups from mere aggregates that we will denote as collectives.

4.3.1 Collectives

According to a simple view, groups constitute mere aggregates of individuals. Following this view, a group is nothing but an abbreviation of "Individual_1 + Individual_2 + Individual_3 + Individual_i + Individual_n." Such a description is certainly adequate for a number of individuals walking down a street, or a number of human beings sharing a property, such as possessing a specific hair color. In the first example, the individuals of the collective are related spatiotemporally, i.e. they are at the same place at the same time. In the second example, they are related by a common property. But does such an understanding represent an exhaustive description of collectives that have a name and a persistent existence over time? To be clear, it is certainly not inadequate to say that groups exist of a number of individuals. But the term fails to capture essential attributes of groups. Obviously, rebel groups or soccer clubs differ from people walking down a street or brown-haired people. Some collectives, such as looting mobs, seem to stand somewhere between both ends of the continuum. Mobs do not have the same permanency as, e.g., a rebel group. Nonetheless, a mob seems to be different from a collective incidentally walking down a street. The following discussion thus needs to shed light on those attributes that specify collectives as groups. It concludes that groups are collectives whose members share the strong collective intentional state of being part of a group. Characteristics like spatiotemporal proximity or shared traits allow for the categorization of individuals into collectives, but they do not define groups. Consequently, let us reserve the term 'collective' to denote the broader category of aggregates of people. 'Groups' then represent a subtype of collectives.

4.3.2 Spatiotemporal Proximity

A second possible criterion to distinguish groups from mere aggregates might be *spatiotemporal proximity*. This would differentiate collectives such as 'all people with brown hair' from mobs or people walking down the street. Spatiotemporal relation seems to be a reasonable criterion, since parts of a whole are often located in a confined space. Examples include the players of a soccer team or rioters in a crowd. In general, we can expect that spatiotemporal proximity correlates with mutual awareness, as well as facilitates inter-individual coordination. This implies that correlation and facilitation are promoting factors for group *formation*. However, spatiotemporal proximity is not a constitutive attribute of groups. For instance, used as a criterion, it fails to

correctly classify spatially-decentralized but highly-coordinated terrorist groups. Moreover, individuals might act as group members, on behalf of groups, and feel as representatives of groups even though they are at a place far away from other group members. In comparison to physics or even biology, the role of spatiotemporal proximity seems to be less important in the social sphere. Here, technological innovation increasingly diminishes the role of spatiotemporal proximity for interpersonal communication and coordination.

In short, spatial proximity is a facilitating factor, not a necessary condition for social relations. It allows for the differentiation of mobs from arbitrary sets, such as all people with brown hair. It fails, however, to correctly classify spatiotemporally scattered groups.

4.3.3 Collective Action

A third and visible strategy might be to denote groups as those collectives that act together. However, such a definition is precluded in the synchronic perspective. As discussed in subsection 3.4.3, it is the objective of this chapter to elaborate on the constitutive elements of groups. Activity, in contrast, is the hallmark of the diachronic perspective. The synchronic perspective must look at what constitutes the existence of groups in between and apart from specific actions by the group. This is not to say that collective action is irrelevant. It will be discussed in subsection 4.5.3.

4.3.4 Collective Intentionality

A more promising fourth route is to define groups as institutional facts. Following this idea, a collective qualifies as a group, and not a mere aggregate, if it is collectively recognized. Put differently, groups are instantiated by collective intentionality, i.e. a shared *belief* in the existence of the group as *content* and the respective collective as its *object*.

In principle, two different groups of people might be the subjects of the respective intentional states. Either the individuals who are part of the group hold the belief that they themselves are part of a group or a sufficient number of people external to the circle of members hold respective beliefs. In the first case, the ascription of group membership would be self-referential, in the second it would be external. This leads to two possible definitions.

1. **The referential definition**: A collective C_1 is a group , if a collective C_2 believes C_1 to be a group, where $C_1 \neq C_2$.

2. **The self-referential definition**: A collective C_1 is a group if C_1 believes C_1 to be a group.

In the referential definition, subject and object of the respective intentional states do not overlap. In the self-referential definition, they are the same set of people. Accordingly, we might define a collective as group if it is recognized as such, either by its to-be-members or by outsiders.

It is doubtful, that the referential definition is a sufficient criterion to determine the existence of groups. To illustrate this point, consider the case of the so called Khorasan Group. In late September 2014, the United States Central Command (2014) issued the following press release:

> Separately, the United States has also taken action to disrupt the imminent attack plotting against the United States and Western interests conducted by a network of seasoned al-Qa'ida veterans—sometimes referred to as the Khorasan Group—who have established a safe haven in Syria to develop external attacks, construct and test improvised explosive devices and recruit Westerners to conduct operations.

Although never having heard of the group before, officials and news agencies debated about the threat it posed. This might indicate the fact that a sufficient number of people believed in the existence of the group, an instance of the referential definition. After a while, however, serious doubts about its existence emerged. Let us assume for the sake of the argument that the skeptics are right and that the existence of the 'Khorasan Group' was invented by officials in order to justify military action or other political reasons. Could one really say that the Khorasan Group exists as a group (if we were able to empirically identify a sufficient number of people still holding this view), or existed (if the skeptics had convinced the public by now)? This view seems rather strange. The referential definition does not seem to be a sufficient criterion to differentiate groups and collectives. To clarify, the argument is not that the individuals who were believed to comprise the group do not exist. Even if we assume that the Central Command was able to give a list of members and that these people really existed, collective acceptance does not seem to be an adequate criterion. If none of the individuals contained on the list know of their membership, then

the group simply cannot be classified as such. Nonetheless, although possibly nonexistent, the idea (or imagined existence) of the group might still serve as an efficacious entity in that the very belief in its existence might serve as a means to legitimize certain actions. As (Thomas and Thomas 1928, p. 572) stated, "if men define situations as real, they are real in their consequences."[12]

What about the self-referential definition? If it is not for the external ascription qua weak collective intentionality that a group exists, it might be qua shared intentional states of its members. Accordingly, a collective C is a group G if (a) there exists a collective C and (b) the members of C share the intentional state that they are part of G. Following this path, groups define themselves as groups. This view seems more adequate than the referential definition.

An extreme example of a group that fits the self-referential but not the referential definition would be that, which successfully and strictly operates clandestinely. As might be true for totalitarian regimes, such a group's survival might depend upon not being recognized as a group by outsiders. The collective might nonetheless constitute a group in which each of its members thinks of themselves as part of the group. It seems reasonable to speak of such collectives as groups that underscore the adequacy of the self-referential definition, while weakening the referential definition.

It might appear advisable to some to define groups via reference to individuals, i.e. in terms of weak collective intentionality. In this case, subject and object of the intentional states would be identical. But this time, they are individual persons. Consequently, we could define groups as those collectives in which *each of the individual members* of the collective thinks that *they themselves* are a member of the respective group. Drawing on this proposition alone, however, would lead to a rather peculiar situation. To see why, lets take a closer look at the type of intentional state proposed in this definition to define groups: 'I am part of group G'. If this definition were applied, there would be cases where individuals erroneously think to be part of a group but are in fact not. If, for example, I think, in a state of strong mental confusion, to be part of the Italian Mafia, but none of the real members—as defined by the self-referential definition with the group as its object—thinks the same, then I am still not part of the Italian Mafia. This stays true even if I act and think like a Mafiosi. This is obviously an unwanted result. We can thus conclude that the individual membership in a group must be accepted by a sufficiently large part of the other members of the respective group. The individual members must share the intentional state that they themselves and the respective others are members of group G for G to exist. This, in turn, is to say that they need to share a we-intention. What underlies groups is strong collective intentionality.

The type of relation between the individual members of a group lies in the fact that they hold the same intentional state. A comparable example can be demonstrated by friends that might have lived apart for a while, but remain bound by the shared belief in their friendship. Collective intentionality and relations are equiprimordial. My status as a group member necessarily depends on the fact that others think alike. Other types of relations—such as, e.g., relations of superiority and inferiority or spatio-temporal proximity—allow to describe specific properties of groups. They are, however, not constitutive of groups.

Delving a bit deeper into the specific characteristics of such self-referential strong collective intentional states, we can identify them as a cognitive intentional state with a mind-to-world direction of fit. They are neither hopes nor feelings, but perceptions or beliefs. And they are true, if they mirror a real state of affairs. The condition of satisfaction is thus that the respective collective in fact shares the self-referential collective intentional state of being a group. The collective intentional state 'we are G' is true, if it is a collective intentional state. The existence of the self-referential strong collective intentional state is itself sufficient to be adequate. The proposition of being a group cannot be wrong. This, however, is unproblematic: Being a group is nothing more than the shared intention to be just that.

Returning to the self-referential definition, we can see that it fits well with the wider literature on *collective identity*. Collective identity can be defined as a *shared collective self-concept* (Mathiesen 2003; cf. Albert 2010b). The collective self-concept is *shared* because knowledge of the self-concept is communally recognized in the given group; it is a collective intentional state. The shared self-concept is *collective*, since it refers to a group of people and not single persons. Identity is defined as a self-concept since identity is the result of self-referential allocation of meaning (Croissant,

[12]This is not to say that a non-existent entity can have an effect. In the hypothetical example of an empty but seemingly existing group, it is the very idea that influences how people act. It is a case in which an institutional fact is unrelated to physical objects or persons. It is nonetheless an object-like institutional fact. See section 3.4.

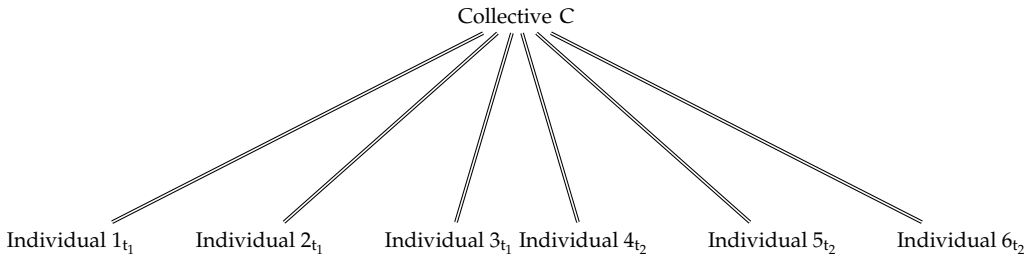

Figure 4.3: Mereological variability of collectives. Whereas the individual members of a group might change, the groups might persist.

Schwank, et al. 2009, p. 27). Thus, collective identity is a subtype of collective intentionality and a criterion demarcating groups from mere aggregates.

4.3.5 Persistence

A fourth possible criterion to differentiate types of collective is persistence. Collectives might in principle, though not necessarily, achieve a certain degree of independence from their constituents. In these cases, a collective might continue to exist as the very same collective although none of its parts likewise continuously exists. The soccer club Borussia Dortmund, for instance, has existed permanently since its foundation in 1909, although the players—as well as other members—have continuously changed and some are now dead. We can say that the club won the championship in 1956, 1957, 1963, 1995, 1996, 2002, 2011, and 2012 although no single player participated in all seasons. Nonetheless, it is reasonable to say that Borussia Dortmund as a club has won the championship eight times.

We can generalize this idea to describe the relation between parts and wholes in collectives. All collectives consist of parts, and the parts of a social collective are individual people. The persistent existence of a collective, however, is not necessarily dependent on *specific* constituents. In other words, some collectives are mereologically variable (Simons 1987) since their existence as collectives is independent of a change of constituents (cf. Albert 2010a; List and Pettit 2011) (see figure 4.3). The relation between parts and wholes can likewise be framed in terms of supervenience. Mereologically variable collectives supervene on their constituents: A change in collective properties entails a change in properties at the individual level. The same, however, is not true for the opposite. A change in individual constituents does not necessarily entail a change on the collective level. Likewise, the individual parts of a collective might themselves change to a certain degree without ceasing to be part of the collective. Enduring rivalries between groups are an example. Whereas inter-individual conflict might only persist as long as both individuals are alive, intergroup conflicts between the same groups might exceed the lifespan of the involved people. Likewise, the so-called Islamic State (IS) exists as a group of people and as an idea. Nonetheless, specific individuals might take part in it or leave it. And although none of the individuals making up IS today may live in 100 years, the group could. In summary, the mereological variability allows to explain the persistence of certain wholes.

In summary, groups are a subtype of collectives. As all collectives, groups consist of a set of individuals. As laid out above, there are no empty or one-person collectives. What qualifies collectives as groups is that they are based on self-referential collective intentionality. This gives them a certain permanency and makes them mereologically variable.

4.4 Holism, Collectivism, and Emergence

Discussed thus far, intentional states of mind and social action are the pivotal elements at the level of individuals. Mereologically variable collectives sharing a collective identity are groups. And social structure denotes a set of social positions. Furthermore, the last section described how the meso-level of groups and the macro-level of social structure supervene on individual intentional states. What has not been addressed so far is the question of reducibility. If groups and structures supervene on intentions, to what extent can they be reduced to individual intentional states? If we

are to describe and theorize groups and structure, should we start from the constituent individuals, closely describe their properties, and then 'aggregate our way up' to the whole to understand it? Or should we understand constituents as inherently relational and context-dependent? This section thus addresses the degree to which the different levels depicted in figure 4.1 denote genuine levels.

From a critical realist perspective, a discussion of reductionism is of utmost importance for two reasons. First, a thorough investigation of the relation between the individual and the structural level—and this includes reducibility—allows the assessment of *whether entities above the level of individuals actually exist*. If it is possible to reduce social structure or groups to the individual level—just like we can reduce sand piles to an aggregate of grains of sand—talk of the supra-individual level is not really meaningful. Referring to groups would just be a convenient shorthand of statements about individuals or an explanatory useful category.

This leads to a second point: Only that, which exists, can have causal influence. Consequently, for structures to have effects on individuals, the former must have an existence independently of the latter. More specifically, the independent existence of social structure is a prerequisite of downward causation in the diachronic perspective. This argument was turned on its head by Bhaskar (1979) and Archer (1995). Their argument in favor of the independent nature of structure from agency is temporal: Structure at t_{-1} is a prerequisite of what we are now at t; hence, structure is independent of and irreducible to agency. Extending our perspective to the synchronic perspective shows, however, that the argument tries to establish what it in fact requires. As a matter of course, we can establish the fact that something exists by showing that it has an effect. The effect of a certain structure at t_{-1}, however, first and foremost requires this very structure to be independent from individual intentional states at t_{-1}. Otherwise, the talking of structure would be a mere shorthand of talking about causal relations on the micro-level. Structure would be epiphenomenal at times t_{-1} and t.

The following three subsections address the question of holism and atomism. Subsection 4.4.1 defines two broad positions in this debate: atomism and holism. Subsection 4.4.2 presents two arguments for holism. Both state that intentionality is not an intrinsic property of individuals but necessarily requires the existence of others. Although both turn out inadequate as they do not refer to synchronic relations, they allow to understand the formative influence of structures on individuals. In search of a synchronic argument, we draw on the concepts of emergence, supervenience, multiple realizability, and wild disjunction in subsection 4.4.3. The argument is that, although things at a higher level (groups or social structure) supervene on kinds of things at the lower level (intentional states), higher-level entities might not be reducible to lower-level entities, as a kind of entity at the higher level relates to a possibly infinite number of different micro-states.

4.4.1 Atomism and Holism

The following debate takes the concepts of intentionality, groups, and structure as points of departure. Investigating into how these concepts, which are located on different levels, are related, the following tries to answer two specific questions:

1. To what extent depend intentional states of individuals on their social positions?
2. To what extent are intentional states of individuals dependent on group membership?

The two questions can be framed as the discussion about atomism and holism. In the present context, atomism is the position that intentionality is an intrinsic property. According to this view, intentionality is held by completely isolated individuals. Hence, collective intentional states—and consequently groups and social structure—are mere aggregates of individual intentional states and are the beliefs of individual persons. To be clear, atomists neither deny that relations between individuals exist nor that relations are unimportant. They do argue, however, that intentional states are intrinsic properties of individuals and do not constitutively rely on these relations (cf. Albert 2010b; Esfeld 2002; Pettit 1996; Schützeichel 2008), An example of such an atomist position is Searle's account of collective intentionality as existent in a brain in a vat (see subsection 4.1.2). We can identify Searle's concept of collective intentionality as *individual we-intentionality* as depicted in figure 4.2 on page 45. It is held by single subjects. Atomism thus entails reductionism.

Holism rejects this view and regards intentionality as a property that necessarily relies on being part of a social system. In other words, holists argue that having cognitive and practical

intentional states necessarily depends on social relations. Holism can take two different forms: Holism (or 'holism from above') states that individual intentions necessarily depend on the fact that these individuals are a part of a whole. Relationalism (or 'holism from below') states that individual intentions rely on relations between individuals (cf. Pettit 1996, pp. 111–112; Albert 2010b; Esfeld 2002; Schützeichel 2008). Holism thus entails irreducibility.

Social holism does not deny an individual's influence on its own decision-making process. Although it argues that at least some intentional states rest on the fact that subjects are part of a whole, individuals are not over-socialized to an extent that would overcome their individual intentional agency. Stated differently, holism does not entail collectivism and does not preclude individualism. Just as all other arguments in this chapter, the argument for social holism refers to a synchronic, not a diachronic perspective. The argument is that intentionality is an extrinsic property in the sense that it requires the existence of something else *to exist*, not *to come into existence*. Otherwise, holism would be trivially true, since all people depend on others in a biological sense (Pettit 2014). It is specifically this synchronic perspective that supplements the diachronic arguments by Bhaskar (1979) and Archer (1995, pp. 147–149). As stated, both argue that, since individuals find themselves vis-à-vis structures they have not personally created, agency cannot be analyzed apart from structure. This argument, however, is not at stake here. In the synchronic perspective, the past does not matter.

4.4.2 Two Arguments in Favor of Holism

Two influential arguments in favor of social holism exist in the literature. The first argument by Pettit (1996) states that the 'second-order capacity' of intentional agents to monitor the formation of beliefs and desires necessarily requires being embedded in relations. The second argument by Tomasello (2014) argues that the cognitive capabilities that are specifically human are socially constituted. As we will shortly see, both arguments are not synchronic arguments. They focus on socialization and thus causal processes. Consequently, we would not regard them as arguments in favor of holism but of collectivism. It is nonetheless worthwhile to quickly elaborate on both arguments to further substantiate the process of downward causation.

The first argument can be summarized as follows (cf. Pettit 1996, ch. 4; Esfeld 2001, pp. 69–85). A fundamental property of thought consists of deliberately forming intentions. This entails that subjects have something one might denote as a 'second-order capacity' or an 'evaluative system' to monitor to what extent their intentional states, i.e. beliefs and desires, are appropriate. In the process of the formation of beliefs and desires, subjects draw on rules, i.e. normative propositions defining which beliefs are appropriate and which are not. Thus, thinking involves deliberate formation of intentional states (beliefs and desires) based on rules.

The main argument is that rule formation requires social interaction. To see why, we need to take a closer look at the emergence of rules. Subjects form rules by extrapolating from a finite set of illustrating examples. This, however, entails a problem: Being confronted with a finite number of examples, how can a subject discern the correct rule? Theoretically, an infinite number of possible rules can be extracted from a finite number of examples (Esfeld 2001, p. 73). And, once a subject has formed a rule, how can he, she, or they decide whether the rule was applied correctly to a new case? As thought involves the capacity to evaluate the correctness of one's beliefs, the ability to detect false applications of a given rule is pivotal. A rule built upon a finite number of examples, however, does not provide guidance towards this end.

Based on this problem, the core argument for social holism (what we would denote as collectivism) states that a subject's ability to follow rules depends on responses from others. The second-order capability to monitor the formation of beliefs and wants necessarily relies on interaction. Only subjects that are or were embedded in social relations have this capability, since interaction allows determining the meaning of rules. The reaction of others signals a subject correct or incorrect use of rules. This is why the atomist reading of rule-following by isolated individuals is wrong: Subjects are simply not able to discern what the correct rule is. Whatever an isolated subject takes as a rule *is* the rule. In the atomist interpretation, 'thinking to follow a rule' equals 'following a rule'. The ability of subjects to change beliefs about rules in interaction, however, allows them to fix their understanding of a rule and to discern in what way rules are to be applied.

In summary, the argument on rule-following posits that only members of a community are able to develop fixed beliefs based on a finite set of examples. Thus, the specific ability to form and monitor cognitive and practical intentional states results from interaction.

A second, a more empirically-oriented argument—debated as an argument in favor of social holism but in our view constituting an argument in favor of collectivism—is brought forward by Tomasello (2014). Based on anthropological reasoning, Tomasello argues that the cognitive capabilities that are specifically human are socially constituted. In a first evolutionary step, human beings have developed the skill of 'second-personal thinking'. This trait allows the engagement in joint activities, where participants each contribute their part to reach a common goal. It allows to take the perspective of others in a given situation, to reason out the others' intentional states, and to adapt one's own behavior in order to make engage cooperative endeavors. Coordination and cooperation with others became necessary conditions to survive (ibid., pp. 137–138).

In a second step, humans were able to take a group perspective. They were able both to think of themselves as members of a collective, and, consequently, to understand and enforce social norms of their cultural group, as well as to understand and make use of collectively accepted institutions. Of crucial importance then is the ability of humans to draw on existing institutional reality present when they are born. We do not start from nothing but draw on a rich inventory of symbols and language that enables complex thinking. Thus, "the most complex and sophisticated human cognitive processes are indeed culturally and historically constructed" (ibid., p. 142). If it were not for our institutional reality, which in turn rests on the ability to share intentional states, then we would not be able to think as we do. As Tomasello (ibid., p. 143) points out:

> Human perspectival and objective representations, recursive and reflective inferences, and normative self-monitoring—the constituents of uniquely human thinking—do not just go away when humans are not collaborating or communicating. On the contrary, they structure nearly everything that humans do, with the possible exception of sensory-motor activities. Thus, humans use recursive inferences in the grammatical structures of their languages, in mind-reading in non-communicative contexts, in mathematics, and in music, to name just the most obvious examples. Humans use perspectival and objective representations for thinking about everything, even in their solitary reveries, and they are engaged in normative self-monitoring whenever they are concerned about their reputation—which is pretty much all of the time. We might also recall here skills of relational thinking, which are products of dual-level collaboration but used more broadly, and skills of imagination and pretense, which are products of imagining in pantomime but are now used in all kinds of artistic creation. Collaboration and communication may play the crucial instigating roles in our story, but their effects on cognitive representation, inference, and self-monitoring extend much more broadly to basically all of humans' conceptually mediated activities.

The argument by Tomasello (ibid.) likewise posits that the specific human cognitive capacities depend on the social environment. The human skill of collective intentionality is not a natural trait, but rather results from the fact that we are born in an environment structured by institutional reality. Put differently, collective intentionality results from being embedded in a social structure. The necessary prerequisites for collective intentionality not only entail cooperation with others—as was also established by the argument on rule-following—but also incorporation in a social group with a specific institutional history (Tomasello 2014, pp. 145–146; cf. Albert 2010b). This entails that the development of specific human cognitive skills depends on the existence of social wholes that are in a sense more than just interacting individuals. Only if children are able to grow up in an environment that is characterized by a sufficiently stable set of institutions—e.g. norms, language, money and power relations—are they able to develop the skills that are characteristic of humans.

The two arguments developed by Kripke (1982), Pettit (1996), and Tomasello (2014) stress the social dimension of individual intentionality. Being embedded in relation is a prerequisite for our specific human intentional abilities. This does not entail that individuals lose their autonomy in making decisions. To the contrary: a subject's autonomy grounds on the very ability to think, i.e. to deliberately shape its own intentional states. This capability, in turn, is formed in social relations. Thus, it seems that autonomy requires a social environment. To capture the social influence of social structures on individual intentionality in social science theory, we will draw on the theory of Pierre Bourdieu and socio-psychological arguments of self-categorization theory in chapter 8.

As has been alluded to, both of the above arguments do not refer to synchronic relations. Both, Pettit and Tomasello argue by discussing how the specific human intentional abilities *come about*. Both stress processes of socialization. They do not argue that individual intentional states *constitutively depend* on relations to others. Neither of the two arguments entails that individuals in temporary isolation from others lose the capability to think as long as they have been socialized in a community. Our lonely police officer Bob (see page 46), is still able to think although he is entirely alone on earth. Neither of both arguments thus gives an adequate characterization of the synchronic perspective. This entails that they are not arguments in favor of holism but rather in favor of a moderate collectivist position as developed in chapter 7.

Rather, both arguments are specifications of the diachronic argument and lend support to the diachronic arguments presented by Bhaskar (1979) and Archer (1995), as well as those by Pierre Bourdieu. Consequently, Bourdieu's concept of habitus will be employed in 8 to explain the formative influence of structure on individual intentional states.

We are still in a need for a 'synchronic complement' with regard to the relation between the micro-, meso-, and macro-level. The following subsection discusses the concept of emergence in a search for a suitable complement. The argument turns out to be only partially satisfying what makes us finally return to our externalist concept collective intentionality.

4.4.3 Emergence

The synchronic perspective on the relation between the micro-level of individuals and the macro-level of relatively-enduring patterns of relations can be adequately described by means of the concept of 'emergence'. Colloquially, emergence denotes a process in which something comes about. This is not what is meant here by emergence, since such an understanding would include a causal process and temporal sequences. Instead, we focus on synchronic emergence (Stephan 2007, pp. 66–72).[13] Emergence denotes a state of affairs in which a composite has certain properties that are not possessed by the parts it comprises (cf. Elder-Vass 2010; Sawyer 2005; Stephan 2002). A widely used example is consciousness, a property not held by neurons. The two most important elements of the concept of emergence include supervenience and irreducibility (Kim 2006).

Supervenience describes a type of relation between two levels (cf. Davidson 1970; Kim 1999; Sawyer 2005, p. 66). If a higher level supervenes on a lower level, two conditions hold: First, any change at the higher level necessarily entails change at the lower level. Second, two identical states at the lower level cannot instantiate two different states at the higher level. Thus, the term supervenience describes a covariance of properties of a system and the structure of its parts. Supervenience is a synchronic, constitutive relation: The properties of the higher level vary at the very same moment in time as the structure of the parts. In the social sciences, the position can be denoted as *supervenience individualism* (List and Spieckermann 2013, p. 632): "individual-level facts fully determine the social facts; i.e., any possible worlds that are identical with respect to all individual-level facts will necessarily be identical with respect to all social facts". Adapted to the present argument: institutional facts and groups supervene on individual intentional states in the sense that any change of institutional facts or groups necessarily involves a change in intentional states at the level of individuals. Moreover, intentional states of mind fully determine institutional facts and groups. There is no extra-substance to institutional facts and groups than shared individual intentions. Applied to political conflict, supervenience states that a political conflict cannot change in its properties without any change at the level of the subjects that bring about the respective conflict. For instance, a change in the issue of a conflict necessarily requires a change in the intentions of the conflict actors. Although conflicts might have properties that are not held by the subjects—such as the fact that conflicts are characterized by incompatibilities—there is no substance apart from the intentions of the subjects that characterizes the emergent level of political conflict. Relations of supervenience thus entail that higher-level entities are not composed of anything else than (possibly related) entities at the lower level.

At first sight, supervenience entails explanatory reductionism: If shared individual intentional states are the micro-foundation of institutional facts, it seems to follow that explanations of the latter can be reduced to the former. However, supervenience is often employed in explanatory frameworks that simultaneously argue in favor of irreducibility (Schützeichel 2010, p. 342; Kim 2006). In fact, supervenience neither entails reductionism, nor is it an argument in favor of irreducibility. Irreducibility, as the second core component of emergence, requires more than a relation of supervenience.

Supervenient relations are irreducible in the case of multiple realizability and wild disjunction (Sawyer 2002). Multiple realizability denotes a state of affairs in which kinds of things at a higher level (macro-level) are related to a possibly larger number of kinds of things at the lower level

[13] Broad (1925, p. 61) put forward the now classic definition of emergence:"Put in abstract terms the emergent theory asserts that there are certain wholes, composed (say) of constituents A, B, and C in a relation R to each other; that all wholes composed of constituents of the same kind as A, B, and C in relations of the same kind as R have certain characteristic properties; that A, B, and C are capable of occurring in other kinds of complex where the relation is not of the same kind as R; and that the characteristic properties of the whole R(A, B, C) cannot, even in theory, be *deduced* from the most complete knowledge of the properties of A, B, and C in isolation or in other wholes which are not of the form R(A, B, C)"

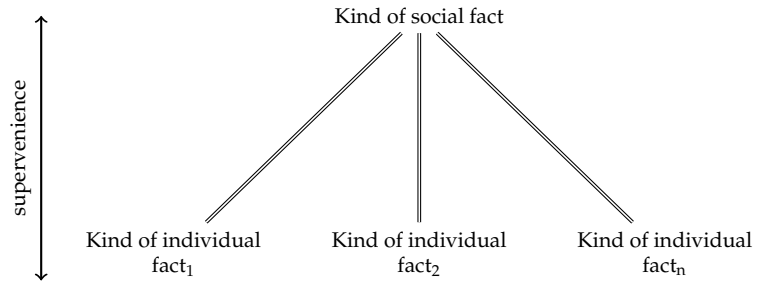

Figure 4.4: Multiple realizability. Although the macro state supervenes on the micro-states, the large number of micro-state that instantiate a certain macro-state precludes meaningful reduction.

(micro level) (see figure 4.4).[14] Wild disjunction denotes a state of affairs in which the different micro-states that are related to a certain macro-state are not related to one another apart from the fact that they all might instantiate the natural kind at the higher level. In this case, meaningful reduction fails. There are simply too many—a possibly infinite number—of micro-states that do not share enough characteristics to be of a natural kind. Fodor (1974) (cf. Sawyer 2005) introduced this idea to argue against the reduction of theories and type-type identity. For instance, monetary exchange might involve physical correspondents that have nothing in common, e.g. the exchange of dollar bills, mussels, or electronic traces. In these cases, we might meaningfully describe the characteristics of monetary exchange at a higher level without being able to reduce this to the possibly endless different states at the micro-level. In analogy, a political conflict can be instantiated on the micro-level in myriad ways. The large variety of these conflictual states on the inter-individual level makes it impossible to give a sufficiently clear account of political conflict at the micro-level. In cases of multiple realizability and wild disjunction, higher level kinds have no single corresponding kind at the lower level. We can thus conclude that the fact that some macro-states are describable under an large number of micro-states precludes meaningful reduction.[15]

There remains, however, a problem with regard to the notion of irreducibility in this context. Does the fact that multiple realizability and wild disjunction preclude meaningful reduction really preclude reduction in an ontological sense? The argument is primarily fashioned to work with regard to types, i.e. kinds of things such as conflict or money, and seems to be valid. It does not work, however, with regard to tokens, i.e. concrete instances of types such as a dollar bill.[16]

The emergentist argument that draws on multiple realizability and wild disjunction seems to fail with regard to specific instances of institutional facts. There is, however, an argument to be derived from the above said that fulfills all conditions that are of importance in the present context: it should be a synchronic argument, it should apply to the relation between intentions and institutional facts, and it should apply to specific instances (tokens).

If one defends an externalist approach with regard to collective intentionality, as was done in section 4.1, and if one defines social positions as founded on collective intentional states, as done in 4.2, then we can see that the powers attached to social positions are relational properties that are dependent on being embedded in relations. These properties, e.g. of being endowed with the power of law enforcement, is irreducible to the individual members of collectives. The powers attached to a certain social position exist qua collective acceptance, which, in turn is defined via relations. Collective intentionality in its most basic sense is 'collective' neither because of the content of the individual intentional state nor because of the fact that it is held by a collective subject. Instead, it is due to the fact that an intentional state—possibly even in the form of 'I belief' or 'I intend'—is shared among individuals.

We can now come to a conclusion with regard to the question how intentional states, groups, and institutional facts are related: In the diachronic perspective, the argument of rule-formation

[14] Mereological variability is a specific instance of multiple realizability that relates to part-whole relations.

[15] Fodor (1974, p. 103) summarizes his argument as follows: "The reason it is unlikely that every kind corresponds to a physical kind is just that (a) interesting generalizations (e.g., counterfactual supporting generalizations) can often be made about events whose physical descriptions have nothing in common; (b) it is often the case that whether the physical descriptions of the events subsumed by such generalizations have anything in common is, in an obvious sense, entirely irrelevant to the truth of the generalizations, or to their interestingness, or to their degree of confirmation, or, indeed to any of their epistemologically important properties; and (c) the special sciences are very much in the business of supporting generalizations of this kind."

[16] For the type-token disctinction see Wetzel (2014).

and the anthropological argument lend further support to the influence of social relations on individual intentions. Extending our view to the diachronic perspective Pettit (1996) and Tomasello (2014) showed that individual intentional states characteristic for human beings depend on the fact that we are embedded in collectives and interact with others. What we believe and what we want is greatly influenced by our social environment. This needs to be reflected by theoretical arguments and will be taken up in the formulation of the theory in chapter 8. In the synchronic perspective, we can conclude that emergence, i.e. the combination of supervenience and wild-disjunction, precludes meaningful reduction of social facts with regard to types. With regard to tokens, we made an even stronger argument that an externalist account of collective intentionality precludes reduction to isolated intentional states.

The following subsection once again tilts the view toward social actions. As Mandelbaum said, it is only via an analysis of *thoughts and actions* that we can understand the social world. Both dimensions are equally important. Were one to reduce institutional facts to states of mind, one would not be able to observe them.[17] Thus, an analysis of the relation between intentions and action is epistemologically important. Moreover, some activity seems necessary to bring about *shared* intentional states of mind. Would one reduce the ontological basis of institutional facts or social structures to activity, however, they would cease to exist once they were not embodied in concrete practices.

4.5 Social Action

The notion that social facts are intentionality-relative does not entail that agency is not important. To the contrary, it is essential in the diachronic perspective of structure and agency as it is agency that creates, recreates, and alters social structures. This section develops an account of agency and links it to the notion of intentionality. It proceeds as follows: First, it develops a definition of agency focusing especially on the link between intentionality and action (cf. ch. 3). After having argued for an understanding of social structure as intentionality-relative, the relation between intentions and actions needs to be clarified. This very relation then leads back to the discussion of the relation between structure and agency. As a result, the section presents desiderata for a realist account of a theory of action. Second, the section brings forward a typology of types of action, the latter differentiating singular and collective social action. Subsequently, focusing on collective social action, it presents an account of collective agency. The section concludes with a discussion of collective agents.

4.5.1 Agency

Agency can generally be defined by three constitutive definitional attributes: an agent, his cognitive and practical intentional states, and some kind of activity linked to the practical intentions of the agent (cf. Bhaskar 1979; List and Pettit 2011; Schmid 2008). We can derive a first understanding of action based on his *representation* of the outer world, *a subject does something*, typically involving bodily movements, because he, she, or they *believes or believe* that this activity allows reaching a specific goal (see figure 4.5).

A look at the three defining attributes of action—agent, intentional state, and bodily movement—reveals a close link between intentions and actions. Behavior is only action if it was intended (cf. Bhaskar 1979, p. 105). As intentions play a vital role in the definition of action—and, as we will see below, in the explanation of action via reasons—a definition of agency can draw on the above definition of intentional states. To do something and to intend to do something are fairly similar things.

First, intentions and actions necessarily require an *agent*. Pertaining to intentional states, the agent is denoted as 'subject'. The logic, however, is similar. The same individual might be the subject of an intentional state and the agent of an action.

Second, action necessarily involves *cognitive intentional states* in the form of beliefs and practical intentional states in the form of reasons (or motivations or goals). It is fairly obvious that agents need to have some beliefs about the state of affairs in the world (List and Pettit 2011, pp. 19–21). As established above, these representations do not by necessity fit the state of affairs

[17] Although one might argue that some methodological tools, for instance electroencephalography or interviews, are able to reveal such states of mind.

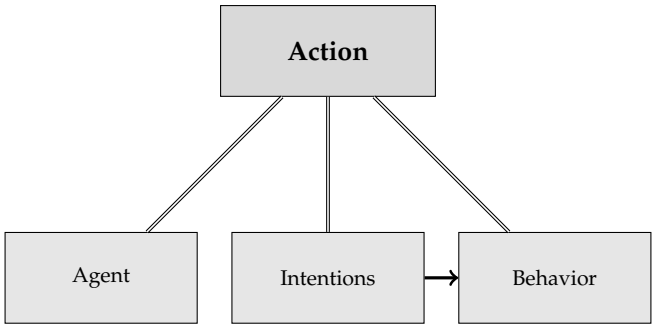

Figure 4.5: Social action. An action is defined by three constitutive attributes: an agent, his intentions, and his behavior.

to which they refer and thus may be false. Among the beliefs involved in action, the agent needs to consider the behavior involved in an action adequate to contribute to his goals. Aside from beliefs, agents hold *practical intentional states*. Like beliefs, these are a subtype of the broader class of intentional states in the form of propositions qualified by a specific modus. Unlike beliefs, reasons represent a state of affairs to be reached. As described in section 4.1, the propositions entail conditions of satisfaction that can be either satisfied or frustrated. As with all intentional states, the intentional states that accompany actions refer to some object in the world, typically a state of affairs to be produced.[18]

For our third point, attribute, activity, social action differs from intentional states. This is because action necessary involves *behavior* of some kind, while intentions are defined as states of mind. Behavior is often equated with bodily movement (cf. Searle 2010, p. 33; Schmid 2008), although one might think of omission as a kind of action (Weber 1921, ğ1).

For behavior to be part of an action, it must be linked to intentional states. This link is causal in nature and is further discussed in the next section. For now, we can summarize the constitutive understanding of action: Action consists in agents engaging in a specific behavior based on practical and cognitive intentional states of mind.

4.5.2 Reasons as Causes

The definition of action draws heavily on intentional states. This leads to a central problem in the theory of action that pertains to the relation between intentional states and actions: Intentional states conceptually serve a double function with regard to action. On the one hand, intentional states are *constitutive* elements of action (as indicated by the vertical line in figure 4.5). Behavior only counts as part of an action if it is accompanied by practical and cognitive intentional states. Behavior without intentions—such as reflexes or 'things that happen to us', like being struck by lightning—is not considered action. On the other hand, practical and cognitive intentional states—or 'reasons'—serve as a *cause* for behavior (as indicated by the horizontal arrow in figure 4.5) (Davidson 1963; Bhaskar 1979, pp. 106–129). In short, agents do things because they have reasons to act. The intentional states in actions cut across the synchronic and diachronic dimension. They are *constitutive part* and *cause* of action. This, in turn, is the well-known problem of endogeneity.

Before proposing a solution to the problem, we have to take a closer look at reasons. Intentions have been extensively discussed above. Reasons encompass unconscious as well as conscious states of mind (Bhaskar 1978, pp. 103, 120; Elder-Vass 2010, pp. 93–94). Reasons that are causally efficacious, i.e. those intentional states that *in fact* brought about a certain behavior, can be denoted as 'real reasons' (Bhaskar 1978, p. 117). These two statements taken together entail that individuals are not necessarily aware of the intentional states that have brought about their behavior. Moreover, individuals might hold false beliefs about their reasons. Thus, 'real reasons' are not necessarily what people give as reasons, e.g. in an interview looking back at something they have done. Instead, real reasons are those intentional states that have in fact caused a specific behavior. Thus, the definition of 'real reasons' via their causal efficacy allows the differentiation

[18] Besides cognitive and practical intentional states, actions often involve affective intentional states. Although empirically all three types of intentional states often occur together, practical and cognitive intentional states are necessary and cumulatively sufficient conditions for actions.

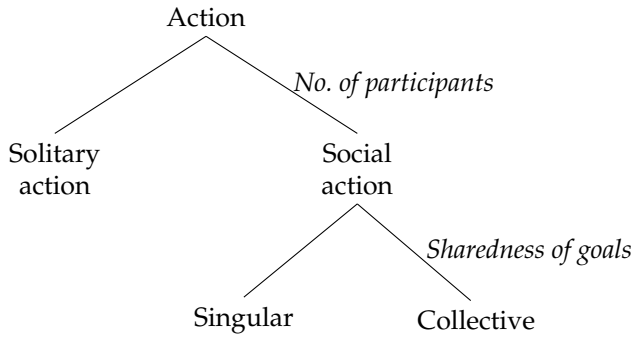

Figure 4.6: Taxonomy of categories of action (adapted with minor alterations from Schmid (2008)).

between real states of affairs and what people give as reasons. This allows to critically assess individual perceptions and scientific theories about reasons (Bhaskar 1978, pp. 116–117). Moreover, only if reasons are causes of action does it make sense to say that individuals calculate costs and benefits of a specific behavior and decide on how to act. If reasons would not be causally efficacious, pondering different options would be meaningless or epiphenomenal.

Reasons are not necessarily formed right before someone engages in specific behavior, but might enduringly exist and be relatively stable. Such long-standing reasons, i.e. reasons that are not made up anew every time someone behaves in a certain way, can be denoted as *dispositions* (Bhaskar 1979, p. 119). Dispositions are a subtype of reasons characterized by a certain permanency. They are thus intentional states and might exist even when not exercised. For instance, a certain individual might hold the disposition to sacrifice his life by committing a suicide attack without ever actually doing so. Such an understanding of reasons as dispositions clearly establishes their independent existence from actions. Sequences of coherent actions—actions that are linked to one another by serving an overarching goal—are expressions of specific dispositions. For instance, the actions of individuals in economic markets, such as individual transactions, might follow their disposition to maximize wealth.

Most importantly, the view of reasons as dispositions enables a solution for the inherent problem that intentions serve a double function with regard to action as causes and constitutive attributes. While reasons—though not necessarily of the dispositional kind—are always a part of actions, the opposite is not true: Dispositions exist in the absence of certain behavior (often expressed in bodily movement) and endure to exist between specific actions. This fits the shift away from activity-dependence and toward intentionality-dependence of social structure. It is intentional states and among them dispositions, not activity, that is ubiquitous and serves as the foundation of social structure. This lends further support to the importance of the synchronic perspective, even in the context of social action.

Linking this discussion back to causal explanation in critical realism illustrates the pivotal importance of dispositions in social science explanation. Reasons and dispositions—the latter understood as tendencies (ibid., p. 121)—serve as the main explanantia linking characteristics of subjects to actions. Thus, an adequate theory of action refers to dispositions as essential characteristics of subjects.[19]

Taking up the arguments on the constitutive attributes of collective intentionality, namely the fact that collective intentionality is a state of shared we-intentions, the following section develops a concept of collective agency.

4.5.3 Collective Agency

Collective agency is a subtype of social agency (see figure 4.6). Instances of collective agency, i.e. collective acts, are a troop of soldiers storming a hill, a soccer team playing the offside trap, or two people walking together.

As a first guess, collective social agency might be defined via the number of agents involved. Following this intuition, an action is a collective action if more than one person is involved. However, as Weber (cf. 2008, ğ1) already pointed out, all instances of *social* action involve more than a

[19]Trivially, reasons and dispositions are not the only explanatia to explain action. As with all types, causal relations in open systems, other factors might interfere with the working of dispositions.

single individual. Moreover, collective agency as understood here should refer to situations where people act together in a coordinated fashion. For instance, defenders might coincidently advance on the field without any coordination or joint intention to do so and thereby cause an attacker to be ruled offside. Such a situation is evidently different from an employed offside trap, where defenders act tactically as a team or at least as the defense. As the example illustrates, the number of individuals involved in an action is not a sufficient criterion to demarcate singular from collective action.

A second possible criterion would be the activity involved. However, the same type of activity might be performed jointly or singularly, this is not an adequate criterion either. I can go for a walk alone, play the offside trap as last defender, or even recapture a hill on my own. Consequently, in light of the definition of action proposed above, and following the idea that classifications should follow constitutive definitional attributes, the difference lies in the intentional states of the involved individuals.

To differentiate singular and collective agency, I draw on the definition of strong collective intentionality developed above (Meijers 2003; Schmid 2003, 2008). Following the externalist and relationist account outlined in subsection 4.1.3, strong collective intentionality is defined as *shared we-intentions*. Thus, the defining feature of playing an offside trap, going for a walk together, or storming a hill, is that the involved subjects share the we-intention to act in a coordinated fashion and that each of the involved believes that the respective others do their part in achieving the goal (cooperation). What differentiates singular from collective agency is that the latter involves collective intentionality of the strong kind. Put differently, strong collective intentionality in the form of a shared practical intentional states, the belief in cooperation, and behavior that is related to these intentional states are the constitutive feature of collective agency. This leads to the following definition of collective social action: Collective action is action towards a goal that is shared in the form of a strong collective intentional state.[20]

If collective social action is action by collectives, who acts? Do individuals disappear behind group agents? Can we attribute the acts by collectives to individuals, to the group, or to both? Following Schmid (2008), collective action entails 'intentional autonomy' but not necessarily 'motivational autarky'. The former states that in terms of individual and collective social action, it remains the individual who acts. Put differently, a specific *behavior* can always be attributed to single persons. If a person behaves in a certain way, e.g. to 'do his part' in a collective action, he is responsible for this behavior. This view needs to be separated from the position of motivational autarky. Motivational autarky is the position that the behavior of an individual is always exclusively based on intentions of that very individual. Thus, while individuals are agents and therefore responsible for their behavior, the behavior must not necessarily be exclusively founded on their own intentions. Although the argument is stated at length by Schmid, it is not perfectly clear what exactly differentiates intentional autonomy from motivational autarky.[21] Because this distinction sheds light on the defining features of collective agency, it is worthwhile to clarify the meaning.

First of all, the difference does not lie between behavior and intentions. Every kind of behavior that is part of an action involves intentional states: Even if group reasons lead to individual action—as it is the case with motivational autarky—every instance of individual behavior is accompanied by individual intentional states. Consequently, the difference does not lie between intentions and behavior, but between different types of intentions.

Following this line of thought, a distinction—introduced by Searle (1983)—between 'prior intentions' and 'intentions-in-action' seems compatible to Schmid's argument and allows for further clarification. Prior intentions denote those intentions that precede and cause an action. Intention-in-action describes the psychological event, which accompanies bodily movements. Applying Searle's classification of types of intentions within action to Schmid's argument paints the following picture: If an individual behaves in a certain way as part of an action, *intentional autonomy* states that intentions-in-action must be held by the very same individual. Intentional autonomy is what qualifies a certain behavior as an action. *Motivational autarky*, in addition, requires that prior intentions must be held by the very individual. It is not, however a necessary definitional attribute of action. Thus, one can act on the volitions of others.

[20] The definition is not tautolotical as the term 'action' can be substituted by the above definition.

[21] "Intentional autonomy refers to a very basic and elementary way in which individuals are responsible for their behavior as agents, in which their behavior can be ascribed to them as actions, and in which they can to introduce a metaphor which I will use repeatedly below claim ownership of their action" (Schmid 2008).

An example of such cases is provided by the 'agentic states' as observed by Milgram (1974, p. 133)(cf. Schmid 2008), i.e. "the condition a person is in when he sees himself as an agent for carrying out another person's wishes." In the famous experiment, the participants were intentionally autonomous but motivationally heterarchical. The participants themselves operated the switch that ostensibly caused an electric shock to be administered to another person. Hence, they were intentionally autonomous. They did not, however, form the intention to do so independently. On the contrary, they were mostly opposed to conducting electric shocks. Hence, they were *not* motivationally autonomous.

In summary, we propose the following view, which draws upon a modified account of Schmid (ibid.): While it is always individuals that behave in a certain way, the reasons causing a certain behavior need not necessarily be those of the very same individual. This argument seems also to be compatible with Bhaskar (1978, p. 118), who argues that reasons need not necessarily be provided by the person that acts. This distinction possibly validates the argument that individuals might be responsible for their behavior despite not being the initial force behind their intention to act. Such an understanding allows for the view that an individual's behavior, though still his own, might follow the wishes of others. Accordingly, individuals do not always act solely on their own volitions, but might follow the intentions of others such as influential leaders. While individual behavior that follows reasons of others seems to be rare between strangers, it plausibly occurs far more frequently in groups. The specificities of collective social action by collective agents constitutes the topic of the next section.

4.6 Collective Subjects

In our definition of collective action, we have only indirectly referred to the agents. They are part of the definition since action always necessarily involves an agent (see figure 4.5). This leads us to the question of who acts in cases of collective action. We have likewise seen that this question might refer to two things: prior intentions or intention-in-action. The latter is always held by individuals since it accompanied a certain behavior, i.e. bodily movement, and it is always individuals that behave in a certain way. The former, however, are not necessarily held by the individual that behaves in a certain way. The argument of this section is that these intentional states can be genuinely collective. In this case, we can speak of the existence of *collective subjects*. These collective subjects are in a sense more than the interrelated individuals and agency by collective subjects is more than collective agency. Recently, Albert (2010b), List and Pettit (2011), Pettit (2003), and Pettit and Schweikard (2006) have argued in favor of the existence of collective subjects.

4.6.1 Collective Subjects as Agents in Their Own Right

List and Pettit (2011) argue that agents can be considered as agents in their own right, i.e in a non-reducible fashion, if they fulfill three conditions of agency: "representational states, motivational states, and a capacity to process them and to act on their basis" (ibid., p. 20). In referring to the account of action as presented in figure 4.5, the authors define agents as those entities that have cognitive and practical intentional states and are able to act rationally on these intentional states (ibid., pp. 24–25). *Rational* are agents that align their beliefs to empirical evidence, act suitably based on their motivations, and achieve a consistent set of intentional states. The main argument in favor of the existence of group agents brings together this conceptualization of rational agents and the so-called *discursive dilemma*.

The discursive dilemma was originally formulated in jurisprudence (Kornhauser and Sager 1986, 1993) and made fruitful for the discussion of group agency by List and Pettit (2002, 2011) and Pettit (2003). The discursive dilemma emerges in situations where individual votes on connected issues are aggregated to a collective decision. It takes the general form as depicted in table 4.1. Each of the three individual positions is consistent, as no individual holds contradictory beliefs. Once the propositions are aggregated by column in a majority vote, however, the outcome is inconsistent. The majority holds the position that p and that $p \Rightarrow q$, but not that q. The discursive dilemma thus states that the aggregation of consistent positions on connected propositions via majority vote gives inconsistent results. Assuming that consistency is a condition for rationality, the dilemma supports the following negative claim: A consistent set of intentional states at the level of a collective cannot simply be reduced to a mere aggregate of individually consistent sets of intentional states. If groups are to count as agents, however, they need to be able to form consistent

	p	$p \Rightarrow q$	q
Individual 1	✓	✓	✓
Individual 2	✓	X	X
Individual 3	X	✓	X
Majority	✓	✓	X

Table 4.1: Discursive dilemma (cf. List and Pettit 2011, p. 45).

group attitudes. A simple aggregation function, which builds on the majoritarian position of each proposition, does not lead to the emergence of group agents, as groups might hold an inconsistent set of cognitive or practical intentional states.

Generalizing the discursive dilemma, List and Pettit (2011, pp. 49–58) argue that no aggregation function can simultaneously ensure the following conditions:[22]

1. Input of any type of internally consistent and complete individual position on a number of propositions
2. Consistent collective outcome pertaining to all propositions
3. Equal weight to each individual
4. Collective position on each proposition derived exclusively from the positions of individuals

While no function allows aggregation satisfying all four conditions, the dilemma is solved by relaxing each of the conditions. This might be achieved, for instance: by requiring only a certain degree of agreement among individuals; by forming a collective attitude only on selected propositions; by introducing a dictator; or by deriving the position on some propositions from the majority's position on other propositions. The authors specifically address the last solution. A possible instance of relaxing the last condition would be to introduce a premise-based solution. In the example depicted in table 4.1, for instance, the premisses p and $p \Rightarrow q$ would be aggregated based on majority rule. The conclusion q, however, would be evaluated based on the aggregated opinions on the premises and not on the individual opinions on the conclusion. Consequently, p, $p \Rightarrow q$ and q would be accepted. The argument leads List and Pettit (ibid., 5–6, 75, ch.1–3) to argue that groups count as agents in a non-metaphorical sense: Groups can principally qualify as agents if they are able to establish a coherent set of intentional states.

The criterion of rationality allows to differentiate between *collectives acting* and *group agents*. It seems uncontroversial that a coherent structure of intentional states is a constitutive element of agency. If a collective holds incompatible views without balking, it can hardly be considered a group agent. The hallmark of groups *as agents* is that they aggregate the attitudes of their members in a consistent fashion. While it might be acceptable for a collective of loosely related individuals to hold inconsistent and even incompatible intentional states, this is not true for group agents such as political parties, companies, or rebel groups. Whereas collectives might bring about a certain state of affairs by a number of singular actions, group agents act on the basis of coherent intentions.

We have seen above that it is always individuals who *behave* in a certain way. In the case of acts of collective subjects, individual behavior follows the cognitive and practical intentional states of the group. This is how groups *act*. This also entails that collective subjects to act collectively must have certain procedures to identify those to act on behalf of the group.

If we can attribute to collectives a set of irreducible coherent beliefs and volitions, procedures to ensure the coherence of these intentional states, and procedures to identify those, who are entitled to act on behalf of the group, it seems plausible to talk about these collectives as collective subjects.

The beliefs and volitions are irreducible because they are non-trivially related to attitudes of group members. It is not possible to grasp the essential feature of a group agent in terms of the intentional states of the individual members. We may thus very well say that a certain group has a

[22] The formulations are slightly simplified.

belief or has a specific goal without adding that this speech is metaphorical. And this is not to say that individuals are unimportant. To see why, we can refer back to our discussion of emergence in subsection 4.4.3. Collective subjects stand to individuals in a relation of supervenience (List and Pettit 2011, pp. 64–72). Collective subjects are supervenient upon their individual members, because a change in belief or preference of the group necessarily involves a change at the level of the individual members. No mysterious surplus substance exists.

Nonetheless, collective subjects have agency, more specifically the power to act rationally based on an irreducible and collectively-consistent set of cognitive and practical intentional states. Thus, collective subjects can be considered as agents in their own right.

At this point, we can merge the definition of groups and the account of collective social action.

1. *Groups* are mereologically variable collectives of individuals sharing a collective identity in the form of self-referential we-intentions.

2. *Collective social action* is behavior by a collective sharing practical we-intentional states.

3. We-intentional states are relational properties that constitutively depend on the fact that they are shared.

In summary, groups capable of collective social action can be denoted as *collective subjects*. In a synchronic perspective, they are defined via self-referential we-intentions: a number of individuals sharing the belief of being part of the respective group. In the diachronic perspective, collective subjects are characterized by sharing we-intentions toward collective social action: Each individual member of the collective subject takes a collective perspective in the form of we-intentions. Taken together, this definition provides an adequate foundation to conceptualize non-state conflict actors.

4.7 Summary

In reaction to our criticism of the diachronic downward perspective, this chapter has developed a synchronic account of the social world based on the notion of intentionality. This complements the diachronic perspective and allows for an adaptation of the macro-micro-macro model of social explanation, which has to include constitutive and causal relations to be complete. Only from a synchronic perspective are we able to understand that social structures—and a fortiori groups and conflicts—continue to exist in between and apart from actions. The adapted explanatory model guides the formulation of our theoretical argument in chapter 8.

Focusing on the synchronic perspective, we identified collective intentionality as key to understanding the social world. A collective intentional state is a state of affairs where at least two subjects share an intentional state that is similar in content and object. We thus reject the rather peculiar idea that single individuals can have collective intentional states and instead favor a relationist understanding. All of the main concepts put forward in this thesis—group, collective subject, social position, social structure, political conflict, and non-state actor—ultimately found on this relational understanding of collective intentionality.

Working our way upward from the micro- to the macro-level, social positions describe slots in the social structure to which specific powers and liabilities are attached through shared acceptance in society. Shared acceptance is a specific kind of intentional state in the form of shared i-intentions. In contrast, groups, which are located on the meso-level, found on strong collective intentional states in the form of shared we-intentions. This gives them a certain permanency and makes them mereologically variable.

To describe the relation between the micro-, meso-, and macro-level, we turned to the debate about holism. Here, two arguments in favor of holism by Pettit (1996) and Tomasello (2014) give important insights into how intentional states are shaped by our social environment. The argument is that only individuals that are embedded in a relatively stable social environment are able to develop the specific human ability to understand others as intentional beings which is in turn a necessary condition of collective acts (Albert 2010b, p. 328). We take up these arguments in our theoretical discussion in chapter 8. However, they turned out to be diachronic arguments just like those by Archer (1995) and Bhaskar (1979). Discussing emergence, we found that supervenience and wild disjunction capture important aspects of synchronic inter-level relations but might not be ontological but rather epistemological arguments. Referring back to our relationist concept of

collective intentionality, we furthermore found institutional facts to be irreducible to individual intentions.

Tilting our view toward agency in the diachronic perspective, we defined social action via the attributes agent, intentions, and behavior. We found that intentions are both constitutive as well as causally related to social action. The latter are reasons or, if they are relatively stable, dispositions. The hallmark of collective agency are shared goals. While in the case of collective agency it is always individuals that behave in a certain way, individuals might follow the wishes of others.

Bringing together all of the above, we arrived at a notion of collective subjects. Collective subjects are groups that are additionally qualified by the ability to act on a set of irreducible and collectively-consistent beliefs and volitions. Thus, collective subjects can be considered as agents in their own right.

Chapter 5

Methodology

"An ontology without a methodology is deaf and dumb; a methodology without an ontology is blind."

Margaret Archer

I see no greater impediment to scientific progress than the prevailing practice of focusing all our mathematical resources on probabilistic and statistical inference while leaving causal considerations to the mercy of intuition and good judgment.

(Pearl 2009, p. xvi)

Until this point, we have mainly focused on rather abstract ontological questions. This chapter aims to demonstrate that the ontological work thus far provides a solid foundation for deriving practical conclusions with regard to methodology.[1] This entails that ontology and methodology are not completely separable, but rather that the former can guide the latter. Here, we agree with Archer (1995, p. 28): "An ontology without a methodology is deaf and dumb; a methodology without an ontology is blind. Only if the two do go hand in hand can we avoid a discipline in which the deaf and the blind lead in different directions, both of which end in cul-de-sacs."

Research articles in quantitative comparative research on intrastate conflict typically do not include discussions of the ontological implications of the choice of the specific methods. Many authors jump straight to the methods. We hold that such an approach is mistaken. The following example illustrates reasons for putting ontology first: John Stuart Mill introduced two methods as the "simplest and most obvious modes of singling out from among the circumstances which precede or follow a phenomenon, those with which it is really connected by an invariable law" (Mill 1882). These methods—the Method of Agreement and the Method of Difference—are included in many introductory textbooks as appropriate ways to attain knowledge about causal relations in the social sciences.[2] Although these methods appear to mirror our intuition and are in many ways similar to contemporary applied research, they come with a heavy burden in terms of ontological premises. If one applies these comparative methods and infers statements of causal relations from them, one necessarily subscribes to a deterministic view of causation in terms of necessary and sufficient conditions, the absence of interaction effects, and an empiricist account of causation (Lieberson 1991; Maniacs 2006, pp. 157–170). These are far-reaching consequences that need to be made explicit in order to preclude unwarranted conclusions.[3] Even if one chooses to omit a discussion of the underlying philosophy of science, it does not simply evaporate.

The preceding chapters have established the basic ontological approach for the present analysis. Even if one agrees with the presented arguments, however, they do not provide an 'out of the box' solution with regard to answering specific research questions. This chapter derives concrete implications from the ontological arguments with regard to definitions and explanations. It thereby links philosophy of science and social ontology to practical methods. Section 5.1 first describes a realist account of concepts. It then develops four specific requirements for adequate 'real definitions'. These definitions are firmly rooted in the ontological premises and thereby address

[1] This chapter primarily focuses on methodology, not on methods. It discusses what kinds of methods are adequate in light of the critical realist position developed in chapter 3. The specific instruments and techniques employed in actual analysis are discussed where they are done in chapter 9.

[2] Strikingly, Mill himself was skeptical about the application of his methods and described their limitations (Mill 1882).

[3] For another illustration see Geddes' 1990 critique of Skocpol (1979), or Mahoney (1999)

a shortcoming identified in chapter 1: Whereas data availability and statistical methods have improved at an enormous pace, definitions remain rather shallow. The one-sided focus on data and the dominance of empiricist thinking (ch. 3) have led to intensive discussions about measurement and statistical inference at the expense of research on the essential attributes of the objects under observation. Both providing and applying criteria for adequate real definitions addresses this shortcoming.

The discussion thus far has likewise shown that constitutive definitions can teach us how objects behave, how they influence one another, and how this leads to events. Put succinctly, concepts are essential for theory building. Neither does causal power arise from processes linking explanans and explanandum, nor is it an illusion derived from constant conjunctions of events. Rather, causal power is a 'potency' inherent in objects (sec. 3.3). From this one can derive the critical realist understanding of explanation described in section 5.2.

5.1 Concepts

Concepts define the object under investigation and link a semantic declaration, e.g. 'state' or 'conflict', to a real world phenomenon. They are important for scientific research in two ways. First, they contribute to the basic principles of science, namely logical and verbal precision, intersubjectivity, and justification (Druwe 1995, pp. 21–24). Second, concepts are the main building blocks of theoretical arguments. The understanding of the properties of an entity is a necessary condition if we seek to explain its causal powers. There are no meaningful explanations without concepts. Thus, although many maintain the opposite (cf. Wonka 2007), concepts come before theory. This does not mean, of course, that research-inducing ideas completely abstract from cause-effect relations. On the contrary, the great majority of scientific investigation begins with an observed conjunction of events. However, meaningful theoretical analysis, i.e. an investigation of the causal power of things, is not possible without having a thorough understanding of the concepts under investigation.

Goertz (2006a) provides a thorough, concise, and—most importantly for our purposes—realist account on concepts. We follow his terminology. A concept is a precise and comprehensive definition of the pivotal characteristics of a phenomenon and of the relations between these characteristics. A concept refers to those attributes of a phenomenon that ontologically define it and are causally relevant (Goertz 2006b, pp. 5, 27). It consists of three levels depicted in figure 5.1. The terminus denotes the term that is used to refer to the definiendum. The attributes are the constitutive elements or essential properties of the definiendum. The indicators operationalize the attributes. Following the diachronic approach laid out in chapters 3 and 4, the relation between terminus and attributes should be constitutive in nature. The attributes *constitute* the phenomenon to be defined, they do not *cause* it. A causal relation may link the level of indicators to the level of attributes in case the latter are hard to observe. For instance, we might employ the emission of nightlight as a proxy for economic development in the empirical analysis in chapter 9. Having clarified the terminology, the following develops criteria for adequate definitions.

5.1.1 Adequate Real Definitions

This section develops criteria revolving around the idea of 'conceptual adequacy.' The quality of a social science concept—and, by extension, the empirical data generated by it—is proportional to the extent to which the concept adequately captures reality. A real definition captures the essential properties of an entity, i.e. properties that are indispensable for what an object is. Developing real definitions therefore always involves considerations of ontology.

In conflict research, an instrumentalist stance prevails with regard to definitions. In this view, concepts are nothing but tools (Neufville 2015). Their value lies in their practical usefulness, not their meaningfulness in relation to reality. As will be shown in chapter 6, many definitions of political conflict are de facto operationalizations. A real definition, however, should not stop at enumerating empirical observables, but should rather focus on the very nature of conflict. A real definition of conflict turns away from a predominantly pragmatic approach to conceptualization. Based on these premises, we derive four requirements that an adequate concept must fulfill: completeness, comprehensiveness, symmetry, and depth.

A *complete* concept—as depicted in figure 5.1—comprises three distinct levels: the terminus, constitutive attributes, and indicators (Goertz 2006b). Concepts that skip the second level—often

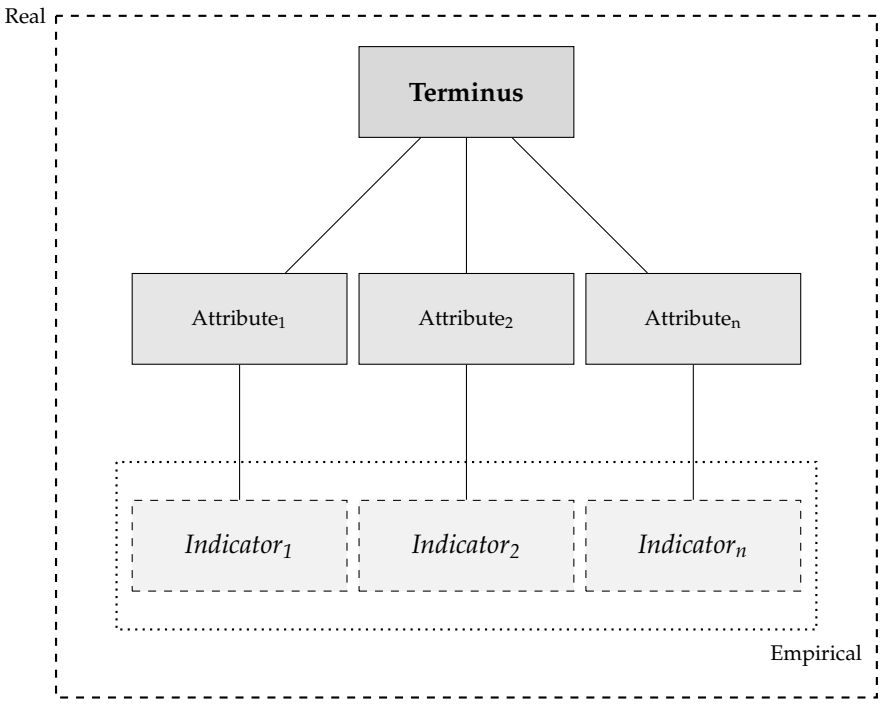

Figure 5.1: Concepts, attributes, and indicators. A complete conceptualization comprises all three levels. Purely operational definitions skip the level of attributes.

due to pragmatism—and that exclusively refer to indicators are defective 'operational definition' (cf. Sambanis 2004).

A concept should be *comprehensive* and take into account the double nature of the definiendum as a progressive stream of actions ('process') and as a persistent state ('structure'). This double understanding corresponds to the synchronic and diachronic nature of social reality (ch. 3,4). A political conflict, for instance, is continuously created, recreated, and altered through the unfolding sequence of events and actions of agents. This is how conflicts (empirically) persist diachronically. Focusing on conflicts as structural phenomena stresses their persistence as constellations in between, independent of, and possibly even without concrete interactions. Conflicts exist, synchronically, among different layers of reality. An appropriate definition should thus grasp the processual dynamics as well as the structural continuity of conflicts.

Concepts are of crucial importance in defining the universe of cases, as they determine what falls into the segment of reality under investigation. This goes hand in hand with the issue of deciding when cases fall outside of this segment (cf. Goertz 2006a). In other words, conceptualizations should be *symmetrical*. In peace and conflict research, this is widely debated pertaining to the concept of peace. Moreover, it is of great practical importance as far as the beginning and termination of conflicts are concerned.

A real definition should reflect the degree of extension and differentiation found in the definiendum. It should be broad enough to cover all empirical phenomena that are instances of the definiendum. At the same time, it should be differentiated enough not to blur important differences between these phenomena. Providing sufficient extension while mapping important differences by virtue of a high degree of internal differentiation results in what we term conceptual *depth*.

These four criteria allow for the evaluation of existing social science concepts as well as serve as a guideline for developing new concepts. They therefore enable the implementation of a critical realist position in practical research. We will employ these four criteria to develop a new definition of political conflict in section 6.1.

5.2 Explanation

This section deals with the question of explanation, an issue, which certainly lies at the heart of science. In a recent article dedicated to research methods for conflict research, Schrodt (2014, p. 289) criticizes the "disparaging of prediction as the criteria for validating a model." Citing Hempel and Oppenheim (1948), Schrodt (2014, p. 290) argues that explanation without prediction "isn't scientific at all!" This view is exemplary for the discipline of conflict research, which, with the help of public institutions, increasingly aims to predict conflict dynamics. Mostly, these accounts do not differentiate between explanation and prediction, but rather assume or—as in the case of Phil Schrodt—stipulate their congruence. The view originates in the Deductive-Nomological (DN) model: It requires an explanandum, a law, and antecedent conditions. In a prediction, one deducts the explanandum from the other two elements prior to the occurrence of the phenomenon to be predicted. "It may be said, therefore, that an explanation is not fully adequate unless its explanans, if taken account of in time, could have served as a basis for predicting the phenomenon under consideration" (Hempel and Oppenheim 1965, p. 138).

This section argues that this view is mistaken. It is closely linked to section 3.3, which introduced the empiricist and the critical realist account of causation. In common understanding, explanation and causation are similar: Explaining means nothing other than identifying causes. As we have seen throughout the preceding chapters, however, the concept of cause is debated. The same is true with regard to explanation (for an overview see Bartelborth 2007; Reiss 2009; Salmon 1989; Woodward 2003).

This section elucidates the methodological implications of different conceptualizations of causation for scientific explanation. It proceeds in three steps. First, the following presents the most influential empiricist model of scientific explanation, the DN-model. Second, it summarizes main arguments against this model. Third, a realist account of scientific explanation is laid out. In summary, the section allows us to situate the critical realism account within the literature and to elucidate why it is preferable to other accounts.

As a result, explanatory approaches can be classified according to their position on the ontological status of causal powers. This criterion assists us in identifying two classes of approaches: anti-realist and realist accounts (Woodward 2003, pp. 118–123; Bartelborth 2007, pp. 21–118; Chalmers 2007, pp. 172–180; Salmon 1989, pp. 4–5). The anti-realist camp comprises all approaches that aim to leave metaphysical arguments out of the discussion of causality and explanation. The realist camp argues that causality cannot be adequately framed without reference to metaphysical entities.

5.2.1 Regularity Approach to Explanation

This subsection presents the DN-model as the most influential approach to explanation in empiricism. It is a bit technical but ultimately allows for a detailed presentation of the problems of the DN-model. The subsequent subsection then proceeds by rejecting the proposal advanced by Schrodt (2014) to adapt such an approach in conflict research.

Empiricist or 'regularity approaches to explanation' belong to the anti-realist camp. Aiming to leave metaphysical arguments out of the discussion of causality and explanation, they share the view that causal laws are nothing more than recurring sequences of events: 'if x happens, then y (almost) always happens.' This view of causation directly flows from the empiricist account to causation. Hempel (1965) and Hempel and Oppenheim (1965) followed this approach to causation in the development of the DN-model (cf. Woodward 2003, ch. 4; Bartelborth 2007, pp. 26–35; Salmon 1989, pp. 4–25).

For empiricists, the main achievement of the DN-model was that the argument is exclusively based on logical necessity: If the explanandum and the explanans are representations of true facts, the DN-model links both in such a way that they form a scientific explanation. The conclusion is deduced from the premises with logical necessity. The DN-model is probably the most widely-known approach compatible with the empiricist concept of causation. The main idea is that the explanation of a phenomenon, i.e. specific events or derivative laws, consists of its subsumption under fundamental laws. For Hempel (1965, p. 337) the explanation of a phenomenon was to show with the help of the DN-model that "the occurrence of the phenomenon *was to be expected*."

The DN-model departs from two elements that are part of every explanation: an explanandum and an explanans (Hempel and Oppenheim 1965, pp. 136–137). The explanandum is a sentence

Figure 5.2: The deductive-nomological model of explanation: An explanandum E is deduced by subsuming it under universally valid lawlike statements L and, where appropriate, antecedent conditions C (cf. Hempel and Oppenheim 1965).

that describes the phenomenon to be explained (E). The explanans contains the antecedent conditions (C), i.e. conditions that need to be realized prior or simultaneously to the occurrence of the explanandum, and general laws (L): "For all that a causal law asserts is that any event of a specified kind, i.e. any event having certain specified characteristics, is accompanied by another event which in turn has certain specified characteristics" (Hempel and Oppenheim 1965, p. 142). The understanding of laws is very closely related to the Humean concept of causation (see figure 3.1 on page 24) and thus remains firmly rooted in empiricism.

A scientific explanation according to the DN-model has to fulfill three logical (1-3) and one empirical (4) condition of adequacy:

1. The explanandum must be logically deducible from the explanans. In other word, the explanation must be deductive. This circumvents the realist position of assuming the existence of unobservable necessary connections between cause and effect.

2. The explanandum must contain laws, making the model of explanation 'nomological' (from Greek nomos = law). Laws are described as "general and unexceptional connections between specified characteristics of events" (ibid., p. 139). They take the logical form $\forall x(Ex \rightarrow Dx)$ (Bartelborth 2007, p. 27).[4] Lawlike sentences need to be universally valid, must have an unlimited scope, and should not refer to one or more particular objects, events, locations, or points in time (cf. Salmon 1989, pp. 13–15).[5]

3. The explanans must have empirical content, i.e. it must be empirically testable.

4. The explanans must consist of true sentences.

The model usually takes the form depicted in figure 5.2.[6] In addition to the DN-model, Hempel introduces deductive-statistical (DS-model) and inductive-statistical explanations (IS-model) (cf. ibid., pp. 51–58). In the former, the law in the explanans is not anymore a universal than a statistical law, which takes the logical form $p(G, H)$ (Bartelborth 2007, p. 27).[7] The explanandum consists of a statistical uniformity that is narrower than the statistical law in the premise. The IS-model accounts for cases where a specific event is to be explained by a 'statistical law' in the premise. Thus, similar to the DS-model, a statistical law forms the explanans. In contrast to the DS-model, the explanandum is a specific event. The occurrence of a specific event, however, cannot be deduced from a non-deterministic law. It can just be stated that the explanandum is highly probable.[8] Accordingly, in the IS-model the conclusion is not logically deduced from the premise; it is an inductive argument. In summary, Hempel brings forward four types of scientific explanation that can be differentiated along two criteria: the explanandum and the law. Events are the first kind of explananda. According to Hempel, they can be explained either by deduction from a universal law (DN-model) or by induction from a statistical law (IS-model). Generalizations are the second kind of explananda. Generalizations narrower than universal laws can be deduced

[4] This means in plain english: 'For all x: if they are E, they are also D'. An example would be: 'For all metals: if they are heated they expand.'

[5] The formulation of an antecedent condition is not a necessary condition, since the DN-model might also be used to deduct narrow generalizations from wider generalizations.

[6] The model as presented here is not generalizable to all kinds of explananda. If the explanandum takes the form of a generalization (e.g., 'oxygen expands when heated'), which is deduced from a more general generalization (e.g., gases expand when heated') and not an event, the argument does not require antecedent conditions in the explanans

[7] 'All x that are H are also G with the probability of p.'

[8] In fact, Hempel initially stated that statistical laws in the IS-model should have high p-values. Later, however, he dropped that requirement due to problems that will be discussed below.

from universal laws (DN-model), while statistical generalizations are deducible from statistical laws (DS-model).

Schrodt (2014) particularly praised that the relationship between explanation and prediction defended by the aforementioned account (cf. Salmon 1989, pp. 47–50; Maniacs 2006, pp. 11–12). According to Hempel and Oppenheim (1965, p. 138), the difference between both is merely "pragmatic". Explanation and prediction have a similar form and are symmetric. They only differ in the sense that the former occurs only after the explanandum, while the latter is given *ex ante*.

In summary, Hempel and Oppenheim advance that scientific explanations always, although sometimes implicitly, consist of deductive or inductive arguments containing statistical or universal laws. The approach is firmly rooted in the empiricist framework of causation. Explanandum and explanans stand in a relation to logical necessity, which does not entail any statement about unobservables. In this view, laws describe deterministic or highly probable coincidences of events and do not entail statements about causal powers of entities. In short, explanation is subsumption under lawlike statements.

What does this mean for scientific practice? 'Do not confuse correlation with causality!' is one of the pivotal lessons for today's students in the social sciences. Put differently, successful explanation requires the identification of accidental regularities from lawful regularities. According to the DN-model, we would proceed as follows: When confronted with a statement that we assume to be empirically true, we proceed to prove whether the statement is universal and general.[9] If that is the case, we can conclude that it is a general law and not an accidental regularity. We may then use the lawlike statement to 'explain' and 'predict' events or narrower generalizations.[10] This is the model Schrodt (2014) proposed to guide future approaches in conflict research.

The following subsection shows, however, that this approach is mistaken. Most importantly, it is not able to effectively differentiate between lawlike and accidental regularities. This evidently proves to be of pivotal importance in explanations and predictions alike.

5.2.2 Criticism of the Deductive Nomological Model of Explanation

The DN-model was widely accepted after its publication (Salmon 1989, pp. xiii–xiv) and remains highly influential to this day. More recent debate in the philosophy of science, however, finds the model to be deeply flawed. Several arguments have undermined the explanatory value of the DN-model. The first relates to the asymmetry of causal explanations. It is illustrated by two examples that go back to Bromberger (1966, pp. 92–93, 108):

> "There is a point on Fifth Avenue, M feet away from the base of the Empire State Building, at which a ray of light coming from the tip of the building makes an angle of θ degrees with a line to the base of the building. From the laws of geometric optics, together with the 'antecedent' condition that the distance is M feet, the angle θ degrees, it is possible to deduce that the Empire State Building has a height of H feet. Any high-school student could set up the deduction given actual numerical values. By doing so, he would not, however, have explained why the Empire State Building has a height of H feet, nor would he have answered the question 'Why does the Empire State Building have a height of H feet?' nor would an exposition of the deduction be the explanation of or answer to (either implicitly or explicitly) why the Empire State Building has a height of H feet. (...)
> 'From the laws of the simple pendulum and the length of a piece of string at the end of which a bob is hanging and local free-fall acceleration, one can deduce the period with which that bob is oscillating. From the same law and data about local free-fall acceleration and the period with which the bob is oscillating, one can deduce its length. Yet a statement of the length is an answer to 'Why does the bob oscillate with such and such a period?' whereas a statement of the period of oscillation is not an answer to 'Why is the length of the string at the end of which the bob is hanging so many inches long?' "

Both examples illustrate the failure of the DN-model to account for the asymmetric relation of explanation. We might explain the length of the shadow of the Empire State Building from the height of the building and the laws of the propagation of light. We might also explain the period of the pendulum from the laws of gravity and the length of the string. It seems strange, however, to explain the height of the Empire State Building by the length of the shadow. Likewise, we cannot explain the length of the string by the period of oscillation. Explanation is asymmetric in the way that causation is asymmetric. The DN-model of explanation is indifferent to the asymmetric nature of causation.

[9] The statement 'no sphere of uranium-235 has a mass greater than 100,000 kilograms' is universal because it refers to a uniform connection, and general because it is not restricted to a subset of pieces of uranium.

[10] In the case of narrower generalizations we have an explanation of something specific since narrower generalizations, in contrast to laws, may refer to particulars (Salmon 1989, pp. 14–15).

Another example illustrating various shortcomings of the symmetry thesis regarding explanation and prediction is the following: The rapid falling of a barometer indicates the approach of a storm. If one assumes the existence of a law between both events, the relation would fit the DN-model of scientific explanation. However, although we would be perfectly able to predict the occurrence of a storm while observing a rapid fall of the barometer, the fall of a barometer does not explain the occurrence of the storm.

A second point regards 'irrelevance'. Kyburg (1965) and Salmon (1971) provided the most commonly-known examples to illustrate this criticism.

> "This sample of table salt dissolves in water, for it has had a dissolving spell cast on it, and all samples of table salt that have had dissolving spells cast on them dissolve in water" (Kyburg 1965, p. 147).
> "John Jones avoided becoming pregnant during the past year, for he has taken his wife's birth control pills regularly, and every man who regularly takes birth control pills avoids pregnancy" Salmon (1971, p. 34).

Similar to the above examples, these two examples perfectly fit the DN-model brought forward by Hempel. The laws 'humans who take contraceptives do not become pregnant', and 'hexed salt dissolves in water' fulfill all conditions of a law, as formulated by Hempel. Nonetheless, the explanans of both arguments is obviously irrelevant for the explanandum. Consequently, there either needs to be more restrictions placed on the DN-model, or the model itself must be abandoned.

A third criticism pertains to the requirements that were formulated regarding lawlike statements (Salmon 1989, pp. 14–16). To repeat, Hempel formulated the following conditions for lawlike statements: They need to be universal, general, and must not refer to particular objects. Now consider the following two statements:

- "No sphere of pure gold has a mass greater than 100,000 kilograms."
- "No sphere of uranium-235 has a mass greater than 100,000 kilograms."

Both statements fulfill the conditions for lawlike statements as formulated by Hempel. If we assume both statements to be true, they would represent general laws. They are universal, because they refer to a uniform connection between two aspects of an empirical phenomenon. They are general because they are not restricted to any subset of the theoretically-infinite number of pieces of gold or uranium in the world. Last, both statements do not refer to any particulars. Both statements fulfill all prerequisites of lawlike statements. Furthermore, both could easily generate deductive arguments. However, they differ with regard to their explanatory power. It is theoretically possible to construct a sphere of pure gold with a mass greater than 100,000 kg. According to current knowledge, however, it is physically impossible to construct a spherical piece of uranium-235 larger than about 49 kilograms because of its critical mass. Thus, the DN-model is fallible regarding the difference between lawlike statements and accidental regularities.

The approach to scientific explanation by Hempel and Oppenheim fails due to its indifference towards causal asymmetry, the failure to exclude explanations that are causally irrelevant, and its fallibility regarding the difference between accidental regularities and real explanations. These counter-arguments show that the empiricist conception of explanation is flawed. The criteria that are elaborated by empiricists do not provide adequate guidance for that, which constitutes a scientific explanation. Founding the practice of conflict research on the arguments of Hempel and Oppenheim, as was proposed by Schrodt (2014), is thus a dangerous idea.

5.2.3 Realist Explanation

Both the last subsection and the critique in section 3.3 show that the empiricist approach to scientific explanation is not sufficient. The aim of the empiricist account was to omit any reference to unobservables. This aim was made possible by founding the approach to scientific explanation on the Humean account of causation. The present section describes the critical realist approach to scientific explanation, which rests on a realist conception of causality.

Before we elaborate on a critical realist account of explanation, a reminder regarding the subtle but important difference between 'cause' and 'causal law' is appropriate: The concept of 'cause' is more extensive than the concept of 'law'. Laws comprise statements about tendencies and possibly refer to the structures and mechanisms bringing about these tendencies. Causes are more extensive in that they cover not only the working of laws but also those events or processes triggering the working of mechanisms.

According to critical realism, neither the constant conjunction of events, nor our perception of constant conjunctions of events form a necessary or sufficient condition to speak of causal laws (Bhaskar 1979, p. 14). In the process of research, one should not stop observing correlations between phenomena, but rather inquire into the 'inner working' of entities to elucidate what makes them work as they do. "There is a real difference, quite independent of men, between the fact that when I heat the kettle of water it boils and the fact that it boils when the time is half-past two or the colour of my socks is blue. The necessary connections that bind some but not other events together (which are the enduring mechanisms of nature) are quite independent of our knowledge of them"(Bhaskar 2008, p. 191). We cannot describe a causal relation by simply referring to constant conjunctions.

Instead, explanation has to take account of the transfactual character of causality. It has to refer to the mechanisms, powers, and tendencies of things. In this sense, real definitions and the critical realist approach to explanation are deeply linked. To define a thing means inquiring into the constitutive attributes of entities. Constitutive attributes elucidate the structures giving rise to mechanisms that subsequently endow entities with certain powers and tendencies. In this sense, we can learn about theory and explanation from the close description of the objects under observation. This is where case studies and thorough definitions have their place with regard to explanation. We can very well understand the causal powers of objects by investigating them in isolation. Critical realism thus underlines the importance of intensive analysis of the objects under investigation.

Lawlike statements, "when their initial conditions are satisfied, make a claim about the activity of a tendency, i.e. about the operation of the generative mechanism that would, if undisturbed, result in the tendency's manifestation"(ibid., p. 88). Lawlike statements thus describe the way of acting of powers. They do not cover external or internal conditions that might inhibit the actualization of a specific power. Consequently, the scientific endeavor aims to identify laws. These are "neither empirical statements (statements about experiences) nor statements about events. Rather they are statements about the ways of acting of independently existing and transfactually active things"(ibid., p. 42).

This does not entail that regularities are completely unimportant in the realist framework. They do, however, have a significantly different status in scientific explanations. With the structure of concepts in mind (see figure 7.1), we can see that regularities have the status of attributes in the empiricist framework. Laws *are* constant conjunctions. This is the implicit ontology of empiricism, as portrayed from a realist position. The realist approach to causation would dispose of regularities as attributes due to the problems described above. Rather, regularities act as indicators of causal powers. As all indicators, they are imperfect approximations and might lead us astray, as in the cases described in subsection 5.2.2. Explanations always involve ontology.

The approach allows us to take a clear position in another related discussion. It is widely held that theoretical parsimony is a criterion to assess the quality of theories (cf. Gerring 2012, pp. 66–67). Loosely following the formulation of 'Occam's razor', one might argue that theoretical arguments should be formulated as parsimoniously as possible. An instrumentalist would put the emphasis on '*parsimoniously*'. Why should we develop large-scale theories about an event, if it can be 'explained' by a rather simple statement? A realist, in contrast, would put the emphasis on '*as possible*'. Parsimony is not an end unto itself but rather an indicator that we have uncovered a mechanism relating to a large number of empirical phenomena. In the end, it is the structure of reality that determines whether or not a parsimonious description of a mechanism is valid. A parsimonious theory is only adequate if it reflects the simplicity in the real world (cf. King, Keohane, and Verba 1994). The very same logic applies to concepts.

5.3 Summary

In summary, we can derive several methodological implications.

Causality is best described via generative mechanisms. Causal powers are properties of things existing independently of the observer. Being part of the *domain of the real*, causal powers are neither exhaustingly defined by the occurrence of events, nor a mere construction by scientists.

When constructing theories, we should aim to provide the best possible description of the *domain of the real*. A good theory is not necessarily parsimonious but only in cases where reality is likewise simple in structure. A good theory is a theory that is true, i.e. that describes the causal powers of real objects. From this we can derive that theories should not—due to the asymmetry

between explanation and prediction—be exclusively measured on grounds of their ability to forecast; nor can they be sufficiently or exclusively evaluated on grounds of their correspondence to events. Regularity is an indicator, not the essence of causality.

This is even more important in the open systems studied in the social sciences. Due to the impossibility of observing causal mechanisms operating in open systems in isolation, regularities in the *domain of the empirical* or the *domain of the actual* may differ from those that would follow from causal mechanisms working in isolation. By differentiating social mechanisms from observable events, critical realism thus illuminates necessarily existing limitations of empirical research. A mere correlational approach is not sufficient to detect causality. This also entails that methods grounded in the concept of necessary and sufficient conditions, such as crisp-set qualitative comparative analysis, are arguably even less applicable than statistical procedures that rest on the concept of probability. We cannot falsify a theory by pointing out that certain events did not happen, just as we cannot falsify the concept of gravity by studying objects isolated from other masses.

What is needed here includes, first, carefully crafted 'real definitions' along the lines proposed above. As the following chapter shows, they are rare in quantitative conflict research. Second, we need valid indicators that correspond to the constitutive attributes of the object under analysis. This can be achieved, e.g., by spatio-temporal disaggregation, which allows the alignment of attribute and indicator as accurately as possible. This point will be taken up in chapter 9. Third, we need theories that are 'metaphysical' in character, i.e. that make statements about the workings of specific causal mechanisms of the entities involved. They need not be parsimonious, although the latter might indicate a true theory. Such a theory can be crafted, e.g., along the macro-micro-macro model, as is done in chapter 8. Fourth and last, we need more elaborated methods to account for the interference of various causal mechanisms. One possible solution for this includes multi-level models as applied in chapter 9.

Chapter 6

Concepts

"Everything should be made as simple as it can be, but not simpler"

Albert Einstein

This chapter puts forward concepts of 'political conflict' and 'non-state conflict actor' that go beyond the immediate observable and include a systematic hierarchy of attributes and indicators. The concepts function as explananda and explanatia in the theory developed in the following chapter 8.

As laid out in the last chapter, critical realist ontology emphasizes the importance of comprehensive conceptualizations of the objects under investigation. Concepts are more than just useful heuristic devices; they provide an understanding of the causal properties of the objects under investigation. Bringing forward real definitions, this chapter contributes to conflict research by transcending the one-dimensional focus on issues of data collection and measurement (cf. ch. 1). We must venture beyond operational definitions and place our focus on constitutive attributes. Once the latter are defined, we can derive indicators from them. Jumping straight from semantic declaration to indicators leaves out the most essential part of what it means to define a thing. This is one of the core messages of critical realism.

Due to the close link between the structure of entities and their causal powers, much of a theory is already contained in concepts. Causation is not something invented by human minds but an objective relationship inhering in reality. And causal potency subsists in the properties of real objects. Adequate definitions—as discussed in section 5.1—are thus a necessary condition for adequate theories and thereby serve as the fulcrum of every scientific investigation. Once the involved concepts have been described, a theory describes how the causal powers of the involved entities cause the explanandum.

The three sections of this chapter put forward real definitions of three concepts of interest: 'political conflict' (section 6.1), 'non-state actors' (section 6.2), and 'social space' (section 6.3). The concepts developed in this chapter form the foundation of the theory and empirical analysis in chapters 8 and 9, respectively. Furthermore, let it be stated here that the development of these concepts is geared toward a more general applicability, as to enable their use in numerous ways.

6.1 Political Conflict

War is a true chameleon, as Clausewitz observed. The same applies, a fortiori, to political conflicts in general as they appear in highly diverse forms and might undergo many transformations. On the side of concepts, Sambanis (2004) observed substantial differences between collections of civil war data and showed that results of causal inference depend on the chosen dataset. While conflict research has since progressed significantly (cf. ch. 1), definitional, operational, and empirical disagreements between data projects still remain.

This section does three things. First, it evaluates the conceptualizations of six leading conflict data projects based on the criteria for adequate definitions developed in subsection 5.1.1. The evaluation identifies the strengths and weaknesses of the investigated approaches and points out the direction of possible improvements. Subsection 6.1.2 presents the methodological approach developed by Christoph Trinn, Nicholas Schwank, and the author as one avenue to address the identified desiderata (Schwank, Trinn, and Wencker 2013; Trinn 2015; Trinn, Wencker, and Schwank

2016; Wencker, Trinn, and Croissant 2015). It is one of the main contributions of the present analysis. The approach includes a refined measurement strategy systematically derived from a set of explicit attributes of political conflict. Subsection 6.1.3 then evaluates this new approach against the criteria for adequate definitions to carve out its added value for conflict research.

6.1.1 Extant Concepts of Political Conflict

Leading conflict data compilations are provided by the Correlates of War Project (COW), the Center for Systemic Peace (CSP), the Minorities at Risk Project (MAR), the Political Instability Taskforce (PITF), the Uppsala Conflict Data Program (UCDP)—in cooperation with the Peace Research Institute Oslo (PRIO)—, and James Fearon and David Laitin (2003, hereafter F&L) (Wencker, Trinn, and Croissant 2015). COW was initiated in 1963 by David Singer at the University of Michigan and later transferred to Pennsylvania State University. CSP, founded in 1997, provides a dataset on Major Episodes of Political Violence (MEPV). The MAR project is based at the University of Maryland and was founded by Ted Gurr in 1986. Closely related to CSP is PITF, a research group initiated by Gurr in 1994. UCDP was established in the mid-1980s at Uppsala University. Since 2004 it has closely cooperated with PRIO, which was founded in 1959. PRIO and UCDP have increased the spatial and temporal precision of conflict data by introducing the Armed Conflict Location & Event Data Project (ACLED) and the Georeferenced Event Dataset (GED), respectively (Raleigh, Cunningham, et al. 2006; Sundberg and Melander 2013).

In the following, we reconstruct the core definitions of the above mentioned conflict research approaches by looking at relevant publications and codebooks and evaluate these definitions against the criteria of adequate real definitions: completeness, comprehensiveness, symmetry, and depth.

Conceptual completeness Addressing the first criterion regarding the existence of systematic hierarchies of constitutive properties ('attributes') and measurable observables ('indicators'), we come to the following conclusions. COW defines war as "sustained combat, involving organized armed forces, resulting in a minimum of 1,000 battle-related fatalities" (Sarkees and Wayman 2010, p. 49; cf. Small and Singer 1982). This definition comprises two attributes: sustained combat and organized armed forces. The first attribute of sustained combat is not positively defined; COW merely states that sustained combat is not one-sided violence and "hide-and-seek operations" (Sarkees and Wayman 2010, p. 49). It is operationalized as 1,000 battle-related, combatant fatalities in a twelve-month period. The involvement of organized armed forces, the second attribute, is defined as war participation of a member of the international system. System membership has the following necessary conditions: territory, minimum population, sovereign control, independence, and diplomatic recognition (ibid., pp. 18–19). War participation is measured by the number of armed personnel employed (> 1,000 armed troops) and the number of battle-related deaths (> 100). Regarding civil wars, Small and Singer (1982) reformulated the second attribute as "effective resistance." This is defined by two alternative, in themselves sufficient criteria: a sufficient level of organization on both sides, which is not operationalized, and the ability "to inflict upon the stronger opponents at least five percent of the number of fatalities it sustains" Small and Singer (ibid., p. 215). COW meets our second criterion.

CSP's MEPV are defined as "systematic and sustained use of lethal violence by organized groups that result in at least 500 directly-related deaths over the course of the episode," with "a base rate of 100 directly-related deaths per annum" (Marshall 2014, pp. 2, 7). This definition consists of two attributes and one indicator. The first attribute is the systematic and sustained use of lethal violence, while the second attribute lies in the fact that the violence is used by organized groups. The indicator is the number of battle-related deaths (100 per annum, 500 per conflict). We infer that the indicator's function is to operationalize the first attribute. It might be that the two different fatality thresholds are linked to the two specifications of lethal violence as 'systematic' and 'sustained', respectively. The second attribute is left undefined and is not operationalized. The rather vague approach to operationalization is a drawback of CSP's conceptualization.

MAR exclusively gathers data on ethno-political conflicts, i.e. conflicts involving mobilized, politically-active ethnic groups which make claims "against the state or against other political actors" (Gurr 2000, p. 65). Problematic is the double use of the word 'conflict' in the definiens and the definiendum. Conflict itself is not directly defined. Rather, MAR's five types of ethno-political conflict discussed below—inter-communal conflict, intra-communal conflict, protest, rebellion,

and repression—taken together implicitly define the conceptual space taken up by 'conflict'. Ethnic, political, or identity groups are "people who share a distinctive and enduring collective identity based on a belief in common descent and on shared experiences and cultural traits" (Gurr 2000, p. 5). An ethno-political group must fulfill two criteria in order to be considered: "The group collectively suffers, or benefits from, systematic discriminatory treatment vis-á-vis other groups in a society. (...) The group is the basis for political mobilization and action in defense or promotion of its self-defined interests" (ibid., p. 7). MAR covers only those conflicts which involve such groups.

PITF analyzes three forms of 'political instability,' i.e. armed conflicts (or 'wars'), mass killings, and cases of contested regime change. We concentrate on the former two. "'Wars' are unique political events that are characterized by the concerted (or major) tactical and strategic use of organized violence in an attempt by political and/or military leaders to gain a favorable outcome in an ongoing, group conflict interaction process." (Marshall, Gurr, and Harff 2014, p. 4). Thus, three attributes define war. First, it is characterized by the concerted use of organized, lethal violence. This is measured by the number of fatalities (more than 1,000 over the course of the conflict and more than 100 in at least one year). Second, armed conflict necessarily involves mobilized state and non-state actors. International and subnational conflicts are excluded. Mobilization is proxied by the number of participants (1,000 people by each conflict party). Third, actors aim at a favorable outcome for themselves. For non-state actors, a favorable outcome is further specified as changing "the established political structure or status quo" (ibid., p. 5). Mass killings are also defined via three attributes. First, they are "sustained policies" (ibid., p. 14). This is operationalized by the duration of persistent activity (at least six month). Second, these policies must be executed or at least consented by a government or, in civil wars, by the contending authorities. This is proxied via the perpetrator and the actor who exerts control over the affected territory. Third, policies must "result in the deaths of a substantial portion" of the targeted group (ibid., p. 1). A precise threshold, however, is not provided. The victims of violence must be non-combatants. Where this is hard to determine, the type of conflict measures, e.g. massacres, is taken into account.

UCDP collects data on three forms of violence: armed conflict, non-state conflict, and one-sided violence (Gleditsch, Wallensteen, et al. 2002). All three are defined dyadically. Armed conflict is defined via three attributes. First, it is "a contested incompatibility which concerns government and/or territory" (Uppsala Conflict Data Program 2015; cf. Gleditsch, Wallensteen, et al. 2002; Themnér and Wallensteen 2014). Second, armed violence is used. Third, the conflict occurs between actors of which at least one is a government. The first attribute is assessed on the basis of the change demanded by the actor – either pertaining to the orientation or composition of the central political system, or to the status of a territory. The second attribute is operationalized as the use of physical violence by material means that results in at least 25 deaths per year. Third, UCDP understands as 'government' the actor in control of a country's capital. Non-governmental groups must at least have a name and resort to armed force. Non-state conflicts differ from armed conflicts in two ways (Uppsala Conflict Data Program 2015; cf. Sundberg, Eck, and Kreutz 2012). First, they occur between organized groups without government participation. Second, they are not characterized by a specific type of incompatibility. Groups qualify as organized if they have a name or if violent incidents form a clear pattern. Moreover, it is necessary that groups employ violence against each other. In a similar vein, one-sided violence differs from armed conflict in that the incompatibility criterion is not applicable and that armed force is used by a government or a formally organized group against civilians (Uppsala Conflict Data Program 2015; Eck and Hultman 2007; Sundberg 2009). In sum, UCDP offers detailed and systematic definitions as well as at least one indicator for each attribute. Operationalizations are generally consistent across the different concepts.

Fearon and Laitin (2003, p. 76) focus on "violent civil conflicts," i.e. fighting between state and non-state actors who seek to "take control of a government, to take power in a region, or to use violence to change government policies," claiming at least 1,000 lives over the entire period of the conflict, at least 100 in the average per year and at least 100 concerning each conflict party. There are three criteria: the involvement of a state against an organized, non-state group; the demand for a change of government policies or of government or territorial control; and the number of fatalities. In view of the fact that these criteria are already close to the level of empirical measurement, they can be regarded as indicators. Therefore, this approach is a typical example of a purely operational definition. As indicators in the social sciences are mainly imperfect approximations that do not fully grasp the sense of the operationalized attribute, operational definitions are problematic.

It is in this sense that F&L's approach misses an important dimension of conceptualization: the essentials of political conflict. In summary, UCDP, PITF (at least with regard to wars), and COW offer the most systematic and complete conceptualizations among the investigated projects.

Conceptual comprehensiveness The second criterion concerns the way in which the processual and structural nature of conflict is recognized by the concepts in question. This loosely relates to the differentiation between the diachronic and the synchronic perspective (cf. 4). Conflicts are structures because they are, synchronically, a specific state of relation between at least two actors. At the same time, conflicts are, diachronically, processes since the continuous or intermittent interaction between actors brings about and reproduces this conflictive relation. Despite this close link, both dimensions are analytically distinguishable: Attributes denoting successive acts and communications are processual, while attributes denoting a relational state between actors refer to the structural dimension. Almost all approaches consider conflicts in their processual dimension. CSP, UCDP, and PITF (in the definition of armed conflict) define conflicts via the use of violence. COW and F&L use closely related formulations ('sustained combat,' 'fighting'). PITF in their definition of mass killings refer to 'sustained policies.' In MAR, discriminatory treatment vis-á-vis other groups in a society is a defining feature of ethno-political groups. This attribute can be considered processual, as 'treatment' implies actions; however, it might also be structural as a state of relative deprivation.

The structural dimension of conflict is only found in UCDP. Its notion of incompatibility, however, only appears in the definition of state-based 'armed conflicts.' Pertaining to these, incompatibilities are defined as "stated (in writing or verbally) generally incompatible positions" (Uppsala Conflict Data Program 2015). Although dependent on specific acts, incompatibility signifies relatively permanent relations between actors.

The majority of definitions includes specifications regarding the degree of the internal organization of actors. While this might be classified as a reference to structures, it does not refer to the structure of conflicts but merely to the internal structure of the actors involved. Likewise, PITF's notion that actors in conflict aim at a favorable outcome for themselves cannot be understood as an incompatibility in a relational sense as it reduces incompatibility to a property of individual collective actors. A similar reduction is found in MAR's reference to group claims.

This overview reveals an imbalance towards processual definitions. It is another instance of the widespread neglect of synchronic relations in the social sciences. Focusing processes is reasonable given the dynamic nature of conflicts and the fact that conflicts are primarily observed via a systematic assessment of conflict measures. One should not, however, dismiss the importance of the structural dimension. Conflicts might or might not persist during periods where conflictual interactions are absent. A structural view accounts for the persistence of conflicts during such periods. More specifically, a reference to, e.g., sustained incompatibilities allows to assess whether a specific conflict has ended or paused: As long as an incompatibility of intentions exists, a conflict subsists. An integration of the structural dimension can thus guide the coding process with regard to the determination of when a conflict ends.

Conceptual symmetry According to the third criterion, it is particularly crucial to specify as clearly as possible the transition of a case from the conceptual set of conflict to the set of non-conflict, or in other words: the termination of political conflicts. The baseline approach is to negate the attributes of conflict: A conflict is considered to have ended when at least one necessary attribute becomes absent (cf. Goertz 2006b).

Most data projects combine the analysis of specific types of events indicating conflict termination with fatality thresholds: COW (< 1,000 deaths and either truce, defeat, or petering out), Fearon and Laitin (2003, footnote 4) ("victory, wholesale demobilization, truce, or peace agreement followed by at least two years of peace"), and PITF (< 100 deaths and either decisive conclusion, such as victory and settlement, or petering out). While in PITF mobilization is a necessary condition to identify a conflict case ('event'), it is not explicitly mentioned in the context of conflict termination. This could be relevant in a case where an actor continues to inflict more than 100 casualties in a year although its size falls below 1,000 members. UCDP is exemplary in that it considers all three attributes of armed conflicts (incompatibility, armed, fatal violence, and organized actors) (Uppsala Conflict Data Program 2015). With regard to incompatibility, it looks at specific events: peace agreements, victory, and ceasefires. However, UCDP's definition of termination only extends to armed conflicts, not to non-state conflicts and one-sided violence. In con-

trast, CSP's approach is purely event-based, seeking to capture the "transformative 'moments"' (Marshall 2014, p. 7) of conflict termination. It relies on expert opinion and not on empirical indicators. MAR equates non-conflict with anything that falls below the lowest intensity level of the respective type.

Conceptual depth Depth is achieved by a balanced combination of extension and differentiation. Concepts of conflict should be broad and differentiated at the same time. They should cover all forms of political conflict without blurring substantial differences between them. Concepts whose extension is large but whose internal differentiation is weak are empirically broad but provide no or few attributes for generating typologies. In contrast, narrow concepts cover only a limited segment of reality.

Some approaches set up several conceptual 'bins' without integrating them under a more comprehensive concept. It seems plausible, however, that different phenomena such as wars or disputes, inter-, intra-, or non-state conflicts, one-sided violence, or protests share enough common characteristics to be regarded as species of a more general kind (cf. subsec. 6.1.2). The existence of cross-species properties both allows and warrants conceptual integration. From a pragmatic point of view, the problem is reflected by the fact that some data projects are indeed dedicated to an overarching research topic, but do not specify what this topic is. This results in what we term 'silo solutions,' which frequently manifest in separate datasets for particular phenomena (Schwank, Trinn, and Wencker 2013).

Considerations of depth are also important with regard to conflict intensity, which is of pivotal relevance with regard to the empirical analysis in chapter 9. Specifically, the extension of conflict intensity should not be as narrow as to include the consequences of conflict—and fatalities, in particular—at the expense of the means of conflict. As with the concept of conflict in general, a concept of intensity should be broad but internally differentiated. In this context, differentiation refers to the number of intensity indicators.

Based on the type of the actors involved and the territories affected, COW uses an elaborate scheme of differentiating the overarching concept of war. The project differentiates inter-state wars (between states), intra-state wars (either between national or regional government forces and domestic or foreign non-state actors, or among non-state actors within a given state), extra-state wars (states against outside non-state actors, one of its colonies, a small or unrecognized state, a pre-state territory or non-territorial non-state actors), and non-state wars (among non-state actors, either across states or within colonies or other non-state territories). With respect to inter-state conflicts, COW moreover recognizes the concept of 'militarized interstate disputes' (MID), comprising conflicts in which violence is threatened but which remain below the level of war (Ghosn, Palmer, and Bremer 2004). Although COW's war concept is rather comprehensive, it is not a universal concept of political conflict since it excludes all conflicts with less than 1,000 annual battle deaths. However, interstate wars are complemented by the concept of MID below the level of war, collected in a separate dataset. This is a typical 'silo solution' because there is no integrating concept of interstate conflict.

Turning to intensity, COW confines its compilation to killed combatants. It thereby applies the most restrictive approach to intensity of all the projects investigated: It does not consider non-combatant fatalities, let alone other dimensions of conflict consequences, and does not look into the means of violence.

Even though CSP's fatality thresholds are significantly lower than COW's (100 per annum, 500 per conflict), an MEPV is far from being a 'universal' concept of political conflict, as the terminus itself explicates. CSP differentiates between inter- and intra-state conflicts, subdividing the latter in civil and ethnic conflicts. These types are further specified as episodes of violence, wars or attempts at independence. 'War' differs from 'violence' in that the war participants seek to impose their will unilaterally. This two-level typology results in seven subtypes. While the categories of violence and war can be attached to international, civil and ethnic episodes, attempts at independence always belong to the international domain. With regard to intensity or 'magnitude,' CSP is notable for assessing the consequences of an MEPV through six dimensions, each comprising a multiplicity of highly qualitative but well-defined indicators: (1) human resources (direct and indirect casualties, sexual violence); (2) population dislocation (physical, psychological, economic, financial, political and military costs of displacement and migration); (3) societal networks (disintegration of identities and interpersonal relations); (4) environmental quality; (5) infrastructure damage and resource diversions; (6) diminished quality of life and non-reciprocal

resource transfers (short- and long-term effects to the aesthetic and humanitarian quality of life, future prospects, financial and human capital outflows, devaluation, socio-psychological consequences). Evaluation of these dimensions results in ten 'warfare categories:' sporadic/expressive, limited and serious political violence, serious, substantial/prolonged, extensive, pervasive, technological and total warfare as well as extermination/annihilation (Marshall 2014, pp. 9–11). This scheme leads to a considerable amount of internal differentiation. However, while its consideration of conflict consequences is much broader than, say, COW's, CSP does not take into account the means of violence.

As far as the dimension of actors is concerned, MAR's core concept, 'ethno-political conflict,' is the narrowest amongst those considered here as it only includes conflicts involving politically active ethnic groups. Considering the actors and the measures they employ, MAR distinguishes inter- und intracommunal conflicts, protests and rebellions of, as well as state repression against, ethno-political groups. The distinction between these types is, to the best of our knowledge, not explicated but can be reconstructed from Gurr (2000), the MAR codebook and from the intensity indicators (cf. below). The types result from successive classifications. Government participation serves as a first criterion. Where the government is the subject of conflict activities, MAR codes this conflict as a case of repression. Where the government is the object, we find either rebellion or protest, depending on whether arms are used or resistance remains primarily non-violent. Ethno-political conflicts without government involvement are in turn distinguished into intra- and intercommunal conflicts. This distinction ultimately hinges on how to demarcate individual groups. Groups are different if they are treated and perceived as such Gurr (ibid., p. 8). MAR's classification scheme does not employ an equal number of criteria across its different branches. While, for instance, protest is defined by three attributes (government participation, direction against the government, and non-violent resistance), intercommunal conflicts use only two criteria (government involvement and infighting). The attributes underlying the taxonomy are not explicitly operationalized. For instance, it is unclear how initiation is identified to differentiate repression from protest/rebellion. It appears that MAR primarily focuses on conceptualizing the various types as such and not on developing a systematic, explicit taxonomy. Consequently, the indicators used to assess the severity of each conflict type give a 'phenomenological' idea of each type.

To each of the five conflict types, MAR applies a unique intensity assessment scheme with five to seven levels. Indicators differ between schemes as well as between levels of the same scheme. This reduces the comparability of cases across the five conflict types and effectively creates operational 'silos.' Severity assessments are done per calendar year, combining rather qualitative indicators (e.g. weapon types, symbolic acts, strikes, affected area, territorial control) with occasional quantifications (e.g. number of clashes, fighters, or protesters) (Center for International Development and Conflict Management 2009). Unlike most of the other projects, MAR takes a substantive look into the means of violence, especially the weaponry and the number of participants. However, means and consequences are not always clearly separated (consider area control or effects on property). MAR is notable for its broad take on intensity by also including non-violent intensity levels of intercommunal conflicts, protests, and repression. MAR recognizes very low levels of violence (excluding intracommunal conflicts and rebellions).

We encounter the 'silo' problem also in PITF, where armed conflicts are conceptually separated from mass killings without explicitly defining the overarching term, political instability. This problem, however, does not arise within these two concepts. Armed conflicts are differentiated into revolutionary and ethnic wars along the dimensions of participating actors and conflict issues. With regard to mass killings, genocides are distinguished from politicides on the basis of the targeted group. The definition of armed conflict is rather narrow (100 fatalities per annum and 1,000 per conflict, 1,000 mobilized persons; intrastate conflicts only; restricted catalogue of issues).

In assessing the conflict 'magnitude' of wars, PITF uses three indicators: (1) the number of rebels, (2) the annual number of fighting-related deaths among combatants and non-combatants, and (3) the portion of a country directly or indirectly affected by fighting. PITF thus combines both intensity dimensions: the means of conflict and its consequences. PITF differs from COW in that it takes into account non-combatant fatalities. Each of the three indicators is assessed on an ordinal pentatonic scale and is omitted in case of insufficient information. The annual magnitude equals the average of the scores. PITF also covers genocide and politicides, i.e. "the promotion, execution, and/or implied consent of sustained policies by governing elites or their agents—or in

the case of civil war, either of the contending authorities—that result in the deaths of a substantial portion of a communal group or politicized non-communal group" (Marshall, Gurr, and Harff 2014, p. 14). While politicides target opposition groups, genocides are directed against ethnolinguistic or religious groups. Fatality figures form the basis of an eleven-point ordinal magnitude scale.

UCDP recognizes three different forms of violence: armed conflict, non-state conflict, and one-sided violence. Whereas armed conflicts involve government actors on at least one side, non-state conflicts are fought exclusively between organized non-state actors. In cases of one-sided violence, a government or organized group uses violence against civilians. Armed conflict is additionally qualified by the fact that it is "a contested incompatibility which concerns government and/or territory" (Uppsala Conflict Data Program 2015). UCDP further classifies armed conflicts according to whether they are intranational, internationalized intranational, extra-systemic (mostly colonial), or international in character. What is missing, however, is an overarching concept of conflict. This leaves the three basic types of violence as conceptual 'silos.' Sharing a threshold of 25 battle-related deaths per year, each of these concepts is rather broad. However, non-violent conflicts or very low levels of violence are excluded. In GED the threshold is lowered to at least one battle-related death per event, considerably increasing the extension, albeit not beyond the scope of violence. Similarly to PITF, but unlike COW, UCDP covers combatant as well as non-combatant fatalities. It does not, however, take into account other dimensions of conflict consequences or the means of violence. As outlined above, the concept of armed conflict is narrowed down by the 'issues' of contestation.

Based on the number of fatalities, UCDP distinguishes two intensity levels of armed conflicts: 'Minor armed conflicts' lie above a threshold of 25 fatalities but below the threshold of war, fixed at a death toll of 1,000. This differentiation, however, is not applied to non-state conflicts and one-sided violence. UCDP offers data on the minimum, maximum, and most reliable number of fatalities per year.

'Violent civil conflict', the comparatively narrow and undifferentiated core concept of F&L, is defined by quantitative thresholds (1,000 fatalities per conflict, 100 per annum, 100 on each side), which are in place to exclude short-term, one-sided, unorganized, and marginally violent or non-violent conflicts. The authors allow for non-state actors' objectives "to take control of a government, to take power in a region, or to use violence to change government policies" (Fearon and Laitin 2003, p. 76). They do not look into dimensions of consequences other than combatant and civilian deaths, or into the means of violence.

Comparative assessment The comparative evaluation yields the following results. With regard to conceptual completeness, COW, UCDP, and PITF (for armed conflict) provide the most systematic hierarchies of defining attributes and indicators. Inter-level specifications of CSP, in contrast, are incomplete and lack detail. MAR focuses on subtypes without explicitly defining conflict. F&L's definition is purely operational. Concerning conceptual comprehensiveness, we observe that nearly all approaches exclusively focus on conflicts as processes. Only UCDP adequately recognizes the structural dimension of conflict by considering states of incompatibility.

While all of the examined concepts are symmetric in that they address conflict termination in some way, there are differences. MAR does not positively define or operationalize it. CSP takes a purely event-based approach without explicating reliable indicators. COW, PITF, UCDP (for armed conflicts) and F&L combine threshold- and event-based strategies. Whereas the termination criteria of COW and UCDP are sufficiently linked to the attributes defining conflict, this only partially applies to PITF. F&L's operationalization of conflict ends fits their conflict indicators.

Pertaining to the conceptual depth of the definitions of political conflict, we observe the following. Due to its high fatality threshold, the extension of COW's concept is very narrow. While CSP, PITF, and F&L exhibit a medium degree of extension, UCDP's concept is relatively broad. Despite the fact that MAR likewise includes conflicts without violence, it is narrow due to its focus on ethno-political conflicts. Some projects differentiate conflict types without integrating them under a more comprehensive concept. We observe such 'silo' solutions in COW, PITF, and UCDP. While CSP collects data on different types of 'political instability,' this term is not explicitly defined. F&L do not internally differentiate their concept at all.

With respect to the depth of the concepts of conflict intensity, COW, CSP, UCDP, and F&L are narrow because they exclusively focus on consequences of violence at the expense of the employed means. In this group, CSP is the most differentiated since it uses a large number of

Concept	Completeness	Comprehensiveness	Symmetry	Depth: conflict*	Depth: intensity**
COW	+	-	+	-/-	-/-
CSP	-	-	-	-/+	-/+
F&L	-	-	-	-/-	-/-
PITF	+	-	(+)	-/-	+/+
MAR	-	-	-	(+)/-	+/-
UCDP	+	+	+	(+)/-	-/-

Table 6.1: Comparative assessment of concepts of political conflict. * = broadness and differentiation; ** = dimensionality and number of indicators.

indicators. The remaining three projects only consider fatality figures. A second group comprises MAR and PITF. Both cover means and consequences. MAR employs a different set of indicators for each of its five types of ethno-political conflict as well as for each intensity level. PITF uses three indicators and a pentatonic scale. With regard to the depth of the intensity concept, PITF arguably offers the best solution here.

Table 6.1 summarizes these results. It shows that overall UCDP performs best among the investigated projects. Nonetheless, the evaluation reveals *two remaining desiderata* revolving around conceptual depth: First, to address the 'silo' problem of conceptual differentiation, and second, to formulate a multi-dimensional and multi-indicator concept of conflict intensity. Both issues are of considerable relevance for empirical research because they affect the ability to capture conflict transformation, on the one hand, and the validity of intensity assessments, on the other. Of specific importance in view of the empirical analysis, however, is the second desideratum (cf. the second aim identified in chapter 1). A multi-dimensional concept of conflict intensity is a *sine qua non* to empirically assess profiles of violence.

6.1.2 The Heidelberg Approach

The concept of political conflict as described in Schwank, Trinn, and Wencker (2013), Trinn (2015), Trinn, Wencker, and Schwank (2016), and Wencker, Trinn, and Croissant (2015) addresses both these desiderata as well as perceived shortcomings of the accuracy, replicability and reliability of the former Heidelberg approach (Sundberg, Eck, and Kreutz 2012, p. 352). The revised approach has also been adopted by the Heidelberg Institute for International Conflict Research (HIIK) in its yearly publication (Heidelberg Institute for International Conflict Research 2016). This subsection introduces the basic concept of political conflict and the definition and operationalization of conflict intensity.

Political conflict is a perceived incompatibility of intentions between individuals or social groups defined by three constitutive attributes: First, it refers to an issue that is of relevance to society as whole. Second, the conflict is carried out by conflict 'measures,' i.e. communications and actions. Third, involved in the conflict are actors that are significant.

Conflict actors are internally coherent collectives, as evidenced by a consistent preference structure. Collective actors comprise states, international organizations, and non-state actors. These are significant if they are taken into account by other conflict actors in their decision-making processes. The significance of an actor is thus not defined by its endowment with resources or its fighting capacity, but through the opponent's reaction. The distinction between state and non-state actors results in three basic conflict types: international conflict (between states), intrastate conflict (between a state and a non-state actor), and subnational conflict (between non-state actors).

Conflict measures comprise all actions and communications carried out by a conflict actor, lie outside established procedures of regulation and, possibly in combination with other measures, threaten a core state function or the international order, or render such a threat probable. Established procedures of regulation are those mechanisms of conflict management that are recognized as such by the actors involved and are performed without resorting to the use or threat of physical violence. Core state functions are the maintenance of (a) the physical security of a population, (b) territorial integrity, and (c) a political, socioeconomic or cultural order. A measure threatens a core state function or the international order if their maintenance is rendered improbable in the perception of a conflict actor. Conflict issues (cf. O'Leary 1976) are material or immaterial

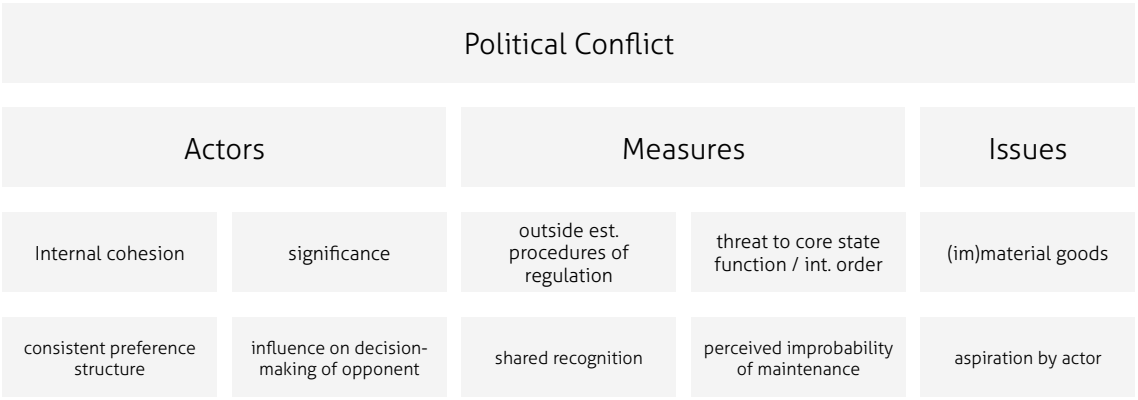

Figure 6.1: Concept of political conflict.

Figure 6.2: Concept of conflict intensity.

objects which are aspired by actors using measures and which have relevance for society as a whole because of their relation to the coexistence of human beings in a society or of states in the international system. In principle, every object might constitute a conflict issue. Relevance for society as a whole does not inhere in an object per se, but arises from its being pursued by measures. Thus, measures have a two-fold function: They constitute conflicts as processes and endow objects with relevance. Ten categories of conflict issues are differentiated, representing common goals of conflict actors. The three conflict attributes—actors, measures, and issues—together form the necessary and sufficient conditions for the occurrence of political conflict (see figure 6.1).

Conflict intensity is a property of a sum of conflict measures in a geographical and temporal space. The primary units of analysis are the calendar month and the 'region,' i.e. the first-level subnational administrative unit of a country. Five intensity levels are distinguished: dispute and non-violent crisis (non-violent conflicts), violent crisis, limited war, and war (violent conflicts). A dispute is a political conflict carried out without the use or threat of physical violence. In a non-violent crisis, actors threaten to use violence. This includes violence against objects without taking the risk to harm persons, sanctions, the refusal of arms surrender, or pointing weapon systems against each other.

The assessment of violent intensity levels uses five indicators measuring the means and consequences of conflict measures. Means are operationalized via the deployment of weapons and personnel. Consequences encompass the numbers of fatalities and refugees and the amount of destruction (see figure 6.2). Each indicator is scored on a ternary scale. The intensity of a region-month is determined by aggregating the five individual scores. This results in an eleven-point intensity scale which is in turn aggregated to the three violent intensity levels.

The weapons indicator determines whether light or heavy arms are used (e.g. handguns or hand grenades vs. artillery or heavy bombs). Regarding the extent to which the fighting capacity of heavy arms is exploited, restrictive and extensive use is differentiated. The personnel indicator is a count of the highest number of persons representing an actor in a single violent measure.

Indicator	0	1	2
Weapons	use of light weapons	restrictive use of heavy weapons	extensive use of heavy weapons
Personnel	< 50	50 - 400	> 400
Fatalities	< 20	20 - 60	> 60
Refugees	< 1,000	1,000 - 20,000	> 20,000
Destruction	massive in no dimension	massive in 1 or 2 dimensions	massive in 3 or 4 dimensions

Table 6.2: Intensity indicator thresholds. Each indicator is rated on a ternary scale. Where reliable quantitative data is not available, a catalogue keywords is employed.

Fatalities comprise the number of deaths from violent measures or their direct consequences. Persons dying due to indirect effects, e.g. starvation or disease, are not counted. The fourth indicator measures the number of refugees and displaced persons. Displacement is defined as the migration of human beings provoked by the fear induced by conflict measures using or threatening violence. Taken into account are flow, not stock data. Finally, the destruction is evaluated in four dimensions considered essential for civilians: infrastructure, accommodation as well as economic and cultural structures. Each of the five indicators is given a score between 0 and 2 (see table 6.2).

Data collection rests on publicly available sources, including academic publications, news agencies, major newspapers, and television broadcasts as well as the local press. As international and local media may be susceptible to distortions due to sensationalism, unbalanced coverage, or partisan bias (cf. Moeller 1999), country-specific knowledge is of utmost importance, complemented by a whitelist of international and local sources.

The assessment of destruction and the use of arms requires a subjective appraisal. However, quantitative information regarding conflict personnel, fatalities, and refugees might not always be reliable, as well (cf. Weidmann 2014b). To ensure valid measurement, codings are re-examined by experienced staff and external country experts. If quantitative data is not available, a catalogue of quantifying keywords is employed.

Apart from considering marginally violent conflict, the Heidelberg approach also covers non-violent conflicts and conflict phases, i.e. disputes and non-violent crises. One of the greatest practical challenges is to demarcate non-violent conflict from non-conflict. Specifically, the concept of dispute elucidates by its negation what non-conflictual controversies are. Controversies which take place within established procedures of regulation or which do not have relevance for society as a whole are not political conflicts. This is particularly important for conflict termination (Hegre 2004), i.e. the transition of a case from the set of conflict to the set of non-conflict. The Heidelberg approach considers a conflict to have ended either if (a) an agreement between the actors has been reached, solving the incompatibility of intentions pertaining to an issue, if (b) all actors on one side have become extinct, or if (c) interactions exclusively occur within established regulatory procedures or cease to be of societal relevance.

6.1.3 Conceptual Assessment of the Heidelberg Approach

The Heidelberg approach fulfills all four criteria of conceptual adequacy and addresses the two desiderata identified above. First, the Heidelberg conceptualization is *complete* since it offers a systematic hierarchy of constitutive properties and measurable observables (see figure 6.1). The terminus 'political conflict' is defined by the three constitutive attributes actors, measures, and issues. These are broken down into five sub-attributes, which are in turn operationalized by one indicator each. Second, the definition is *comprehensive*. Political conflict is defined as a structure of incompatible intentions. The processual nature of conflicts is included in the notion of conflict measures. Structure and process are thus both constitutive elements of the approach. In other projects this is only found in UCDP. Third, the approach is *symmetric* by explicitly conceptualizing the termination of conflicts. It does so by defining empirical conditions that each indicate the absence of one of the constitutive attributes.

Turning to the fourth criterion—conceptual *depth*—, we address the added conceptual value of the Heidelberg approach. It encompasses all forms of conflictive political interaction, whether highly, marginally or non-violent, inter-, intra-, sub-, or transnational, ethnic, civil or terrorist in nature, short- or long-term, organized or 'unorganized,' one-, two-, or many-sided, involving

any relevant issue. In comparison, although being relatively broad, MAR is restricted to ethnopolitical and UCDP to fatally violent conflicts. Integrating various types of conflict under a single term, the Heidelberg approach avoids the disintegration of the real phenomenon into conceptual 'silos.' While it might be argued that this amounts to lumping together essentially different phenomena, the approach allows for the systematic derivation of subtypes of conflicts along the three constitutive attributes (cf. Angstrom 2001). This contributes to the analysis of different types of conflict (cf. Le Billon 2001).

The assessment of violent intensities under the Heidelberg system is multi-dimensional, taking into account both the means of conflict and its consequences. Whereas COW, UCDP, and F&L exclusively focus on fatality figures, CSP considerably broadens the dimension of consequences. Only MAR, PITF, and the Heidelberg approach also account for conflict means. However, MAR is inherently unsystematic in this regard. Compared to PITF, the Heidelberg measurement is broader, taking into account not only fatalities and personnel but also weaponry, refugees, and destruction. This puts the intensity measurement on a broader and more solid footing than a sole, and widely debated (Obermeyer, Murray, and Gakidou 2008), focus on fatalities.

In summary, this section has presented a new concept of political conflict developed on the foundations of a critical realist perspective and illustrated its added value in comparison to existing approaches. The following section more closely focuses on one of the constitutive attributes of intrastate political conflict: conflict actors.

6.2 Non-State Conflict Actors

Conflict actors are constitutive elements of political conflict. Actors bring about conflicts through their own efforts, whether that is defining the topics and items of conflict by via communication and volitions. Moreover, their reciprocal interaction determines conflict dynamics. The present section develops a concept of non-state conflict actors built around the social-philosophical concept of collective subject (cf. ch. 4), the concept of political conflict presented above, and the existing literature. This strategy aims to provide a definition that not only mirrors the critical realist perspective of the social world, but also stands in compatibility with the concept of political conflict, while highlighting the commonalities and differences with existing approaches.

This section relates the concept of 'conflict actors' to 'political conflicts' and advances a typology of non-state actors. In this effort, the following proceeds with three steps: First, subsection 6.2.1 gives an overview of existing research concerning the conceptualization of non-state conflict actors (NSCA). Second, we take the smallest common denominator of existing definitions as my point of departure in developing a more elaborated conceptualization of NSCA in 6.2.2. The new definition rests upon those of chapter 4 to carve out essential attributes of NSCA. The third and final step discusses conflict-relevant characteristics of NSCA and presents a taxonomy of conflict actors in subsection 6.2.3.

6.2.1 Extant Concepts of Non-State Conflict Actors

Current research on non-state actors in political conflict can be divided broadly into two types: On the one hand, quantitatively oriented research analyzes the role of non-state conflict actors (NSCA) using large samples of conflict data (cf. Cunningham, Gleditsch, and Salehyan 2009b; Fjelde and Nilsson 2012; Gent 2011; Salehyan, Gleditsch, and Cunningham 2011). Due to practical reasons, however, the descriptions of NSCA mostly remain shallow and rely not only on handy definitions to cope with the needs of coding reliability, but also on the extensive amount of data to be processed and the problem of lacking information. Mostly, news databases such as LexisNexis or other media releases are used as a source for coding information on NSCA. This heavily restricts the amount of information on NSCA. Qualitatively oriented research, on the other hand, focuses on the role of a single or a small sample of non-state conflict actors in specific conflicts (cf. Gates 2002; Humphreys and Weinstein 2008; Weinstein 2007). These approaches generally characterize NSCA under investigation in greater depth, e.g. analyze dynamics within non-state actors or focus on characteristics of individual members of the collective actor. Research methods comprise interviews and field studies. Thus, while quantitative research often lacks elaborated concepts and can be criticized for a lack of validity, qualitative research often fails to establish universal definitions and quantifiable indicators, which are prerequisites for comparative anal-

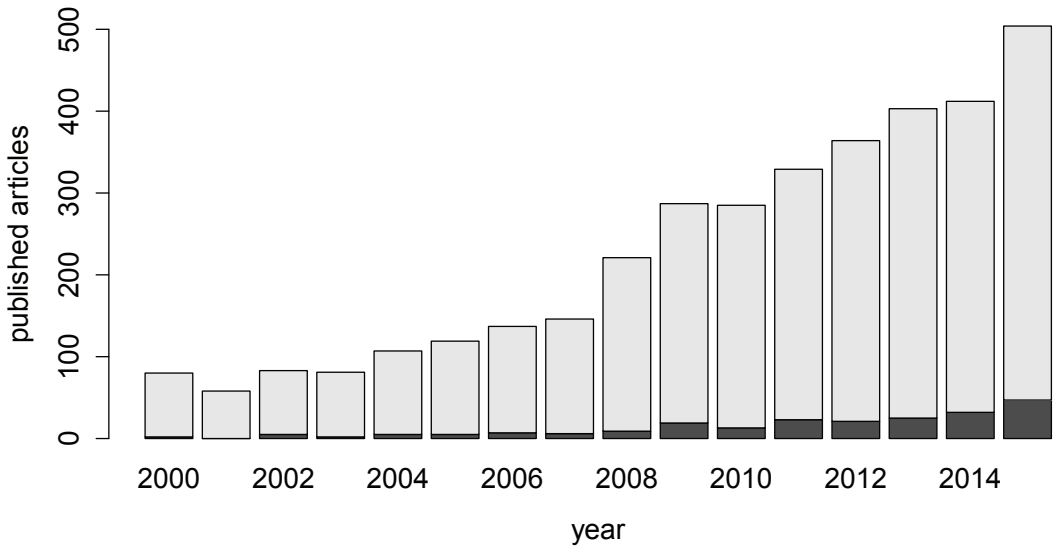

Figure 6.3: Relative share of articles on non-state actors in the literature on intrastate political conflict 2000-2015. Results are from the Social Science Citations index.

yses. Keeping these shortcomings in mind, the following gives a broad overview of the state of research on non-state conflict actors.

For our first step, we identify the population of scientific works in a bibliographical analysis (see figure 6.3).[1]

As the temporal overview of those publications listed in the Social Science Citation Index exhibits, scientific interest in the role of non-state actors has been on the rise (also see results in chapter 2). Since 2000, the total number of newly published articles both on non-state conflict actors and intrastate conflict has greatly increased. The ratio of publications on NSCA to all publications on intrastate conflict has risen from 3.5 percent between 2000-2004 to 6.8 percent between 2010-2014.

Given the high interest in the topic under analysis, a review of the conceptualization of NSCA used in research on intra-state conflict provides an opportunity to assess the state of the research, compare different concepts, and evaluate their usability for the purposes of quantitative and qualitative research. A screening of scientific works for their respective definition of non-state actors shows that many fail to give one. It is common practice to refer to codebooks in case of quantitative analyses. However, the concepts of non-state actors should at the very least enter discussion.

The following summarizes extant definitions of non-state conflict actors from the literature.[2] From these, we can get an idea of the common understanding of the term within the research community and derive relatively undisputed core characteristics.

> The smallest common denominators are that the non-state actor is an entity comprised of several individuals and that it has some form of organizational structure (be it formal, as in e.g. rebel groups or more traditional, as in e.g. ethnic groupings) (Harbom and Sundberg 2009).

> [T]he main characteristics of armed groups can be described as follows: (...) The combatants are organized according to a basic command structure and follow its instructions. (...) The group is engaged in a political struggle, that is an attempt to redefine the political and legal basis of society through the use of violence. (...) Independence from state control. [However], [t]he issue of state control is often problematic (Bruderlein

[1]The bibliographical analysis was conducted using Web of Science with the following search terms on articles: TS=(“non-state actor$” OR “NSA” OR “terrorist group$” OR “Armed group$” OR "rebel$”) AND TS=(“civil war$” OR “intrastate conflict$” OR “domestic conflict$” OR “internal war$” OR “internal conflict$” OR “domestic war$” OR “intranational war$” OR “intranational conflict$”).

[2]Definitions of NSA employ different termini: Non-state actor, armed group, non-state armed group, and organized armed group. One can argue, however, that they all relate to very similar empirical phenomena and can therefore be compared. Such a comparison serves as an adequate starting point to address the issue of conceptualization of NSCA.

> 2000).
>
> [B]y 'armed groups' we mean groups that are armed and use force to achieve their objectives and are not under state control (Petrasek 2001, p. 5).
>
> This Protocol (...) shall apply to all armed conflicts (...) which take place in the territory of a High Contracting Party between its armed forces and dissident armed forces or other organized armed groups which, under responsible command, exercise such control over a part of its territory as to enable them to carry out sustained and concerted military operations and to implement this Protocol (International Committee of the Red Cross 1977).
>
> We propose that rebel groups will be better understood if they are seen as predatory organizations focused on resource extraction and survival. (...) We examine three key elements of a group's character: command structure, level of militarization, and responsiveness to community (Beardsley and McQuinn 2009, pp. 627–630).
>
> Non-state armed groups are classically defined, in Weberian fashion, as "violent challengers to the state's monopoly of legitimate coercive force" (Policzer 2005, p. 8). Among the vast universe of such groups, the scope of enquiry of this paper is reduced to a sub-set of actors who pursue primarily political (as opposed to economic or private) agendas; understand the use of force (often seen as a last resort) to be a legitimate and pragmatic tool of resistance against clearly defined opponents (i.e. as opposed to indiscriminate terror); are formally organised and have hierarchical, accountable structures (and often distinct military and political organs); and exercise some degree of territorial control (where they develop their own parallel governance structure) (Dudouet 2012, p. 98).
>
> We define a nonstate actor as an organized political actor not directly connected to the state but pursuing aims that affect vital state interests (Pearlman and Cunningham 2012, p. 3).

As a first approximation, the following core characteristics can be extracted from the definitions of non-state conflict actors. Non-state conflict actors

- consist of multiple individuals,
- have a certain degree of organization,
- are not part of an internationally recognized state.

These three relatively undisputed attributes refer to the internal organizational structure of NSCA, their structural embedding, and to their practices, respectively. Together, they form the smallest common denominator of what constitutes non-state conflict actors. As it will turn out, it is reasonable to regard these attributes as a necessary definitional attribute of NSCA.

While these three definitional attributes are relatively undisputed, the above definitions also mention three characteristics often part of the definition, albeit disputed among scholars. These are clearly specified goals, the exercise of territorial control, and armament as well as the employment of violent means.

Concerning the first disputed definitional attribute, Beardsley and McQuinn (2009, p. 627) proposes to conceptualize rebel groups as "predatory organizations focused on resource extraction and survival" . Bruderlein (2000) and Dudouet (2012), on the other hand, do not completely neglect the role of materialist incentives, but notably diminish this role to other means of more directed political purpose. Similarly, Pearlman and Cunningham (2012) see the affectedness of vital state interests as necessary attributes of non-state actors. Schlichte (2009b) empirically finds that the employment of violence by those armed groups that are included in his study always remains geared toward changing or overtaking political power in the specific national or local arena.[3]

The lack of agreement concerning the definitional attribute of a specific goal is comprehensible. Epistemologically, it is often hard to assess the (primary) motivation of conflict actors. Groups may write political slogans on their flags while pursuing material incentives and vice versa (Collier and Hoeffler 1998). And the line between political and criminal non-state actors is not always clearly cut. Pablo Escobar, leader of the Medellin Cartel, not only was the head of one of the world's largest drug trafficking organizations, but also likewise pursued political goals running for the Columbian parliament. One could question whether his candidacy for parliament gave expression to his political will to reduce inequality, or merely provided a means to further his economic incentives. Of course, a combination of the two would also stand as a reasonable assumption. Based on the arguments laid out in section 4.5, we can state that excluding motivation

[3]It remains possible, however, that the empirical result stems from the focus of research. If political motivation was a defining characteristic guiding case selection, then this result is a methodological artifact.

per se from the definition is not an option. Shared intentions are an essential property of collective subjects. From a critical realist perspective, the constitutive role of shared intentions outweighs methodological problems of assessing motivations in the social sciences. We cannot simply remove constitutive attributes from definitions due to a lack of empirical knowledge in specific cases. Epistemological concerns aside, the specific motivation of an actor (in contrast to a further unspecified shared intentionality, which is constitutive for any collective subject) provides a useful criterion to distinguish different types of actors. For instance, *political* non-state actors could be denoted as those that *aim to influence, take part in, or take over the state functions of fashioning the political, socioeconomic, or cultural order of a state.* Even where actors do not openly pursue political goals, criminal organizations might become so powerful that their doing affects core state functions. Mexican drug cartels, for instance, threaten the security of the population and question the state's monopoly on the use of force. Following this idea, it is not the motivation of actors, but whether they affect core state functions that makes them political. This corresponds to the notion of *political* in the definition of *political conflicts* (cf. sec. 6.1). In summary, motivation is an essential property of collective subjects and its specific form, albeit at times difficult to identify, allows the differentiation of actor types.

Concerning the second defining characteristic in dispute, territorial control, the debate is less problematic. In states such as Pakistan, Somalia, Sri Lanka (until 2009), Syria, or Iraq, the government's monopoly on the use of force may be or was disputed by non-state actors in certain territorial areas or policy fields. This, however, is an empirically seldom phenomenon and full-fledged state-like control by non-state actors almost never occurred. This leads to the insight that territorial control should not be considered a necessary definitional attribute of NSCA. It is, however, a suitable indicator in determining the strength of NSCA as well as a useful attribute in developing a typology of NSCA. We will pick up this property of non-state actors as a way to measure their strength.

The third disputed definitional attribute of non-state actors concerns their armament and the employment of violence. Both attributes are considered in tandem due to their resemblance. Most likely the availability and use of weaponry is included in definitions to delimit non-state conflict actors from other actors such as political parties or civil society actors, i.e. groups that are, to a large extent, not actively engaged in political conflicts. This corresponds to the widely shared view that political conflict is widely equated with violent conflict (cf. sec. 6.1). As argued extensively above, this thesis follows a different approach. The line between non-conflict and conflict is crossed at which point measures lie outside of established procedures of regulation. Political conflict might take place between unarmed actors and even where violence is absent. Applied to the definition of non-state actor, the availability and/or use of arms should not be included as a definitional attribute of non-state conflict actors. The arguments are similar: It allows us to track the development of non-state actors over time through periods in which arms are taken up or laid down. Furthermore, this development can be tracked through phases in which conflict persists but violence is absent. As long as actors are involved in political conflict, they fall under the definition of non-state actors.

At the bottom line, a composition of multiple individuals, a certain degree of organization, and non-stateness are definitional core characteristics of NSCA that are relatively undisputed in the extant literature. The other discussed criteria serve as a means to differentiate types of non-state actors, but are not definitional attributes: *Territorial control* and *armament* allow for the assessment of the strength of NSCA, the specific *goals* of non-state actors allow for the differentiation, e.g. between criminal organizations and political non-state actors.

6.2.2 A Real Definition of Non-State Conflict Actors

The discussion thus far has primarily built on the extant concepts. The working definition derived thereof mirrors the state of the literature. All of them more or less meet the requirements of an operational definition. As argued above, however, operational definitions do not suffice. What is needed is a real definition, a definition that meets the criteria of real definitions: completeness, comprehensiveness, symmetry, and depth (cf. sec. 5.1).

The framework developed in chapter 4 allows precisely that. This subsection applies the insights from the philosophical discussion on intentionality to conceptualize non-state actors. Departing from the list of widely acknowledged core attributes derived from the literature, the following discussion puts forward a real definition by elaborating on the constitutive attributes of

non-state conflict actors. This obviates loss of contact with the extant literature while putting forward a real definition. To make the concept fruitful for quantitative and qualitative analyses, indicators for all constitutive attributes are developed. In illustrating its empirical applicability, the approach can be illustrated by its application to the so-called 'Islamic State' (IS).[4]

To define non-state conflict actors, we begin by focusing on the noun: actors. Subsequently, the specifying attributes of 'non-state' and 'conflict' are discussed.

The first point of discussion leads with the statement that the NSCA are groups. Based on the self-referential definition developed in section 4.3, we can state that groups exist at any point in time as being the state of affairs of a number of individuals sharing the we-intentional state of constituting a group. We can further specify that this idea recurs according to the constitutive attributes of intentional states, as laid out in subsection 4.1.1: The *subjects* of the intentional states are the respective individuals. They share the we-intention, i.e. strong collective intentionality, with the *content* 'we are part of group C', where C denotes the respective group. Since this intention qualifies as a perception or belief, its *modus* is cognitive.

It is this belief that 'carries actors over time', even at times when they do not act as collectively, and when no interaction between group members takes place. This approach to defining non-state actors entails that neither external ascription (e.g., the press, government officials, or scientists stating the existence of the group), nor spatiotemporal proximity of the individual group members, nor collective action (such as a committed attack), nor a specific degree of persistence (as indicated, e.g. by mereological variability) are necessary definitional attributes of groups.

To be clear, all of these four attributes might be properties of empirically-existent non-state conflict actors or groups more generally. Governments aspire to gain intelligence of most existing non-state actors operating on their territory, and often this expectation is met. Spatiotemporal proximity greatly facilitates communication between group members and often precedes group formation (Schlichte 2009a). Collective action most often serves the purpose of founding or joining a group, e.g. to eliminate or at least reduce inequality within a society. Finally, well-organized groups might attain a long-term existence, outliving their founders, such as in the case of Al-Qaeda, which survived the death of its founder and leading figure Osama Bin-Laden in 2011. Although important and shared by many, these properties are nonetheless non-constitutive. We might well think of short-lived, clandestine groups preparing for an attack while at the same time being spread over different continents. Following the proposed definition, such actors would—conditional upon the additional constitutive attributes developed below—still qualify as non-state actors.

The membership of individuals in an established group can be measured via all forms of membership declaration by its affiliates. Most importantly, the respective instrument used to establish the number of individuals that think of themselves and of the other putative members of any given group as group members must operate with sufficient certainty.

Suitable instruments are documents that present the command structure of non-state actors; apparent symbols such as tattoos, a uniform, or membership cards; instances of verbal or written self-incrimination that are confirmed or at least unopposed by other group members. The qualification of the last point, i.e. the need for some reciprocity, is important in the discrimination against cases of erroneously assumed group membership (one of the rare cases of individual we-intentionality, see figure 4.2 on page 45) from real membership as constituted by a shared belief (strong collective intentionality).

With regard to the case of IS, several instruments are available. One example points to Excel tables listing members of IS obtained by US-officials (Shapiro 2014). These lists give a fairly broad overview of the size of the group listing each of its members, their role in the organization, their salary, and the number of dependents, i.e. wives and/or children. Most importantly, such lists indicate the mutual awareness and shared knowledge of membership in the organization. The documents furthermore illustrate—although hardly surprising given the size of the group—the administrative effort to organize IS.

[4] IS is not part of the the Disaggregated Conflict Actor Database compiled for the present analysis, as it is not located in Asia and Oceania. IS is nonetheless chosen as an illustrative case considering the availability of original data on its internal structure. This makes this example an ideal case for illustrative purposes. Moreover, the definition of non-state conflict actors put forward in this chapter is designed to be applicable to all world regions, making the example of IS thereby further representative of the definition's universal utility.

The membership of specific individuals in IS can be assessed via the pledge of allegiance bay'a.[5] In contemporary times, bay'a plays an important role in the indication of individual membership in Islamic organizations. For instance, the Muslim Brotherhood was founded 1928 by means of the bay'a. Moreover, states such as Kuwait and Morocco maintain properties of the bay'a for legitimization (Marsham 2013). As for the case of membership in IS, individual pledges of allegiance are available on video. Examples include the German jihadist Abu Mudschahid al-Muhadschir al-Almani, who pledged allegiance to Baghdadi after defecting from Al-Nusra, i.e. another Sunni Islamist non-state actor fighting against the Syrian government (Live Leak 2014); the bay'a by Philip Bergner, aka Abu Usama al-Almani (Live Leak 2013); and Denis Cuspert who talks about his pledge of allegiance to Baghdadi (At-Tibyan 2015). The mutual relation created by the Islamic pledge of allegiance is documented in the proclamation of Baghdadi as caliph by al-Shami (2014), the official spokesperson of IS:

> In light of the fact that the Islamic State has no shar'ī (legal) constraint or excuse that can justify delaying or neglecting the establishment of the khilāfah such that it would not be sinful, the Islamic State—represented by ahlul-halli-wal-'aqd (its people of authority), consisting of its senior figures, leaders, and the shūrā council—resolved to announce the establishment of the Islamic khilāfah, the appointment of a khalīfah for the Muslims, and the pledge of allegiance to the shaykh (sheikh), the mujāhid, the scholar who practices what he preaches, the worshipper, the leader, the warrior, the reviver, descendent from the family of the Prophet, the slave of Allah, Ibrāhīm Ibn 'Awwād Ibn Ibrāhīm Ibn 'Alī Ibn Muhammad al-Badrī al-Hāshimī al-Husaynī al-Qurashī by lineage, as-Sāmurrā'ī by birth and upbringing, al-Baghdādī by residence and scholarship. And he has accepted the bay'ah (pledge of allegiance).

As described above, it is important to rule out cases of one-sided declarations of group-membership. With regard to the case of attacks in San Bernadino, California, on December 2, 2015, for instance, the two attackers had, supposedly, pledged allegiance to IS prior to the shooting. Both, however, were probably not known by other IS members. Thus, although their attack might have been inspired by a similar body of thought as proclaimed by IS, and both attackers might even have thought of themselves as IS members, they are not considered members of the organization according to our definition.

Thus far, we have focused on the synchronic perspective and discussed what comprises NSCA groups. Now, we turn to those procedures within groups that allow them to engage in plural action. Taking up the arguments in sections 4.5, collective action describes the act of collectively pursuing a common goal. As we saw in section 4.6, the ability to act 'as one' additionally requires coherent beliefs and volitions. It might be true that conflictive events involve 'collectives acting'. An prime example for this would be communal riots between loosely-defined collectives that might share no more than a certain physical trait or the London riots in August of 2011. For a collective to gain a certain permanency, however, it seems pivotal to establish procedures to bring about coherent intentions. If we follow this view, non-state actors are more than just groups that act collectively: They are collective subjects.

To say that NSCA are collective subjects spurs several consequences with regard to their conceptualization. More specifically, engaging in plural action as a collective subject requires groups to develop three kinds of procedures:

1. Procedures to form consistent and adequate cognitive intentional states.
2. Procedures to form consistent practical intentional states.
3. Procedures to determine individuals to act on behalf of the group.

Every group necessarily requires the development of these three features in order to act as a collective subject. As laid out in section 4.6, for groups to act rationally, their beliefs must mirror true facts, while their motivations must not be mutually exclusive. Only actors that are able to build consistent sets of cognitive and practical intentional states are capable of goal-oriented behavior and reasonable employment of their assets (cf. List and Pettit 2011). Groups holding contradictory beliefs about current states of affairs–such as widely separated positions on what to achieve and how to achieve it–lack the ability to act as a collective.

This has a direct impact on the process of identifying NSCA. It allows for the derivation of clear-cut indicators to identify and differentiate NSCA. These indicators permit the qualification

[5] Bay'a is an Islamic ritual where an individual or a group pledges allegiance, verbally or in writing, to a religious leader on the condition that the latter faces up to his responsibilities towards the former and that the leader obeys the rules of Islam. In Sunni Islam, bay'a has largely replaced other means to legitimize the caliph such as designation by predecessor or popular vote. While bay'a first appeared in the Quran as a political-religious terminus technicus, it had existed in pre-Islamic times (cf. Marsham 2009; Rosiny 2014).

of a certain group as a collective subject and thereby the determination of the body of cases under analysis. The indicators are:

1. A certain degree of internal organization.
2. A consistent order of preferences as evidenced in a clearly communicated (and ideally documented) list of intentions that are not mutually exclusive.
3. Verbal or non-verbal symbols used by individuals that link their actions to a group.

All of these three elements are necessary conditions to identify a given group as an NSCA. These indicators differentiate NSCA from ad-hoc mobilized groups.

The formation of consistent intentional states is dependent on some form of organizational structure within the group. These procedures need to be institutionalized to a certain degree, i.e. sufficiently accepted, to allow NSCA to come to a consistent worldview and to decide on collective goals.

The formation of consistent and adequate cognitive intentional states requires two things: the means to acquire knowledge about the group-external world, and a way to interpret this reality. At best, NSCA have their own intelligence units that are entrusted to collect, filter, and convey information within a group. IS, for instance, allegedly installed a rather sophisticated structure to gather information on the situation in the extended territories under its control (Barrett 2014; Reuter 2015a). Based on documents allegedly obtained by non-jihadist Syrian rebels from the house of leading IS figure Samir Abd Muhammad al-Khlifawi aka Haji Bakr, the German news magazine DER SPIEGEL describes the procedures within IS (also see figure 6.4):

> [T]here is a constantly recurring, core theme, which is meticulously addressed in organizational charts and lists of responsibilities and reporting requirements: surveillance, espionage, murder and kidnapping. For each provincial council, Bakr had planned for an emir, or commander, to be in charge of murders, abductions, snipers, communication and encryption, as well as an emir to supervise the other emirs – "in case they don't do their jobs well." The nucleus of this godly state would be the demonic clockwork of a cell and commando structure designed to spread fear. From the very beginning, the plan was to have the intelligence services operate in parallel, even at the provincial level. A general intelligence department reported to the "security emir" for a region, who was in charge of deputy-emirs for individual districts. A head of secret spy cells and an "intelligence service and information manager" for the district reported to each of these deputy-emirs. The spy cells at the local level reported to the district emir's deputy. The goal was to have everyone keeping an eye on everyone else. (...) [S]pies also ensured that IS leadership was constantly informed of where the population was weak or divided or where there were local conflict, allowing IS to offer itself as a protective power in order to gain a foothold.

Aside from implemented procedures to gather information, IS has an intolerant and illiberal, but consistent worldview. This worldview is deeply linked to its collective identity. Most importantly, IS follows a specifically strong version of monotheism (Reuter 2015a). On the one hand, it strictly prohibits worshipping any god or gods other than Allah. On the other hand, the strict monotheism of IS is directed against worshipping any other entities besides Allah such as found in the veneration of saints in Shi'ism.

The second necessary requirement to engage in plural action includes procedures to form consistent practical intentional states. NSCA must determine what they aim to achieve and how best to act accordingly. Just as in the determination of coherent cognitive intentional states, the formulation of goals requires an organizational structure.

The decision-making itself involves the determination of ends and adequate means. It takes place on different levels of abstraction. While contemporary military doctrines differentiate many different levels of warfare, it generally suffices to differentiate between two: strategy and tactics. Clausewitz (1980) famously argued that violence is always employed as a means to an end and is never an end in itself (cf. van Crefeld 1998). Based on this assumption, tactics denote the use of armed force toward the end of a victory in a single battle ('Gefecht'). Extending the understanding of tactics to include violent *and* non-violent means, Clausewitz' classification can be adapted to the concept of political conflict as described above.[6]

Strategy, on the other hand, describes the implementation of battles toward the end of victory in war. Thus, a strategy puts single battles into context and directs them toward the more general goal pursued by conflict actors. In political conflict, these goals are defined as the conflict items.

[6] A typology of profiles of violence along with a latent class analysis of empirically-frequent types of tactics is developed in chapter 9.5.1.

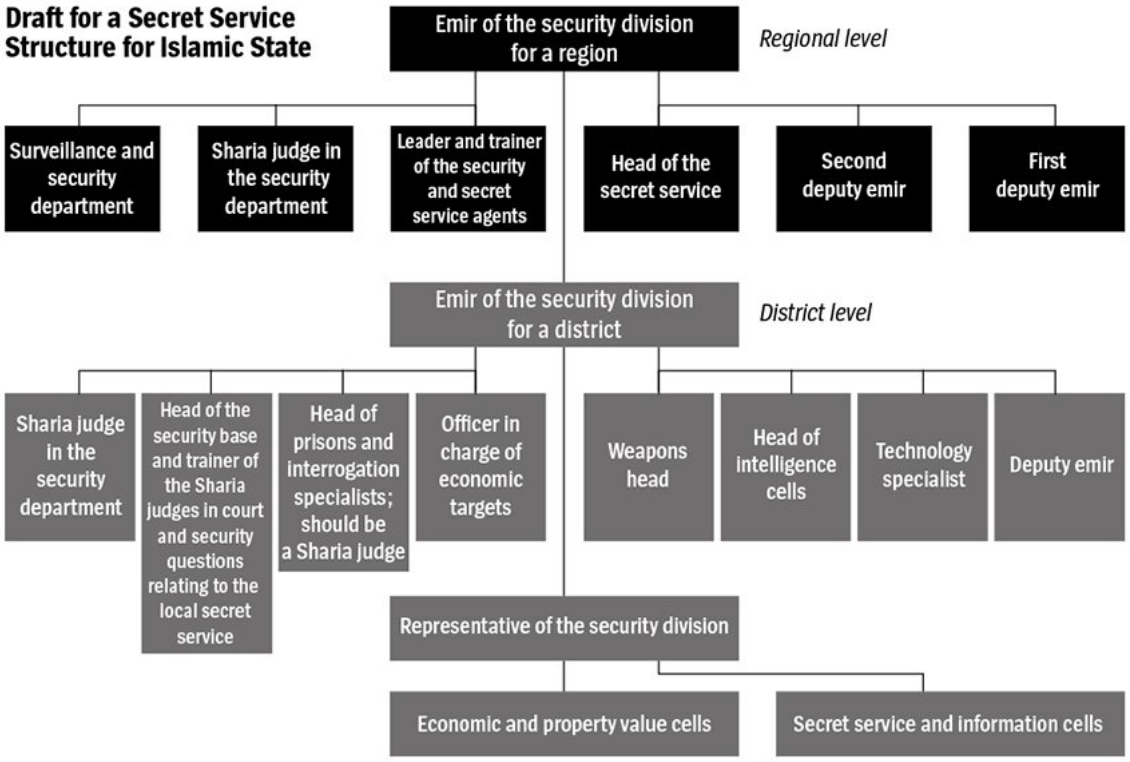

Figure 6.4: Proposed structure of the so called 'Islamic State' (Reuter 2015b).

Let us now apply these ideas to our running examples. The strategy of IS is influenced by two core themes: the establishment of a caliphate in accordance with Islamic law and the eschatological theme of the apocalypse (Reuter 2015a; Wood 2015).

The aim to establish a caliphate requires state-like territorial control: "The Islamic State, by contrast, requires territory to remain legitimate, and a top-down structure to rule it" (Wood 2015). This is why IS gears much of its efforts toward expanding the territory under its control and establishing a legal system following Sharia law.

The strong eschatological motif finds expression, for instance, in the great lengths to which IS conquered of the town Dabiq.[7] Moreover, its strong monotheistic worldview is put into force via systematic persecution of adherents of other religious groups. This is evidenced by performing such upon the Yazidis, a Kurdish religious minority predominantly living in Northern Iraq (Amnesty International 2014). Another examples can be found in the systematic destruction of sanctuaries that belong to those adhering to a different faith as well as to other branches within Sunni Islam. IS explicitly justifies the destruction of artifacts by referring to the Prophecy (Coles and Hameed 2015).

A third requirement to act is the ability to determine which individuals will act on behalf of the group. As laid out in section 4.6, while groups may have volitions that are irreducible to individual volitions, individuals may act upon group rationale in cases of motivational heterarchy. Since qualitative evidence on the basis of interviews is seldom available (cf. Humphreys and Weinstein 2008) and its collection would present an insurmountable challenge in a comparative analysis, the identification of procedures that determine individuals to act on behalf of the group must be based on the use of symbols by acting individuals. These symbols might take different forms: a specific uniform, a flag, a plausible claim of responsibility that is supported, or at least unchallenged, by leading figures of the respective group. These symbols signify that the acts of certain individuals were executed in the name of the respective NSCA and aimed at pursuing a collective goal.

[7] Dabiq is a small town in northwestern Syria which—as Prophet Muhammad is believed to have said—is the place where the armies of Rome meet the armies of Islam for a final battle before the victorious Muslims conquer Constantinople.

Returning to the case of IS, an often-used symbol is a monochromatic flag that is believed to resemble the battle flag of Prophet Muhammad.[8] Although not being unique to IS in its general design, its specific design does have unique characteristics. According to McCants (2015), the group itself used a quote of Ahmad Cevdet Pasha, an Ottoman scholar, to explain the choice of the flag: "The secret in creating a flag is that it gathers people under a single banner to unify them, meaning that this flag is a sign of the coming together of their words and a proof of the unity of their hearts. They are like a single body and what knits them together is stronger than the bond of blood relatives". The purpose of the flag thus clearly alludes to the uniformity of the group and—where it appears in the context of acts by individuals or small collectives—links these acts to the greater group.

In summary, a certain degree of organization, a consistent order of preferences, and symbols linking individuals to a group are indicators that qualify groups as actors. This essentialist view of groups stands in direct opposition to individualist perspectives.

6.2.3 A Taxonomy of Conflict Actors

The above discussion proposes a real definition of the term 'actor' by referring to the concept of 'collective subject'. As we aim to develop a definition of *non-state conflict* actors, however, we need to further elaborate on this notion. It might seem far-fetched to elaborate on a definition of an empirically-confined phenomenon, such as that of NSCA, on the grounds of conceptualizing a ubiquitous concept such as 'group' or 'actor'. The formation of concepts of lower generality (e.g. classical subtypes in contrast to diminished subtypes) in intensional classification, however, follows exactly this procedure: After conceptualizing the more general phenomenon, concepts of lower generality are defined via the specification of properties of the more general phenomenon (cf. Marradi 1990, p. 132).[9] The following applies this method by confining the phenomenon under analysis by adding the terms '*conflict*' and '*non-state*'.

The former specification is only briefly touched upon, as conflict actors were defined above. The latter specification, however, allows us to build a taxonomy of actor types demarcating two types of actors that are not state actors, i.e. non-state conflict actors and militias, from state actors. An advantage of a systematic approach to conceptualization thus lies in a systematic mapping of the conceptual space.[10]

We can define 'conflict actors' as those actors that are part of a political conflict in the above defined sense. This entails that they have an incompatibility of intentions with at least one other actor, are relevant, and act outside of established procedures of regulation. By being part of a conflict, actors are *as per definitionem* political actors, since their volitions or actions directly affect core state functions or the order of the international system. As briefly discussed above, it is not the specific motivation of groups, but rather the fact of their affect on core state functions that makes them political. Obviously, groups can enter and leave the universe of conflict actors throughout their lifespan.[11]

Focusing on the universe of conflict actors, non-state actors can be differentiated from state actors and militias. More specifically, non-state actors are a *taxon* derived from the root concept

[8] Called 'standard' or 'banner', it bears a version of the Islamic testimony of faith, the Shahada: "I declare that there is no deity but Allâh and that Muhammad is the prophet of Allâh." (Newby 2002, p. 193). The design of the seal, displayed on the bottom of the flag, resembles the design of what is believed to be the seal used by Prophet Muhammad.

[9] An alternative route would be 'extensional classification'. Here, one departs from a number of empirical objects or events and sorts them into sets according to at least one property of the objects or events. Extensional classification differs from intensional classification, as it does not depart from a concept but from empirical objects or events. In light of the arguments in chapter 3, intensional classifications seem to be the more adequate procedure based on a critical realist philosophy of science. However, we also apply the method of extensional classification in the empirical analysis in chapter 9, where we draw on Latent Class Analysis.

[10] We here exclusively apply a classification that leads to the formation of categories with a smaller empirical extension (cf. Goertz 2006b) than the root concept. This is typical for many approaches to classification (Collier, LaPorte, and Seawright 2012; Collier and Mahon Jr. 1993; Sartori 1970). Specifically problematic from a critical realist view would be to pursue the idea of 'part-whole' hierarchies in combination with the idea of diminished subtypes, as proposed by Collier and Levitsky (2009). Applying this combination leads to subtypes that entirely lie outside of the conceptual space of the root concept.

[11] This entails that the empirical analysis in chapter 9 does not analyze how collectives become conflict actors *instead* of becoming political actors, but rather under what circumstances NSCA emerge. Analysis of the inclusion of collective subjects that are not conflict actors, e.g. political parties or non-governmental organizations, is a possible extension for future research.

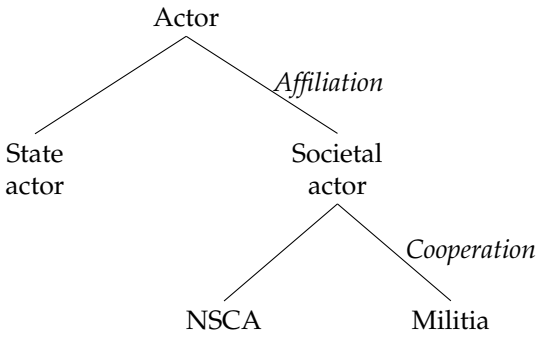

Figure 6.5: Taxonomy of conflict actors.

t'actor' by repeated intensional classification in a three-level taxonomy (see figure 6.5).[12] The two criteria that define the property space of the respective classes at each fork of the taxonomy are the *affiliation of the group members* and the *cooperation of the respective actor with the government of a state*.

The criterion for the affiliation of members of a group allows for the differentiation of two taxa of actors: state actors and societal actors. Affiliation is a characteristic of the individual members of a group and can be operationalized by individual employment status. Accordingly, *state actors* are those actors that are primarily composed of direct employees of a state. An example is the military. State actors are often directly lead by members of the executive branch of a state and are state-financed. *Societal actors* comprise individuals that are not directly employed by the state. This includes actors of the civil society, criminal organizations, and corporations.

The taxon of societal actors can be further differentiated by determining whether the respective actor cooperates with the government or not. In accordance with the above discussion, cooperation can be understood as a form of strong collective intentionality. Two actors cooperate if they share a we-intention toward a common goal and if each of them feels obliged to do his part of the collective endeavor.[13] Applying this criterion allows to differentiate societal actors into militias and NSCA.[14] *Militias* are societal actors cooperating with the government. An example for this can be illustrated with the Sudanese Janjaweed. *NSCA* are societal actors not formally cooperating with the government such as IS.

In summary, *non-state conflict actors* are collective subjects engaged in a political conflict that are not cooperating with the government of the state in which they primarily reside. Collective subjects are groups capable of plural action. Groups are collectives of persons sharing a self-referential strong collective intentional state of being part of the respective group. They are capable of plural action if the group holds a strong collective practical intentional state (possibly irreducible to individual volitions) to act toward a common goal. This is also the case if each (or at least a significant number) of the members of the group is willing to do his part in reaching the collective goal.

The empirical analysis that follows in chapter 9 primarily focuses on non-state conflict actors. The discussion thus far might appear too extensive. Indeed, why use a sledgehammer to crack a nut? The motivation behind tackling the phenomenon of non-state actors as precisely as possible within a critical realist framework lies in the fact that it allows for the elucidation of the inner workings of these actors. We can better understand what makes collective groups and what procedures allow non-state actors to act as collective subjects. It directs the analytical view toward those features of NSCAs that are essential in their very being. By including concrete indicators

[12] Taxonomies are multi-level classification schemes. In contrast to classification schemes, taxonomies are based on more than one criterion. In contrast to typologies, the order of application of fundament is highly relevant. The further down we go in a taxonomy, the larger the number of taxa (Marradi 1990).

[13] Note that cooperation here denotes cooperation between two different groups and not cooperation within a single group. Thus, the decisive criterion is a shared practical intention to act toward a specific goal and not a shared belief of group membership. Trivially, the latter cannot be the case since in order for groups to cooperate, they necessarily must exist as *different* groups.

[14] A certain ambiguity is introduced in those conflicts that affect more than one state. In these conflicts, actors might cooperate with one government, but not with the other. Depending on what actions within a conflict are analyzed, actors might qualify as militias or as non-state actors. If a given societal conflict actor needs to be unambiguously classified, the criterion can be specified to mean cooperation with the government of that state in which the respective group primarily resides.

and linking the rather abstract characteristics of what constitutes collective subjects to measurable indicators, as well as by applying the attributes to derive a taxonomy of actors, the above has illustrated the added value of such a realist approach. Returning to the issue of conceptualizing non-state conflict actors as collective subjects, the following elaborates on those characteristics of non-state conflict actors that are not constitutive attributes.

Whereas the above has laid out all non-trivial essential features of non-state actors, the following presents characteristics that can be derived from these definitional attributes. To carve out a core definition, these characteristics were not included in the above definition. They are, however, important, when it comes to mechanisms and the functioning of NSCA.

From the above discussion, we can derive the following characteristics of NSCA:

- NSCA, qua being groups, have a specific type of collective identity that is shared among their individual members.
- NSCA, qua being actors, follow certain goals.
- NSCA, qua being collective subjects, are characterized by a specific form of relational structure that enables them to form coherent goals.
- NSCA, qua having an existence over and above their individual members, are mereologically variable.

These four characteristics are addressed in turn together with the implications for the typology of actors and the subsequent empirical analysis.

Collective Identity

The self-referential strong collective intentionality constituting NSCA as groups can likewise be denoted as a specific type of collective identity, i.e. a shared collective self-concept (Mathiesen 2003; cf. Albert 2010b). Whereas collective identity *per se* is a constitutive feature of all groups, the specific form of collective identity can serve as a category to classify groups.[15] In light of the pivotal importance of the content of collective identity—as a facilitating factor of plural action, a potential cause for intergroup conflict, a topic in cultural conflicts, or as a way to differentiate different actors—it appears important to determine the content of the collective identity of actors.

To do so, the NSCA database codes the collective identity for each of the included actors. For each of the included actors, the collective identity is identified. The classification draws on an analysis of symbols, documents, or even a specific habitus (cf. Albert 2010a). The variable can take five values: religious, economic, ethnolinguistic, political, and environmental. The different contents of collective identity are not mutually exclusive and can be coded in any combination. Based on the above description, for instance, the Islamic State's collective identity can clearly be identified as being religious.

Orientation

Collective identity relates to group-internal relations. As conflict actors, however, NSCA likewise pursue certain goals. In the context of political conflicts, these goals often contradict goals of state actors and become conflict issues. Conflict issues can be categorized according to the concept of political conflict as presented in section 6.1. On a more abstract level, however, the practical intentions of NSCA might be described as their orientation. This orientation need not necessarily be the object of contention, as is the case with conflict issues. The term orientation is coined to more generally classify the aims of collective subjects. Collective identity and orientation are often closely related. This is hardly surprising given the close link between how one sees and interprets the world and what one wants to achieve or change. The shared identity of groups often translates into a specific orientation. This, however, need not necessarily be the case. For instance, A group might base its collective identity purely on religion, while its orientation faces fighting against environmental degradation. Collective identity and orientation are different concepts that

[15] The notion of collective identities in the context of political conflicts appears in four different ways. First, collective identity constitutively underlies groups and facilitates plural action. Where individuals identify with groups allows them to overcome problems of collective action (Wendt 1999, p. 242). Second, collective identities might cause (Huntington 1996; Kaufman 2006) or facilitate (Gurr 1974) the onset of conflict. Third, collective identity is deeply linked to the concept of cultural conflicts since everything "was von einer Gesellschaft zur Hervorbringung und Wahrung der kollektiven Identität konstruiert und sodann von den Akteuren in einer Kommunikationssituation als Kontext aufgebaut wird, gehört zum Bereich des Kulturellen. (Croissant, Schwank, et al. 2009, p. 27). Cultural identity might thus be the topic of communication in intergroup conflict. Fourth, being a constitutive element of groups, identities at least allow a differentiation of groups (Esteban and Ray 2008).

both allow differentiating collective subjects. Cases in which two groups have a different collective identity or different goals might connote their cooperation. They cannot be part of the same collective subject, however. Thus orientation, just as collective identity, serves as a suitable means to categorize NSCA. As above, five kinds of *orientation* are discerned: religious, economic, ethnolinguistic, political, and environmental. These types can occur singularly or in any combination.

The necessity of procedures to build coherent intentional states is reflected in the internal organization of NSCA. At one end of the continuum are NSCA with a purely hierarchical structure, where competencies are clearly allocable from top to bottom. One leader exists, or a small clique of leaders, who set the agenda and organize the implementation, while the subordinates at the bottom of the hierarchy implement these agendas without much decisional autonomy. In these classes of NSCA, few are motivationally autarkic since only the elite formulate preferences and the respective means to be employed. Such organizations are often geographically concentrated, i.e. usually act in a specific confined space. Different functions of the organizations are bundled at the top of the hierarchy. Decentralized actors rest at the other end of the continuum with no clear hierarchical structure. In such actors a multitude of centers of authority exists in which policies are designed and implemented. Such actors are often geographically fragmented, acting transnationally or even globally. As a consequence, motivational autarky is distributed over a larger number of decision-making centers, usually complicating the formation of consistent intentions. Consistent intentions, however, are a prerequisite for plural action. It can thus be expected that decentralized actors are more likely to fragment than centralized actors. As discussed, the dividing line between a single decentralized and multiple actors is marked by a consistent set of cognitive and practical intentional states as evidenced by a common orientation, a common identity, and the existence of mechanisms to enable coherent practices. Indicators to assess whether NSCA are centralized or decentralized encompass the existence of a single central authority and geographic concentration.

Since non-state actors are collective subjects, they are usually mereologically variable. With regard to non-state actors, mereological variability states that neither existence nor persistence of NSCA is dependent on *specific* individual members. While all members of a collective subject may have changed, the collective subject itself might stay the same. The mereological variability of NSCA entails consequences for methodology. An approach, which compares NSCA with a wide longitudinal and cross-sectional scope, should rather focus on groups and position them within the social structure, as well as describe their internal organization, i.e. the internal positioning of individuals, without referencing to *specific* individuals (Smith and Fetner 2007, p. 16). While it may be true that some leaders, e.g. Che Guevara or Osama bin Laden, have deeply shaped the organizations they have built, one should not overestimate individualist traits of leaders. Similarly, the death of individual NSCA members—be it by suicide bombing, battlefield combat, or targeted killing—might even strengthen NSCA. NSCA are more than their individual members. They are tied together by a shared intention. And arguably, the glorification of martyrdom is directed towards the goal of strengthening exactly this collective identity. Emphasizing a difference between 'them and us' allows for strengthening of collective identities. The example of martyrs scarifying their lives for the collective end might foster the will of others to do the same. Likewise, individuals leaving an organization or being killed in battle do not necessarily affect the working of a collective subject. Groups persist not by specific individuals, but a collective that shares a specific collective identity. And although a collective identity cannot persist without being shared, it might survive longer than a lifespan.

6.2.4 Conceptual Assessment

The definition of NSCA fulfills all four criteria of conceptual adequacy. Just as the Heidelberg conceptualization of political conflict, the definition of NSCA is *complete*, as it offers a systematic hierarchy of constitutive properties and measurable observables. NSCA are defined via three constitutive attributes: they are societal actors not cooperating with the government ('non-state'), conflict actors ('conflict'), and collective subjects ('actors'). Each of the attributes can be further disaggregated to more specific constitutive attributes as described above. Indicators for each of the three attributes where likewise formulated above and need not be repeated here. Second, the definition is *comprehensive*. Non-state conflict actors are defined synchronically by the fact that they are groups, as further specified in the self-referential definition. The processual nature is captured by those procedures that are necessary for the formation of consistent beliefs and volitions.

Third, the approach is *symmetric* by specifying and discussing entities that might be regarded similar to NSCA but do not qualify as such under the proposed definition such as, e.g. mobs, rioters, or militias. With regard to conceptual depth, the approach is likewise broad as well as internally differentiated. It is broad since it does neither include specific volitions (cf. Beardsley and McQuinn 2009; Bruderlein 2000), nor territorial control (cf. Dudouet 2012; International Committee of the Red Cross 1977), nor the use of armed force (cf. Bruderlein 2000; Petrasek 2001) as constitutive attributes. At the same time, it is differentiated since the thick description of NSCA based on the arguments in chapter 4 allows us to derive characteristics to differentiate NSCA along multiple lines: size, internal organization, weaponry, territorial control, ideology, orientation, and their relations to other actors. All of these characteristics are coded in the NSCA-database originally designed for the present analysis on grounds of the reasoning of this section.

In summary, this section has presented a new concept of political conflict developed upon the foundations of a critical realist perspective. Furthermore, this section has illustrated the added value of the concept of political conflict in comparison with existing approaches. The following section more closely focuses on one of the constitutive attributes of intrastate political conflict: conflict actors.

6.3 Natural and Social Space

Following the now-classic approach to social explanations, most social science research distinguishes two different levels of analysis: a micro-level encompassing the acting 'parts', and a macro-level referring to the context of actors (Coleman 1990; Esser 1993; Greve, Schnabel, and Schützeichel 2008). The specific empirical phenomena to which these levels relate differ between approaches: The micro-level often comprises individuals or groups, while the macro-level comprises the structures in a single state or the international system. In the framework of this thesis, the micro-level is populated by individuals, and the meso-level by collective actors. This section systematically describes the macro-level of analysis.

Proposed in what follows is that conflict studies—and possibly other approaches dealing with inter-group relations within societies—should conceptualize the macro-level as consisting of multiple overlapping material contexts and social fields. Whereas contexts are material or natural in nature, fields are social in that they constitutively depend in their existence on collective intentionality. This approach to conceptualize the macro-level is first and foremost a method to systematically approach multi-level theoretical analysis. Still, it permits the interweaving of the complex nature of natural and social reality in a coherent theoretical argument. This argument is presented in the following chapter 8.

6.3.1 A Taxonomy of Structures

Aiming to explain the emergence of conflict actors and their strategic and tactical decisions, we are mostly interested in those factors that are important for the preference formation of actors. Conflict research to date has put almost every conceivable and reasonably plausible variable under scrutiny (cf. sec. 2). To assess the role of factors located on the macro level—and, more practically, to determine adequate control variables for the empirical analysis—a systematic approach is advisable. To do so, the following description categorizes macro-variables in a taxonomy. The taxonomy applies the understanding of the social world as proposed in chapter 4 to systematically classify explanatory variables of interest in conflict research.

On the first level, we can differentiate between the *natural space* and the *social space* based on the criterion of whether the respective entity is ontologically dependent on collective intentional states (see figure 6.6).[16] If every individual in a population lost its memory and with it the collectively-shared intentional states, the natural space would continue to exist unaffected. It is entirely constituted by material matter. The social space, on the other hand, is ontologically dependent on collective intentional states. As Bourdieu (2002, p. 176) pointed out:

> Après tout, qu'est-ce qu'un pape, un président ou un secrétaire général, sinon quelqu'un qui se prend pour un pape ou un secrétaire général ou plus exactement pour l'Église, l'État, le Parti, ou la nation? Seule chose: ce qui le sépare du personnage de comédie ou du mégalomane, c'est qu'on le prend généralement au sérieux et qu'on lui reconnaît ainsi le droit è cette sorte "d'imposture légitime" comme dit Austin.

[16] The differentiation bears resemblance to the differentiation of three worlds by Popper (1978).

Entities populating the social space, most of all institutional facts, are often embodied or linked to material objects (which are part of the natural space). Their essential properties, however, are determined by the fact that they are shared intentional states, i.e. by their mode and content (cf. sec. 4.1). Stated as it is here, this differentiation is too broad to function as an analytically useful concept. Thus, bringing explanatory variables of empirically-oriented research and abstract ontological discussions closer together, the following taxonomy formulates more specific subtypes for both spaces.[17]

Two subtypes, or 'contexts', within the *natural space* can be discerned: The *geographic context* refers to the physical geography. It encompasses the distribution and types of natural resources, topographical properties, and the climate as well as meteorological phenomena. Of greatest interest in the field of conflict studies is the presence of oil, diamonds, and drugs, as well as the inhospitability of an area (cf. ch. 2 and Ross (2004)).[18] The *anthropological context* describes human-related but not socially-constructed characteristics of populations. This encompasses settlement patterns and demographic characteristics of populations. In the field of conflict research, the size of the population has attracted by far the most attention, proving to be of greatest explanatory power. Showing only mixed results in the research synthesis in chapter 2, but of importance, are youth bulges (Croissant, Schwank, et al. 2009).

The *social space* is constituted by what has been described here as the social structure. It comprises relations between social positions, which in turn are constitutively dependent on collective intentionality. A useful and—due to its spatial analogies—analytically fruitful view of the social space was formulated in the field theory of Pierre Bourdieu (Bourdieu 1982, 1985, 2001; Bourdieu and Wacquant 1992). Without buying every aspect of Bourdieu's theoretical approach, we can adapt the spatial analogies of his definition of social fields. Following this idea, the social space can be differentiated in connected, but relatively autonomously functioning social fields. A field, in turn, can be understood as a spatial model of relative social positions. More specifically, Bourdieu and Wacquant (1992, p. 97) defines a field as

> a network, or a configuration, of objective relations between positions. These positions are objectively defined, in their existence and in the determinations they impose upon their occupants, agents or institutions, by their present and potential situation (situs) in the structure of the distribution of species of power (or capital) whose possession commands access to the specific profits that are at stake in the field, as well as by their objective relation to other positions (domination, subordination, homology, etc.).

As laid out in section 4.2—and here we can tie back the notion of fields to our earlier discussion on collective intentionality—social positions are constitutively dependent on collective intentional states. This synchronic relationship likewise entails that the structure of a field is not dependent on interaction or even collective action. For instance, a relation of subordination between the German Chancellor and his or her ministers exists even if it is not instantiated by associated actions. Positions are objective in that they are able to bear causal powers. They bestow those individuals holding certain positions with powers otherwise not wielded.

Thinking of positions as being located on a spatial field allows for the introduction of analytically useful relations. Pertaining to different positions on a single field, we can differentiate between proximity and distance as well as between super- and subordination. Moreover, we can compare the position of individuals between different fields. Individuals might hold similar positions across multiple fields, a case of 'homology', or different positions, a case of 'heterology'. This requires the existence of multiple fields, linking back to our effort to propose a taxonomy of macro-level entities.

We can differentiate three fields in modern nation states as subtypes of the social space.The *political field* is constituted by the distribution of chances or powers to influence and articulate policies by participating in politics. Relatively stable and empirically common types of distributions are identified by political regime typologies among the most-widely used explanatory factors analyzed in conflict research (cf. ch. 2). To define political power as 'direct influence on political processes qua holding office' would be too narrow a definition of political power, as it would exclude the majority of the population. In modern political systems, political influence is

[17] Here, again, we follow the logic of classification described above and discussed in footnote 10.

[18] The specification of these two contexts reveals that the classification between the natural and the social space is not always clear cut. With regard to the geographic context, for instance, the classification of valuable resources such as diamonds into the natural space is dubious. Although plausible at first sight, some of the essential features that make diamonds important with regard to conflicts include their value. This value, in turn, is socially constructed and rests upon the collectively accepted view. Thus, diamonds are in a sense more than a carbon compound. On the other hand, the value of diamonds is a result of its material characteristics and its rarity.

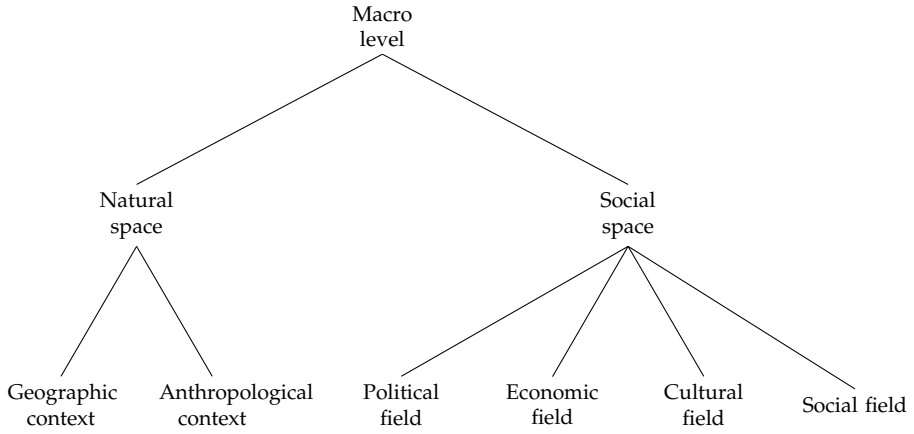

Figure 6.6: Taxonomy of macro phenomena.

seldom direct but mediated via representation. Political elites can thus be viewed as representatives of populations. This does not necessarily require democratic procedures. Where political elites act on behalf of certain populations, the former's status within the political system indirectly determines the influence of the respective group on political processes.

The *economic field* consists of the distribution of wealth in a population. The economic field is well suited to illustrate the difference between absolute and relative field positions. A low absolute position in the economic field is captured by the concept of poverty. Inequality, in contrast, describes a situation where wealth, irrespective of its absolute amount, is unequally distributed. In global comparison, the population of the United States holds high absolute positions in the economic field. At the same time, however, the economic field remains characterized by a comparatively high degree of inequality. Typical indicators are the gross domestic product and the Gini index.

The *cultural field* distributes identity through the three cultural domains of language, religion and historicity (Croissant, Schwank, et al. 2009). From a normative perspective, the cultural field differs from the political and the economic field in its 'nominal scale': It is impossible to rank a given religion, language or origin higher or lower with regard to others. What is possible, however, is to group individuals sharing cultural characteristics together. Thus, analogous to settlement patterns in the geographical context, we can locate individuals on the cultural field. Typical explanatory variables in conflict research pertaining to characteristics of central importance in the cultural field are the religious and ethnolinguistic fragmentation of a population. However, this view reduces culture to individual 'ethnic markers'. It fails to take into account an essential characteristic of culture: "the production and reproduction of meaning" (Allan 1998, p. 37; cf. Croissant, Schwank, et al. 2009; Goldblatt, Held, and McGrew 1999).

The *social field* represents the distribution of embodied cultural capital (cf. Bourdieu 1986) in the population. Cultural capital describes the knowledge and education of individuals. Common quantitative indictors include literacy or educational attainment. Cultural capital greatly influences individual chances in life such as participation in the labor market or political participation.

6.3.2 Analytical Value of the Field Theoretic Approach

While these fields all coexist in societies, they differ in importance, i.e. their relative impact on the lives of individuals and groups. In the words of Stewart, Brown, and Mancini (2010, p. 10): "what is important are the elements that seem most significant to the people involved, i.e. what they believe to be central – indeed, in the extreme, the kinds of things which people will fight over." Dominant fields do, despite the relative autonomy of fields, even influence dynamics of other fields.[19]

The relative importance of fields usually remains relatively stable over time. However, in times of crisis and deep structural change, shifts in relative importance may occur, and often, rapidly.

[19] An example for an account of a dominant field is the theory of Karl Marx, who postulated the dominance of a specific field. He conceptualized the *means of production* as decisive in determining the course of history and diminished the role of, e.g., religion to be the "*Überbau*" and thus having no decisive influence on historical processes.

Examples for rapid change can be considered in terms of changes in the political regime or economic structure through external intervention and decisive shifts in the distribution of cultural identity in a society, such as after the partition of Pakistan in the 1970s. More important for cross-sectional analyses are differences between societies.

The conceptualization of social space as a combination of different fields serves the aim of endogenization and disaggregation. The former is addressed by highlighting the constitutive connection between collective intentional states and social positions. Fields as configurations of social positions supervene on collective intentional states that subsequently are constitutively dependent on the existence of others (compare section 4.4). Although social positions supervene on similar intentional states shared by a number of individuals, however, they cannot be reduced to individual intentional states due to multiple realizability.

In summation, the taxonomy of the macro-level offers a means to systematically integrate approaches to the explanation of political conflict. It allows us to transcend a purely geographical understanding of space, revealing the view of relative positions in different fields. Furthermore, the taxonomy allows us to analyze similarities and differences between different fields, the relative importance of fields, and changing patterns over time. The analytical value of this understanding reaches beyond the focus of this thesis in which only some of the analytical possibilities are translated into praxis.

6.4 Summary

Instrumentalist strategies and operational definitions do not suffice to serve as a foundation for valid and reliable data. The practical value of data depends on thorough conceptualizations. A clear understanding of the attributes of conflicts, non-state conflict actors, and the natural and social space allows for the deduction of valid indicators, as well as the investigation of the causal interactions of conflicts with other phenomena.

Expanding the recent debate on practical issues of data quality and measurement, this section has evaluated extant concepts of political conflict and non-state conflict actors based on their underlying definitions. Employing realist criteria of conceptual adequacy, it concludes with regard to political conflicts that all existing data projects have specific advantages and drawbacks. Due to its instrumentalist stance, the dataset by F&L appears problematic from a critical realist perspective. While MAR and CSP are much more substantive, their conceptual structures lack systematicity. Whereas COW and PITF fulfill some requirements, UCDP performs best according to our criteria. However, weak points of UCDP include the narrowness and poor differentiation of its concepts of conflict and, especially, of intensity. Regarding the latter, PITF fares much better.

The evaluation identifies a broad, yet differentiated and integrative, conception of conflict, as well as a multi-dimensional and multi-indicator approach to intensity as remaining desiderata. By addressing these, the Heidelberg approach opens new avenues for empirical research. Possible applications encompass the empirical analysis of the dynamics of escalation and de-escalation; an integrative analysis regarding various levels of violent and non-violent conflicts conceptually separate from the question of conflict onset and termination; an analysis of a broad range of possibly varying conflict issues; and an investigation into conflict transformations.

With regard to non-state conflict actors, we found that quantitative research often lacks elaborated concepts whereas qualitative research often fails to establish definitions that can guide data collection. Drawing on extant definitions, we found that a composition of multiple individuals, a certain degree of organization, and non-stateness are definitional core characteristics of NSCA. Applying concept developed in chapter 4, we identified NSCA to be collective subjects. This entails that they are groups (in the synchronic perspective) that are able to act as a collective (in the diachronic perspective). To act collectively, they must develop procedures to form consistent beliefs and volitions as well as determine individuals to act on behalf of the group. In contrast to other kinds of conflict actors NSCA are not affiliated nor cooperating with the government of the state in which they primarily reside. From this real definition of conflict actors, we can derive that NSCA are characterized by a collective identity, a specific orientation, a specific kind of organizational structure, and are mereologically variable.

With regard to the macro-level, we differentiated between the natural and the social space. The natural space can be further discerned into the geographic and the anthropological context. The social space consist of the political, the economic, the cultural, and the social field.

Taken together, these concepts form the building blocks of the theoretical approach of this thesis. Before we turn to the theory, however, we situate our approach in the field. This is done in the next chapter.

Chapter 7

Explaining Conflicts

Explanations exist; they have existed for all time; there is always a well-known solution to every human problem–neat, plausible, and wrong.

Henry Louis Menken

This chapter identifies, compares, and criticizes three explanatory approaches that dominate conflict research. Such an account does not exist in the field of conflict research. While the theoretical reviews presented in chapter 2 illuminate the field from various angles and are sufficiently exhaustive in their respective domains, they do not divide the field along explanatory approaches. Some comparable approaches exist for theories of international relations (Bennett 2013), social movements (Opp 2009), and path dependence (Mahoney 2000). Each of the approaches, however, is different to the one pursued here.

Taking theoretical arguments to the centre stage addresses the widespread shortcoming of too broad representations of essentially complex theoretical accounts. More often than not, theoretical discussions play a minor role in the large-n comparative literature on civil war. A focus on data and methodology in the quantitative literature is defensible in light of the limited space of journal papers. Most studies with an empirical focus, however, do not exclusively aim at giving a descriptive historical account. For instance, Collier (2000a) and Fearon and Laitin (2003) even derive policy advises from their results. This presupposes the generalizability of identified mechanisms as well as their significance in future conflicts. In this sense, even empirically focused papers are rarely a-theoretical.

Theoretical aspiration, on the one hand, as well as brevity of description and lack of comparative assessments, on the other, lead to a state of tension in the literature. Leaving aside theoretical underpinnings makes it difficult to understand, systematize, and criticize existing approaches and thus hinders progress in explaining political conflict and the formation of non-state actors. To exclude theoretical work and focus on empirical issues is not an option. As was outlined above, theoretical arguments are a *sine qua non* if one adheres to the nomothetic approach of science, i.e. the aim to formulate generalizable statements about classes of entities. Consequently, the following account addresses the theoretical ambiguity in a critical comparative account of existing theoretical approaches.

Highlighting the peculiarities of existing explanatory approaches and reframing them in a single terminology allows to elucidate where the theoretical approach of this thesis builds on or departs from existing approaches. We will proceed as follows. Section 7.1 compares selected contributions to the study of conflict occurrence, onset, and duration. It focuses on three influential strands of research: the grievance perspective focusing on the causal link between inequality, discontent, and (violent) political action; the economic perspective, which portrays rebels as utility-maximizing rational actors; and the feasibility perspective, which refers to the explanatory power of opportunity structures. These three schools dominate the theoretical debate in conflict research.

Section 7.2 takes a more general look on these perspectives and relates them to three explanatory approaches. An explanatory approach here denotes a certain stance with regard to the diachronic relations between structure and agency. More specifically, the following comparison focuses on two core nomological components in theories on intrastate conflict: The first relates to enabling, constraining, and forming effects of structures on individuals. The second deals with the theory of action to explain individual and collective participation in violence. Based on how these two nomological components are defined, three explanatory approaches can be identified:

- the *individualist approach* of the economic perspective
- the *structuralist approach* of the feasibility perspective
- the *moderate collectivist approach* of the grievance perspective

The former term with regard to each of these three pairs denotes the explanatory approach. The latter term denotes how the three explanatory approaches are usually referred to in the context of conflict research.

Each of the following two sections contributes to the goals of this thesis. Section 7.1 allows to situate the theoretical approach of this thesis within the wider theoretical debate of conflict research. Revealing a divide between slim economic theories, complex grievance-oriented approaches, and over-simplistic structural approaches, it allows to find an adequate position within the field of research. Section 7.2 provides guidance with regard to the path to be pursued in future theories on political conflict. It argues in favor of realist, and against instrumentalist theories as well as in favor of an approach where theoretical and empirical foci overlap. Arguably, this is the moderate collectivist approach.

7.1 Three Approaches

A detailed reconstruction of theories is an extensive endeavor. Consequently, it is impossible to account for the majority of the literature. To select the universe of publications for review, I distinguish the grievance perspective, the economic perspective, and the feasibility perspective. This threefold differentiation fits the literature and is broadly in line with the theoretical reviews discussed above. To structure the discussion of theoretical approaches, the presentation of each theoretical approach proceeds in three steps.

- In a first step, we select the publications to review for each perspective. A legitimate strategy is to identify the most influential works of research traditions (cf. Opp 2009). These are those works that shaped a specific tradition and are predominantly cited as 'founding fathers'. This complements the broad perspective of our research synthesis in chapter 2.
- In the second step, we review the theoretical arguments. Theories consist of statements describing the relationship between concepts. Accordingly, we analyze the conceptualization of the most important independent and dependent variables. Questions of operationalization are only discussed if it necessary to understand the theoretical argument. Moreover, the theoretical argument is rephrased in terms of the micro-macro-micro model of explanation (Coleman 1990; Esser 1993). This includes a thorough analysis of the nomological statements within and between levels.
- In a third step, we summarize recent developments within the three perspectives.

7.1.1 Grievances

The first influential strand of research to be portrayed emerged in the 1960s and 1970s with Davies (1962) and Gurr (1974). It highlights the role of grievances felt by individuals when explaining the emergence of protests and civil war. In this strand of research, collective identities play a pivotal role. Gurr (2000), for instance, focuses on ethnopolitical groups as the main unit of observation. It would be misleading, however, to denote such approaches as purely 'ethnic' or 'identitary'. Although collective identities are of central importance, the approaches by far reach beyond the scope of ethnic identity as they include arguments on mobilization and opportunity structures. The pivotal explanatory factor in the explanation of political conflicts, however, are perceived grievances that motivate individuals to engage in collective violence.

Following the outline defined above, the following discussion illustrates the foundations of the research tradition in the 1960s and 1970s as well as more recent advances. First, it describes the concepts and theoretical arguments of Gurr's seminal contribution *Why Men Rebel*. Second, it discusses the most important changes to the overall grievance argument appearing in Gurr (ibid.). Finally, recent contributions to the debate are presented together with advances in the economic and the feasibility perspective in subsection 7.1.4.

Why Men Rebel

The key explanatory variable of Gurr's theoretical argument is relative deprivation. Relative deprivation is famously defined as the "perceived discrepancy between men's value expectations and value capabilities. Value expectations are the goods and conditions of life to which people believe they are rightfully entitled. Value capabilities are the goods and conditions they think they are capable of attaining or maintaining, given the social means available to them." (Gurr 1974, p. 24).

Relative deprivation is a psychological state pertaining to the perceived disparity between expectations and subjectively estimated capabilities. The emphasis on the subjective nature of relative deprivation entails that the latter can—at least logically—be at odds and even diametrically opposed to objectively given inequality. Both, capabilities and expectations relate to the *current state* of a person and to its *future prospects*.(ibid., p. 27) Accordingly, expectations denote what one justifiably expects to keep as well and what one justifiably aims to attain. Capabilities refer to the values a person actually possesses and to the amount of values he thinks he is able to achieve in the future.

Relative deprivation is genuinely a psychological property of individuals and thus located on the micro-level. Political violence—the dependent variable of Gurr's theory more closely defined below—refers to the use or threat of violence by a collective. This entails the question of aggregation. Briefly addressing this issue, Gurr defines a group's expectation or capability as the aggregated average of the individual value positions (ibid., p. 27). This way, the concept of relative deprivation can refer to both "individual states of mind and their collective distribution" (ibid., p. 44) While the intensity of relative deprivation is "a psychocultural variable [and] the basic unit of analysis is the individual" (ibid., p. 83), it can be analyzed as an aggregated mean of groups.

Expectations and capabilities are both related to values, i.e. "desired events, objects, and conditions for which men strive" (ibid., p. 25). Values are further specified and encompass welfare values contributing to "physical well-being and self-realization" (ibid., p. 25), power values determining one's autonomy to act and the influence on the acts of others, and interpersonal values such as one's status in the society, the embeddedness in a community, as well as "the sense of certainty that derives from shared adherence to beliefs about the nature of society and one's place in it, and to norms governing social interaction" (ibid., p. 26). These three value types demarcate the spectrum of individual incentives.

How is relative deprivation linked to inequalities between groups? On the one hand, relative deprivation is based on *intra-individual* comparisons over time. This is evidenced by Gurr's (ibid., pp. 64–65) reference to the Cantril scale. Cantril (1965) asked individuals to compare their past, present, and future positions. On the other hand, relative deprivation is not completely independent from inter-group comparisons. The expectations of the members of a group may rise with the upward mobility of other groups (Gurr 1974, p. 105). Nonetheless, the focus constitutes the central difference between the concept of relative deprivation and the concept of horizontal inequality (cf. Cederman, Weidmann, and Gleditsch 2011; Stewart 2008). The former refers to a relation between individuals or even intra-individual comparison over time. The latter denotes inter-group relations.

Bringing together the temporal dimension and the level of aggregation, relative deprivation of groups can be analyzed as a state of affairs as well as over time. Analyzed statically at any point in time, relative deprivation is characterized by its scope and its intensity (Gurr 1974, p. 29): Scope denotes the relative proportion of people affected by a state of relative deprivation. Among the concepts discussed thus far, this is the first variable that genuinely relates to the meso-level. It makes no sense to speak of the scope of relative deprivation of an individual person. Intensity captures the amount of discontent (or synonymously anger (cf. ibid., p. 21)) resulting from relative deprivation (ibid., pp. 29, 60). Analyzed over time, Gurr differentiates four types of relative deprivation based on the development of expectations and capabilities (see table 7.1) (ibid., pp. 46–56).

In parts, the terms as used by Gurr (ibid.) are misleading. It is confusing that Gurr speaks about the "intensity of R[elative] D[eprivation]" (ibid., p. 29) and in the same sentence defines it as "anger to which it [, i.e. relative deprivation,] gives rise". Anger, discontent, and 'intensity of relative deprivation' thus become synonymous as all of them refer to a consequence of relative deprivation. It would have been more intuitive to denote the degree of discrepancy between value expectations and capabilities as 'intensity'. This would have allowed for more parsimony with

		Expectations		
		↘	→	↗
Capabilities	↗	–	–	–
	→	–	–	aspirational
	↘	–	decremental	progressive

Table 7.1: Types of relative deprivation.

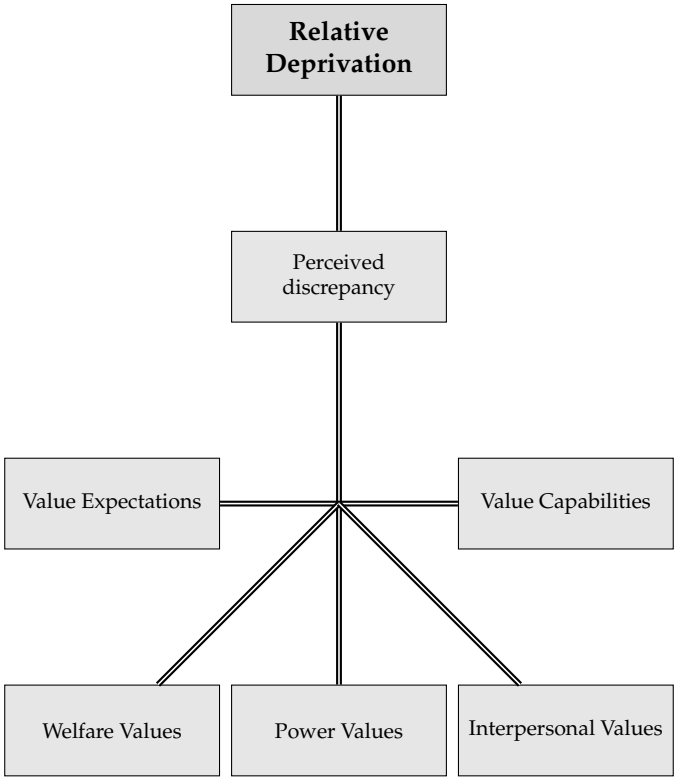

Figure 7.1: Concepts, attributes, and indicators.

regard to the variety of terms denoting the psychological consequence of relative deprivation. The ambiguities bear problems pertaining to the clear demarcation of explanans and explanandum in one of Gurr's central hypotheses: "The potential for collective violence varies strongly with the intensity and scope of relative deprivation (RD) among members of a collectivity." (Gurr 1974, p. 24) Since 'potential for collective violence' and 'discontent' are synonyms (cf. ibid., pp. 320, 324) and likewise 'intensity of relative deprivation' and 'discontent', the hypothesis becomes partially redundant. A better definition of intensity and greater terminological parsimony would have increased the clarity of his approach. This underlines the importance of clearly explicated and well defined concepts as advocated by critical realism.

In summary, the term relative deprivation denotes a subjective discrepancy between the welfare, power, and interpersonal values a person thinks he or she ought to possess and what the person thinks he is able to achieve. Analyzed as a group-level variable, relative deprivation describes the average intensity of relative deprivation, which is a result of relative deprivation, and the proportion of affected group members.

The main dependent variable is political violence, defined as "all collective attacks within a political community against the political regime, its actors—including competing political groups as well as incumbents—or its policies." (ibid., pp. 3–4). Violence is not restricted to the actual use of violence but also includes threats to use violence (ibid., p. 4). Besides this rather broad definition of violence, several types of violence are differentiated.

As can be inferred from the definitions, Gurr (ibid., pp. 9–12, 334–335) differentiates types of violence based on two criteria: the level of organization and the amount of popular partici-

		Popular Participation	
		limited	*widespread/substantial*
Degree of Organization	*unorganized*	–	Turmoil[1]
	organized	Conspiracy[2]	Internal War[3]

[1] "Relatively spontaneous, unorganized political violence with substantial popular participation, including violent political strikes, riots, political clashes, and localized rebellions." (Gurr 1974, p. 11)
[2] "Highly organized political violence with limited participation, including organized political assassinations, small-scale terrorism, small-scale guerrilla wars, coups d'etat, and mutinies." (ibid.)
[3] "Highly organized political violence with widespread popular participation, designed to overthrow the regime or dissolve the state and accompanied by extensive violence, including large-scale terrorism and guerrilla wars, civil wars, and revolutions." (ibid.)

Table 7.2: Forms of political violence (own figure based on Gurr 1974, p. 11). The criteria differentiating the three types and the definitions of the types vary throughout the book.[1]

pation. Originally, the three types of political violence that are differentiated by Gurr—turmoil, conspiracy, and internal war—were not deduced from definitional attributes. Instead, they were inductively constructed based on factor analyses by Rummel (1965) and Tanter (1965). Gurr (1974, p. 334) argues that the typology is almost exhaustive as it would captures "almost all occurrences of political violence".

Each of the three identified types of political violence can be analyzed with regard to its magnitude. Magnitude is defined via three attributes: the scope, i.e. the number of involved persons, the intensity, i.e. the level of destruction, and the duration of violence.

This multi-dimensional approach to the definition of the dependent variable allows Gurr (1968) to empirically test hypotheses relating to a wide range of different specifications of the dependent variable. Gurr (1974, pp. 317–359) formulates hypotheses regarding the incidence, the magnitude, and the form of political violence, thus combining a binary, a quantitative, and a qualitative view. The argument on the magnitude of violence is described below.

The theoretical arguments of Gurr (ibid.) are by far more complex than the theoretical arguments presented in the last section on the economic perspective. The following description illustrates the complexity by showing all variables that are included in the model to explain the magnitude of political violence. Theoretical arguments on the origins of the different forms of political violence as depicted in table 7.2 are not discussed. They are, however, comparable in their level of complexity (cf. ibid., pp. 334–347).

For the sake of clarification and to allow comparison to other models, Gurr's argument explaining the magnitude of political violence is restructured along the macro-micro-macro model. This elucidates the interplay between levels as well as the specific importance of the individual level. Gurr (ibid., pp. 12–13) summarizes his main argument as follows.

> The primary causal sequence in political violence is first the development of discontent, second the politicization of that discontent, and finally its actualization in violent action against political objects and actors. Discontent arising from the perception of relative deprivation is the basic, instigating condition for participants in collective violence.

In the following, Gurr's argument is approached from two perspectives. First, the micro-mechanism is described, which arguably forms the core of his argument. Second, the overall argument explaining conflict magnitude is discussed.

The micro-mechanisms advanced in Gurr (ibid., pp. 22–58) draws on social psychological theory (cf. Berkowitz 1962; Dollard et al. 1939). It links relative deprivation as independent variable to aggressive behavior as dependent variable. The first link in the causal chain connects relative deprivation and frustration. If individuals perceive that they are or will be deprived of goods and conditions of life they think they are entitled to, they are frustrated. Here, frustration is understood as an interference in one's goal-directed behavior and not primarily in the sense of 'desolation' (cf. Dollard et al. 1939). Second, Gurr focuses on the link between frustration and aggression. Frustration caused by relative deprivation may lead to a number of responses that are aimed at relieving the frustration. One of them is aggression. However, aggression is more than an arbitrary response to frustration. "The disposition to respond aggressively when frustrated is parts of man's biological makeup; there is a biologically inherent tendency, in men and animals, to attack the frustrating agent." (Gurr 1974, p. 33) Thus aggressive responses to frustration are part of the conditio humana. Last, the instigation of aggression is only actualized, i.e. only leads to concrete behavior, if an external cue appears that represents the source of frustration.

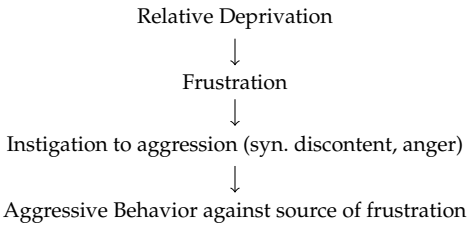

Figure 7.2: Frustration-aggression mechanism following Dollard et al. (1939) and Gurr (1974).

Frustration-aggression theory specifically differs from the micro-mechanisms assumed by rational choice approaches: "discontent provides an innately nonrational (but widely rationalized) impetus to violence, empirically and analytically distinguishable from actors' estimations of the utilities of violence"(Gurr 1974, p. 326; cf. Gurr 1974, pp. 210–2011)

Even though extensively drawing on psychological research, Gurr (1974, p. 12) claims that his argument should not be interpreted as "wholly or primarily psychological" since the independent and dependent variables were situated on the level of society, i.e. the macro level. This is certainly true and also pertains to a large number of other variables included in his model. Nonetheless, important concepts and the nomological core of his argument linking relative deprivation and aggression lie—as shown above and as clearly set out by Gurr in the introduction to the recent edition of *Why Men Rebel*—on the micro-level. As Victoroff (2005) observes, the *frustration-aggression theory* developed by Dollard et al. (1939) is not restricted to an understanding of group behavior but also explains individual behavior. I would go further by arguing that Gurr, even though he focuses on *collective* violence, primarily employs the frustration-aggression mechanism to explain the tendency of individual's to engage in violent acts. Group organization, size, and relative capacity do play a role in some parts of his arguments. They are not systematically integrated, however, with frustration-aggression theory. Nothing in the theoretical argument linking deprivation to aggression genuinely relates to group processes. Put succinctly, "men are quick to aspire beyond their social means and quick to anger when those means prove inadequate" (Gurr 1974, p. 58). Where deprivation, aggression, and violence are related to groups, Gurr follows a simple aggregative logic as illustrated in the definition of *scope* and *intensity* above.

To explain the magnitude of political violence, Gurr draws on a large number of psychological and social variables. The argument entails three argumentative steps that revolve around discontent, justifications for political violence, and the capacity to act. If people are discontented, regard violent political action normatively justified as well as pragmatically useful, and the balance of power between dissidents and the government is about equal, highly violent political violence is most probable. In each of the three steps, psychological and societal variables constitute important factors.

Discontent (syn. anger, intensity of relative deprivation) is determined by four psychological and several social variables.[2] Value capabilities, the second reference point of relative deprivation varies with the degree to which values are flexible and consequently in how far value distribution is a zero-sum game, the value gains of reference groups, past value losses, and open value opportunities (Gurr 1974, pp. 123–154). In summary, the psychological and societal variables together determine how the value expectations of individuals develop and in how far individuals perceive that they can attain and maintain value capabilities. Disregarding the redundant formulation of the hypothesis (compare discussion above), the frustration-aggression theory depicted in figure 7.2 then explains how relative deprivation leads to discontent.

Gurr's theory does not aim to explain any type of violence, but a subtype of violence that is further defined as being directed against the political regime, its actors, or its policies, i.e. political violence. To lead to political violence, discontent must be focused on the polity, politics or policies

[2]The psychological variables include the degree of perceived discrepancy between value expectations and value capabilities, the strength of motivation to attain the respective value with respect to which discrepancy is experienced, the proportion of value classes where capabilities do not meet expectations, the number of remaining substitutes to attain value capabilities, and the time period for which a discrepancy exists. Societal variables that influence if and in how far groups are susceptible to rising value expectations encompass the realistic chance to attain the new value expectations, the value gains of reference groups, past value gains, and the equilibrium between value positions (Gurr 1974, pp. 92–122). Figure 7.2 ignores self-enforcing effects. For instance, Gurr (ibid., p. 101) argues that the individual susceptibility to rising value expectations is dependent on existing relative deprivation. As value expectations are part of the definition of relative deprivation, this is *de facto* a self-enforcing effect.

of a state. This, in turn, only applies if discontented individuals regard violence against the regime as normatively justified and useful. Thus, assuming existing discontent, norms and perceived utility are the two pivotal variables influencing the propensity that violence becomes political.[3]

Politicized discontent is a necessary, but not sufficient condition for political violence. In a third and last step, Gurr includes the balance of coercive capacity[4], comparable with Weber's definition of Macht, and institutional support[5] between the regime and its opponents in his explanatory framework. In short, the smaller the difference in scope and extent of coercive control and the smaller the difference in institutional support between conflict parties, the greater is the likelihood of highly violent internal conflict.

In summary, the third step introduces the balance of power in a wider sense. Given a sufficient amount of discontent directed against the polity, politics, or policies of a given state, the relative balance between the regime and its opponents determines the expected magnitude of violence. In this third step of the argument, Gurr mainly focuses on organizational capacity and popular support of the conflict parties. Arguably, this third step in the argument is the one that focuses most on the meso-level as it includes variables that are not trivially aggregated but are genuinely located on the level of collective actors.

The summary of Gurr's argument elucidates its great complexity. Some 30 variables are included in the theoretical model to explain the causal link between relative deprivation, discontent and its focus on the political, and the magnitude of political violence. All in all, Gurr derives 82 hypotheses linking the main concepts of his theory.

Peoples versus States

Thirty years after formulating *relative deprivation theory*, Gurr (2000) published his book *Peoples versus States* in which he further elaborated his argument. The argument of *Peoples versus States* is not presented here in the same level of detail as Gurr's earlier contribution. Instead, this section discusses the main advances and specifies some of the drawbacks of his argument. All in all, three differences stand out. They relate to the independent variable, the dependent variable, and the unit of analysis on the micro-level.

First, the argument integrates theories focusing on resource mobilization (cf. Tilly 1978), opportunity structures (cf. Esman 1994; McAdam 1982; Tarrow 1994), and rational-choice approaches to collective action problems (cf. Lichbach 1998) prevalent in the greater literature on social movements (cf. Gurr 2000, 350, fn. 3). Theoretical arguments from these strands of research are combined in a more coherently formulated theoretical argument linking ethnic identity and ethnopolitical conflict. In summary, Gurr (ibid., pp. 65–95) argues that ethnopolitical conflict can be explained by four sets of factors: *Salience* describes the importance of cultural identity for people sharing cultural traits. It is determined by cultural dissimilarities and status differences between groups as well as past or ongoing conflicts (ibid., pp. 66–69). *Incentives* denote the motivation of individuals to act on behalf of a group. Groups are more prone to act collectively if they suffer from inter-group inequalities with regard to their economic, political, and cultural status; have lost political autonomy; and are or were forcefully repressed (ibid., pp. 69–74). *Capacities* refer to the cohesiveness of a given group and its ability to mobilize. Salience of collective identity and collective incentives are the most important determinants of a group's capacity. Thus, capacity, salience, and incentives are not mutually exclusive sets of factors. The latter includes the for-

[3]Normative and utilitarian justifications for political violence are hypothesized to be strong and/or widespread if socialization in a society emphasizes the tendency of individuals to blame others instead of themselves in case of frustration, violence has occurred frequently and with a great magnitude before, the regime has shown to be capable of alleviating relative deprivation before, the regime has unequally distributed resources in its efforts to alleviate relative deprivation, and the political regime has a low legitimacy, the degree to which doctrines/beliefs/ideational systems link relative deprivation with political targets and portray political violence as an effective way to alleviate relative deprivation, the extent to which political violence has proved conducive in the past, the success of other groups with political violence, the spread of aggressive political symbols, and the proliferation of means of communication (Gurr 1974, pp. –225).

[4]The coercive balance is influenced by the spread of a regime's instruments of surveillance; the size, resources, training, and loyalty of the security and dissident forces; the severity and consistency of sanctions already in place; and the geographic concentration of dissidents (ibid., pp. 232–273).

[5] Relative institutional support, i.e. the possibility to achieve compliance without resort to violence, is determined by the spread of membership in pro-regime and pro-dissident organizations, the cohesiveness and organizational differentiation (complexity) of these organizations, the amount of resources available to these organizations, the opportunities these organizations open up for their members, and the provision of channels of anti-regime protest by these organizations (ibid., pp. 274–316). Not all arguments imply linear relationships. Expected curvilinear relationships are not specifically indicated in this summary.

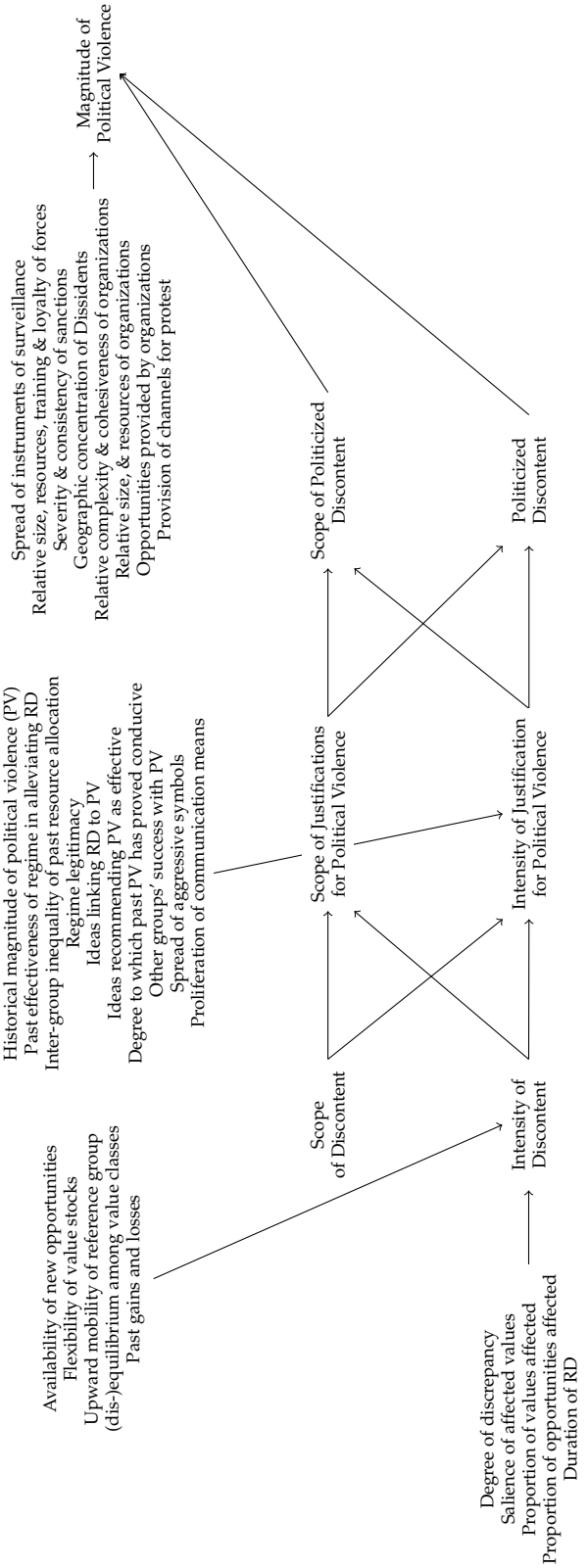

Figure 7.3: Reconstruction of the explanatory model of Gurr (1974).

mer two. Moreover, existing networks of organization, territorial concentration, organizational ties between collective actors, and authentic leaders hypothetically strengthen group capacities for ethnopolitical action (Gurr 2000, pp. 74–79). *Opportunities* relate to a set of factors that are different from the three sets of factors denoted above. Opportunities exclusively refer to group-extrinsic properties in the domestic and international sphere. Domestically, state power, regime type, regime or leader change, as well as prevailing norms of a political order are important determinants of opportunities. Internationally, foreign support as well as transnational relations of groups, spillover effects, and global doctrines influence the opportunity structure (ibid., pp. 79–92).

Second, the definition of the dependent variable considerably changed. While the theory advanced in *Why Men Rebel* aimed at explaining political violence, *Peoples versus States* focuses on ethnopolitical conflict, i.e. "conflict in which claims are made by a national or minority group against the state or against other political actors." (ibid., p. 65) By restricting the type of actors in the definition of conflict to ethnopolitical groups, the extension of ethnopolitical conflict is significantly smaller than the extension of political violence.[6] Ethnopolitical conflicts are thus primarily defined as *ethnic* by specifying the non-state actors involved. The specific issues at stake need not necessarily revolve around cultural issues such as, e.g., language or religious rights. Whereas the extension of the main explanandum is narrower, the advanced typology is simplified. Having distinguished three different types along two dimensions in his earlier work, Gurr (ibid., p. 70) differentiates between two strategies of political action: protest and rebellion. It is not entirely clear which criteria differentiate both types. Protests are based on a show of support while the strategy of rebellion is defined as the mobilization of coercive power (ibid., p. 29). Following the Minorities at Risk project, the distinction hinges on whether arms are used or resistance remains primarily non-violent (cf. Gurr 1996). Moreover, neither of the two publications explicitly operationalizes the criteria that are used to differentiate types. The primary focus lies on conceptualizing the types as such and not on developing a systematic, explicit typology. In consequence, the differentiation is not entirely clear. Apart from these shortcomings, the modification of the dependent variable determines the explanatory scope of the theory, i.e. the number of of phenomena it seeks to explain. While *Why Men Rebel* set out to provide a general explanation of political violence, *Peoples versus States* brings forward a medium-range theory (Merton 1949) that claims explanatory power regarding the decision of ethnopolitical groups to engage in ethnopolitical conflict. This step can be interpreted as a reaction to criticism against the relative deprivation argument. As, among others, Tarrow (1994) and Tilly (1978) pointed out, grievances are rather ubiquitous whereas conflict is not and thus the former is an insufficient condition for the latter.

A third difference is that the argument more clearly focuses on collectives and not individuals as main actors. While the psychological micro-mechanism linking deprivation and aggression formed the nomological core in *Why Men Rebel*, Gurr (2000, p. 7) defines ethnopolitical groups as the main unit of analysis. Although the empirical interest of the earlier work likewise involved groups, the focus on the meso-level is terminologically and theoretically much more pronounced in Gurr's recent work.

A fourth difference pertains to a mismatch between theoretical and empirical focus. The theoretical focus and likewise the explanatory interest is defined by the research question, i.e. "When does ethnic identity lead to political action?" Gurr (ibid., p. 6) The given answer puts the argument in a nutshell: "When ethnicity has collective consequences for a group in its relations with other groups and with states. More exactly, to the extent that ethnicity is a major determinant of a people's security, status, material well being, or access to political power, it is likely to be a highly salient part of their identity." (ibid., p. 6) The problem is as follows: The scope of the theory includes individual mobilization based on ethnic identity, as evidenced in the above quote. The research design, however, *de facto* limits the empirical analysis to the question: when do groups *that are already politically active* decide to engage in violent action. This, however, is not a deliberate decision. Instead, the narrower focus results from a selection bias that in turn follows from the definition of ethnopolitical groups. Ethnic groups are defined as collectives whose individual members share the belief that some of their common traits such as language, religion, origin, shared custom, or common place of living sets them apart from other collectives (cf. ibid., p. 8). In short, ethnic groups are collectives with a shared cultural identity. Ethnopolitical groups are a subtype of ethnic groups, i.e. ethnic groups "whose ethnicity has political consequences resulting either in differentiated treatment of group members or in political action on behalf of interest

[6] 'National peoples' and 'minority peoples' are the two main types of ethnopolitical groups (Gurr 2000, pp. 16–17)

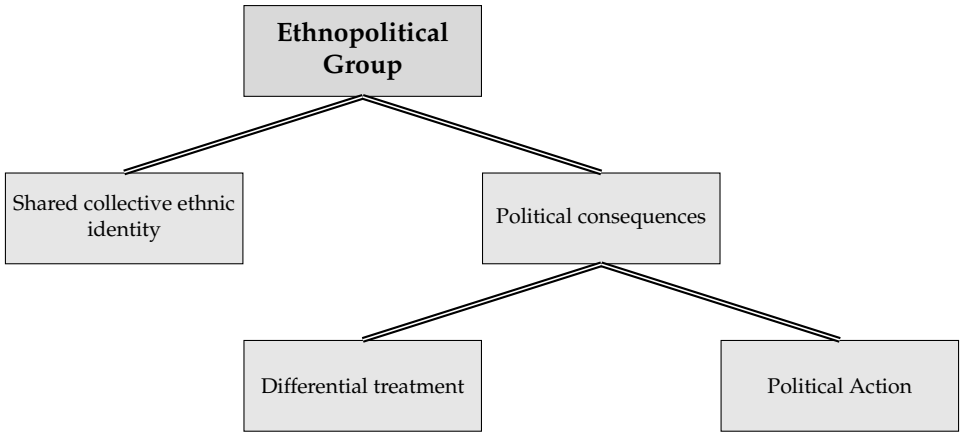

Figure 7.4: Definition of ethnopolitical group (Gurr 2000, p. 5).

groups." (Gurr 2000, p. 5) *Political consequences of ethnic identity* in the form of either *differential treatment* or *political action* additionally characterizes ethnopolitical groups (see figure 7.4). The precise analysis of the concept of ethnopolitical groups is not—as it might appear—a quibble. To the contrary, it has important consequences for the whole research design. The problem is that groups that are not differentially treated are not part of the universe of cases. Consequently, theoretical arguments on the effects of differential treatments cannot be tested empirically. In a recent publication, Birnir et al. (2015) address the problem by extending the sample to include groups that are 'socially relevant'.

In summary, *Peoples versus States* significantly improves the earlier argument in *Why Men Rebel*. It reacts to criticism by integrating insights from the literature on political opportunities, strengthens validity of the theory by restricting the explanatory scope, and explicates its focus on groups more clearly. Last, the complexity of the argument is reduced. Although still being complex in comparison to the wider literature, Gurr has significantly reduced the number of explanatory factors and mechanisms making his argument more manageable.

7.1.2 Economy

One of the most influential approaches to the explanation of intrastate conflict is the economic perspective. The economic research tradition has been very influential in the academic discussion as well as influenced the decision of policy makers in the United Nations (Berdal 2005), a fact that may also stem from the authors' affiliation to the World Bank. The publications that lay out the main arguments are Collier (2000a) and Collier and Hoeffler (1998). In Collier and Hoeffler (2004), the authors adjust their initial theoretical argument and initiate a shift from individualist to structuralist arguments that is finally completed in Collier, Hoeffler, and Rohner (2009). Due to the major theoretical adjustments in 2009, it makes sense to take the publications between 1998 and 2004 as a main source to portray the economic research tradition. Moreover, the following discussion sheds some light on the origins of their economic perspective. When constructing their argument, Collier and Hoeffler cite the theoretical work of Azam (1995) and Grossman (1991, 1995). Thus, these works are briefly addressed.

On economic causes of civil war

The main explanandum is rather broadly defined as the "causes of civil war" (Collier and Hoeffler 1998, p. 563), "the origin of civil war" (Collier 2000a, p. 92) or "the outbreak of civil conflict" (Collier and Hoeffler 2004, p. 563). A closer look on the operationalization of the dependent variable illustrates a lack of precision concerning different types of dependent variables. The 1998 paper investigates "the occurrence and the duration of civil war" (Collier and Hoeffler 1998, p. 567), the 2000 book chapter tries to retrodict "whether each country has a civil war during each five-year period" (Collier 2000a, pp. 92–93), and the 2004 paper tries to retrodict "the risk that a civil war will start" (Collier and Hoeffler 2004, p. 572). Two things can be said about the specifications of the explananda. First, the three specifications represent three different types of phenomena: occurrence, duration, and onset of civil war. The extension of the three explananda taken together

indicates that the authors attribute great explanatory power to their theoretical argument. However, the alternation of explananda may not have been fully intended but was due to a conflation of concepts as admitted by Collier and Hoeffler (2004, p. 564). Second, the authors limit their theory to *wars*, i.e. highly violent conflicts. This limitation is understandable by the limited availability of data at that time. Last, the exact specification of the dependent variable remains unclear in Collier and Hoeffler (1998). It might be a dummy that measures conflict onset for five-year periods as in Collier (2000a), Collier and Hoeffler (2004), and Collier, Hoeffler, and Rohner (2009).

The central nomological statement in Collier and Hoeffler (1998) clearly reflects its origin in economic theory as it takes the form of a rebel's utility function. War is ultimately explained as the result of a situation where the probability and value of winning, on the one side, outweigh the costs of rebellion, on the other. Put simply, the rebels' utility function is defined by Collier and Hoeffler (ibid., p. 565) as follows:

$$\text{Decision to Rebel} = (\text{Probability of Victory} \times \text{Gains}) - (\text{Opportunity} + \text{Coordination Costs})$$

The nucleus of the theoretical argument by Collier and Hoeffler (ibid., p. 563) is simple: "War occurs if the incentive for rebellion is sufficiently large relative to the costs". The formulation unmistakably indicates that the authors build their main argument on rational choice theory, as the relative distribution of costs and benefits for actors does the main explanatory work. Moreover, the analytical focus lies on the macro-level as the dependent variable *war* and the independent variable *incentive structure* are both structural entities. As is typical for methodologically individualist arguments, the theoretical work is primarily done on the micro-level. In the case of Collier (2000a) and Collier and Hoeffler (1998, 2004), the main mechanism describes the choices of individuals according to an exogenously assumed theory of action.

Three statements further specify the argument and clarify its main concepts: (1) "The objective of rebellion is either to capture the state or secede from it"(Collier and Hoeffler 1998, p. 564). (2) "In general, the incentive for rebellion is the product of the probability of victory and its consequences."(ibid., p. 564). (3) "[T]he costs of rebellion (...) [are] made up of the opportunity costs of conflict and the cost of coordination"(ibid., p. 567).

The first statement is a deterministic axiom. It postulates that the motivation of non-state conflict actors in civil war lies in the exercise of governmental power; either by violently attaining government in a political unit that already exists or by the formation of a new one. At this point, the aim of rebels seems to be primarily political: governmental power. The second and the third statement further break down the concepts of incentives and costs, respectively.

The second statement defines the incentives to engage in rebellion. The difference between *objective* and *incentive* lies in the fact that the former is postulated as fixed, while the latter is liable to change as it is determined by two other variables. To explain individual incentives, Collier and Hoeffler (ibid.) draw on the probability of victory and the expected material benefits in case of a hypothetic victory. The former is determined by the "capacity of the government to defend itself" (ibid., p. 564). This view is rather simple, as one might argue that it is not exclusively the capacity of the government but rather the balance of power between the government and the rebels that counts. The exclusive focus on government capability is adapted from Grossman (1991) who argues that the military options of rebel groups are *per se* limited to a low level. The second determinant of incentives, i.e. the consequences of victory, are determined "by the capacity of a future rebel government to reward its supporters" or, more specifically, "the potential revenue of the government" (Collier and Hoeffler 1998, p. 564).

The third statement defines the costs of rebellion. Fighting is costly "due partly to the opportunity cost of rebel labour and partly to the disruption to economic activity caused by warfare" (ibid., p. 565). Moreover, as non-state conflict actors are collective actors and "war-making is the decision of a collective" (ibid., p. 564), transaction costs are added to the model that account for the "passage from individual interests to collective decisions." (ibid., p. 564) The costs of rebellious activity are thus composed of opportunity costs, i.e. the foregone income through peace-time production and the breakdown of the economy in the event of civil war, and the coordination costs of forming a collective actor (ibid., p. 565).

At this point, it is necessary to extend the discussion to the level of indicators to identify three shortcomings. The first shortcoming pertains to a conceptual aggregation on the level of indicators. When turning their view to the measurement of variables, Collier and Hoeffler (ibid., p. 564)

argue that both, the military capacity of the state and the potential revenue from capturing or erecting government are determined by the taxable base of the economy. They conclude that because the taxable base "both reduces the probability of victory and increases the gain in the event of victory, its net effect on the risk of war is a priori ambiguous." Thus, when switching from the level of concepts to the level of indicators, the authors argue that two concepts—the probability and the reward of victory, that together determine one of the central variables of the theoretical argument, i.e. rebel incentives—can be operationalized via the very same indicator: the taxable base. Pertaining to the revenue, the tax base represents the prize itself. Pertaining to military capacity, the tax base determines the possibility to attain military might. Thus, where conflicts are fought about government, the research design does not allow to analytically distinguish between the probability and the hypothetical reward of victory. The theoretical distinction at the level of the attributes is not adequately mirrored on the indicator level. The re-aggregation occurring between the level of attributes and the level of indicators is illustrated in figure 7.5.

A similar tension between the conceptual and the indicator level exists with regard to population size. Collier and Hoeffler (1998, p. 564) argue that in secessionist conflict it is not the taxable base but the size of the population of the respective region that constitutes the 'prize'. Arguing that the objectives to capture the state or to secede may coexist in the very same conflict, Collier and Hoeffler (ibid., p. 565) model population size and taxable base as aggregative effects. Population size—together with ethnolinguistic fragmentation—is likewise an indicator of the costs of coordination within collective actors (ibid., p. 567). Coordination is assumed to be more difficult in highly diverse and in very homogenous countries as well as when the population is large. In consequence, population size simultaneously measures incentives and costs of rebel groups. Theoretical terms that seem to be clearly distinguishable turn out to be rather similar on the indicator level.

A third shortcoming is the obscure role of ethnic fractionalization. The authors hint towards the role of ethnic fractionalization as the main mechanism explaining incentives in secessionist conflicts: "The effect of population size on the desire for secession is most apparent when considered at the extremes. Were the global population contained within a single nation, linguistic and cultural disparities would be likely to generate continuous violent conflicts. By contrast, were there as many nations as socio-cultural groups, the desire for secession would presumably be much diminished." (ibid., p. 564) In this argument, the authors implicitly introduce two axioms: First, that a large population coincides with linguistic and cultural disparities. Second, and more importantly, that ethnolinguistic diversity spurs secessionist conflict. At the same time, it is assumed that ethnolinguistic diversity makes coordination more difficult. In consequence, the role of ethno-linguistic diversity remains theoretically obscure: Its influence on incentives via the size of population as an indicator for revenues is not clearly stated. Nor is ethnic diversity used for measurement. Instead, it is assumed to correlate with population size. On the other hand, ethno-linguistic fragmentation is used as an indicator of coordination costs. The main problem is that different arguments are not consistently included in the conceptualization of core variables. Under the hood, the formulation and operationalization of the utility function becomes rather complicated.

Until here, we have clarified the main concepts and the nomological core of the economic approach. We now turn to agency: Who calculates costs and benefits of rebelling? On the one hand, Collier and Hoeffler (ibid.) often use the term "rebel groups" or "rebels" to denote the collective that "faces the choice between remaining peaceful and fighting a war"(ibid., p. 566). Following this formulation, the formal model seems to represent the decision-making process of existing rebel groups whether to rebel or stay peaceful. On the other hand—departing from Grossman (1991) who only includes foregone income—Collier and Hoeffler (1998, p. 565) include the costs of coordination in their model and elaborate on the link between individual interests and collective decisions. Following this trace, the agent seems to be the individual that decides to either partake in rebellious activity via the formation or participation in a rebel groups or to stay put. Another possible conclusion when following this trace could be that the authors think of an unorganized collective—defined by cultural commonalities(ibid., p. 567)—that somehow decides to invest the coordination costs to come up with a collective decision to either rebel or not. If the authors think of fully organized and "black-boxed" rebel groups that can be treated as unitary, it would not make great sense to include coordination costs as a way to problematize the aggregation between individuals and collective non-state actors. If the authors think of individuals as main agents, the costs of coordination would need to be invested before the group is able to de-

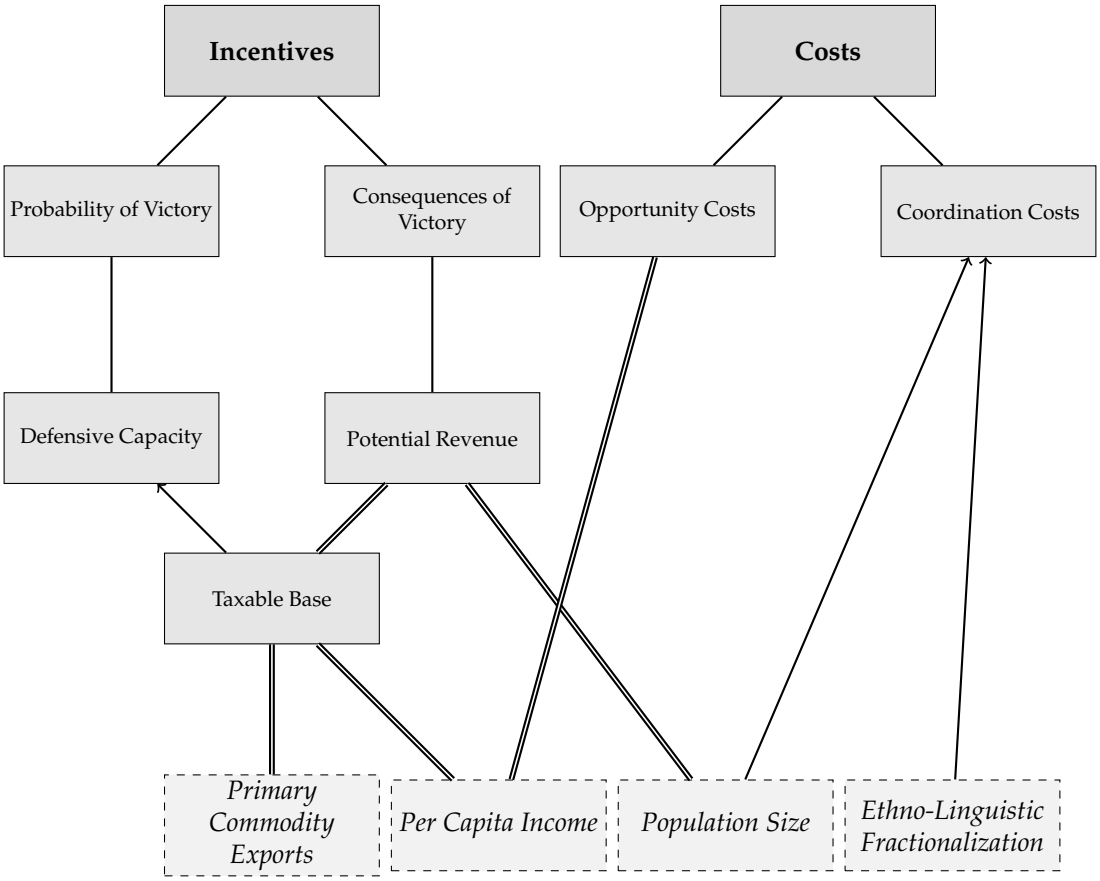

Figure 7.5: Concepts of explanantia in Collier and Hoeffler (1998).

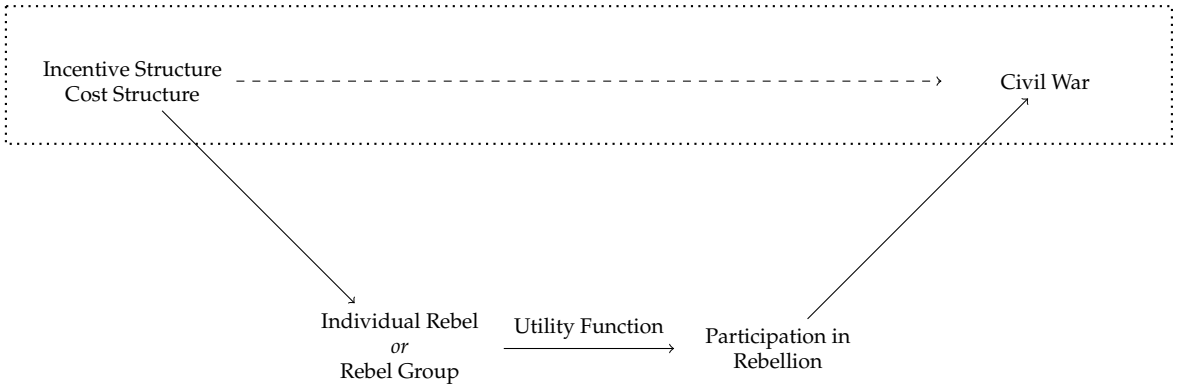

Figure 7.6: Explanatory model of Collier and Hoeffler (1998).

cide whether to rebel or not. In this case, the model would have to entail two steps, where the costs of coordination are a necessary condition to come up with a decision as a group. A closer look on the works by Grossman (1991) and Azam (1995) does not provide any further insight as they conceptualize the non-state actor side as "peasant family" or "the opponent", respectively. Moreover, Collier and Hoeffler (1998, p. 567) summarize their theory in a way that does not refer to any specific actor type.[7] As a result, it is not entirely clear whether the micro-level, i.e. the level of the social actor, is populated by individual or by collective agents. It remains unclear who decides whether to rebel or not. Whereas the aggregation process is theoretically problematized, it is not included in the formal model.

At this point, it is necessary to refer back to the objective of rebel actors as defined by the authors. These were introduced above as hard-wired and postulated to constitute either secession or governmental power. After discussing the decision process in detail, it becomes clear that these objectives are not really axioms that are introduced ex-ante. Rather, they confine the universe of means available to actors which in turn are assumed to always aspire material benefit. In other words, to secede or to topple the government represent two strategies of acquiring wealth in cases where the benefits of rebellion outweigh its costs. Theoretically more important is the more abstractly defined, "hard-wired", and postulated motivation of actors to maximize their economic wealth. Taking control of government or seceding from an existing state are merely means to strive for material benefit.

Summing up, the occurrence and length of conflicts is—according to Collier and Hoeffler (ibid.)—dependent on the decision of a wealth-maximizing rational actor (be it an individual, a rebel group, or an unorganized collective) to engage in rebellion to reach one of two objectives, i.e. secession or acquiring government. Actors decide to rebel when the benefits, as a function of the probability of victory and the amount of post-conflict revenues, outweigh the costs of organization and foregone income due to fighting. Thus, the very same theoretical mechanism equally explains the occurrence and length of civil wars (see figure 7.6).

After having discussed the early works of the economic perspective, I now turn to subsequent works that had great influence in the scientific debate. The central empirical result remains unchanged in Collier (2000a, p. 110): "the evidence on the causes of conflict points to economic factors as the main drivers of conflict. (...) Greed seems more important than grievance". The author still argues that political conflicts are mainly caused by individuals who decide to take up arms due to their economic agenda. Although Collier (ibid.) does not state his theoretical argument in great detail—the chapter rather intends to give a more accessible account of the economic perspective—there are some important deviations in terms of theory that can be identified. These changes do not decisively depart from the arguments made in Collier and Hoeffler (1998), but initiate a change that will become fully pronounced in Collier, Hoeffler, and Rohner (2009).

First and foremost, Collier (2000a, p. 91) restates his model of rational actors: "rebellions might arise because the rebels aspire to wealth by capturing resources extralegally". This micro-theory of greedy individuals is contrasted with an explanatory model that focuses on grievance. Here, rebels "aspire to rid the nation or the group of people with which they identify of an unjust regime" (Collier 2000b, p. 91). As was indicated above, Collier favors the former theory of action as having a greater significance to explain the emergence of political conflict. Where Collier (ibid.) departs from Collier and Hoeffler (1998), however, is the way in which the mechanisms below the macro-level are specified.

Apart from restating the model of a rebel's utility function as it was introduced in Collier and Hoeffler (ibid.) in a starkly simplified way, Collier introduces an new argument that explains why greed-oriented rebellions occur more easily than rebellions motivated by grievances. His argument stems from collective action theory and relates to the link from the micro to the macro level, viz. explains individual (non-)participation in rebellions. According to Collier (2000b, pp. 98–99), grievance-based rebellions face three obstacles: The *free-riding problem* pertains to the public goods character of the relief from grievances. Individuals may enjoy the abolishment of, e.g., political exclusion without participating in the rebellion. The *coordination problem* relates to problems of actor formation. As small rebellions only have a small chance of success and are more dangerous for the individual members, individuals are not willing to participate. Consequently, the formation of large rebellions fails in its early stages. The *time-consistency problem* describes the fact that

[7] "To summarise, we propose a formulation in which both the probability of civil war and its duration are a function of the gains from rebellion, made up of the probability of rebel victory and the gains from victory (state capture or secession), and the costs of rebellion, made up of the opportunity costs of conflict and the cost of coordination."

rebels need to fight before they are able to reap the fruits of their labor. Once aims are achieved, however, rebels cannot be sure that the new leaders will stick to policies they have advertised before the aims were achieved. This hinders the emergence of grievance motivated rebellions (see figure 7.7).

In light of the above mentioned criticism of an insufficiently described process of actor formation, the discussion of collective action problems in emerging rebellions is an improvement. By theoretically investigating the logic of aggregation, Collier fills a gap that was left open in his 1998 formulation of the economic perspective. This step, however, *ipso facto* also leads to a shift in his explanatory approach. The main theoretical argument in favor of the economic perspective is not—as it was in 1998—that rebels first and foremost follow a utility function. To the contrary, the grievance perspective is accepted as an equally plausible description of individual motivation (Collier 2000b, pp. 92, 100, 110). Where the grievance perspective loses explanatory power pertaining to the emergence of civil war, however, is in the explanation of processes of individual participation in rebellions. The main nomic argument is not that all men are *homines oeconomici* but that only *homines oeconomici* participate in rebellious activity due to collective action problems. While Collier and Hoeffler (1998) had a clearly specified model of individual decision-making, Collier (2000b) bases his model of explanation on two coexisting motivations on the micro-level.

Extending the view toward methodology and empirical investigation, there is no large difference between the two works. Both, Collier and Hoeffler (1998) and Collier (2000b) *de facto* operate on the macro-level in terms of empirical investigation. In the latter, however, methodological restrictions are more clearly expressed and are reflected in a more modest and less specified theory. Thus, although both works share a limited empirical focus, the gap between theoretical ambition and methodological approach appears smaller in Collier (ibid.). Neither publication problematizes the emergence of individual motivation, as is typical for rational choice arguments. Collier and Hoeffler (1998) assume rebels to act on the basis of a utility function, while Collier (2000b) introduces the two motivational types and explicates his agnosticism regarding further specification. The shift in the argumentation that is accompanied by a cut-back regarding the description of decision-making processes of actors can thus be interpreted as a result of epistemological constraints. While Collier and Hoeffler (1998, p. 565) offered a very detailed formal model of rebel utility function, Collier (2000b, p. 92) expresses doubts on the very possibility to analyze decision-making processes on the micro-level. Accordingly, he explicitly states his approach to infer the motivation of actors, i.e. a micro-level entity, from correlations on the macro level. More specifically, he investigates the relation between structural conditions that either alter the cost-benefit analysis of profit-oriented rebels in favor of rebellion or motivate actors to rebel against existing grievances, on the one hand, and the incidence of civil war, on the other. He argues that all those factors that promise material revenue from extralegal activity will lead to extralegal activity and thus rebellion. Here, Collier admits the restricted validity emerging from his structural empirical focus. He solely relies on correlations on the macro-level to infer causal links on the micro-level. [8]

7.1.3 Feasibility

The feasibility approach gained in importance with the publication of *Greed and Grievance in Civil War*. It is the second most-cited papers in research on civil war and intrastate conflict and constitutes an important turning point in the debate.[9] The paper caused a huge debate, subsumed under the catchphrase "greed or grievance", on whether individuals fight for individual profit or against injustices. Both arguments clearly allude to the micro-level. Accordingly, it appears incorrect to single out this paper as pivotal for the feasibility thesis. We argue, however, that the title is a misnomer and does not reflect the theoretical model, which in fact focuses on the opportunity of rebellion.

[8] This is not an ecological fallacy, i.e. a logical fallacy that occurs when variables on the micro-level are inferred from variables on the macro-level. Ecological fallacies pertain to situations where the macro-micro link is analytical, e.g between mean values that describe a population and characteristics of individual members of that very population. In Collier's argument, however, the link between the macro- and the micro-level is causal, as he argues that individuals will not pass up economically lucrative situations. Here, an economically lucrative situation occurs and actors *then* decide to act accordingly. Graphically, causal links are illustrated by arrows.

[9] Citations following the Social Science Citation Index with the search term " 'Civil War' OR 'intrastate conflict' ". The most cited paper is Fearon and Laitin (2003).

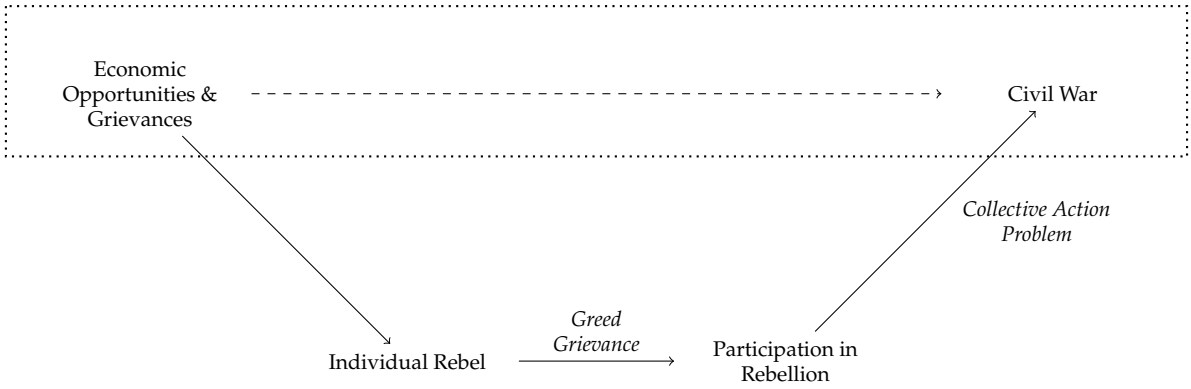

Figure 7.7: Explanatory model of Collier (2000b).

Greed and Grievance in Civil War

In their 2004 paper *Greed and Grievance in Civil War*, Collier and Hoeffler (2004) shift their theoretical view from the micro- to the macro-level. The shift toward opportunity structures as the sole decisive variables is rooted in the fact that Collier and Hoeffler (ibid., pp. 464–565) introduce the concept of misperceived grievances, i.e. subjective perceptions of unfair treatment that are not rooted in objective conditions such as economic inequalities. Individuals are no longer assumed to be perfectly informed about structural conditions but may misrepresent them. While the theoretical model in Collier (2000b) differed from Collier and Hoeffler (1998) regarding the micro-macro link (collective action problems), Collier and Hoeffler (2004) introduces an argument that pertains to the macro-micro-link (misperception) (see figure 7.8).

Collier had introduced the concept of collective action problems as an argument against the grievance perspective. He argued that even if grievances objectively existed and were perceived by actors as such, rebellions simply would fail to gain enough leverage. By introducing the concept of misperceived grievances, the authors now pursue a diametrically opposed argument. They do no longer mention collective action problems anymore but argue that even misperceived grievances may lead to civil war (ibid., p. 589). Thus, individual participation in civil wars may be motivated by grievances that do not really exist (ibid., pp. 564–565). Pertaining to the micro-macro link they argue that for both, greed- and grievance motivated rebellions alike, opportunity of rebellion is a necessary condition, " 'opportunity' and 'viability' describe the common conditions sufficient for profit-seeking, or not-for-profit, rebel organizations to exist." (ibid., p. 565) Furthermore, Collier and Hoeffler (ibid., p. 564) assume the ubiquity of individuals motivated by greed and grievance motivated individuals. Pertaining to greed, they take up the Machiavelli Theorem by Hirshleifer (2001) according to which "no one will pass up a profitable opportunity to exploit someone else" (Collier and Hoeffler 2004, footnote 2). Pertaining to grievance they assume that "[m]isperceptions of grievances may be very common" (ibid., p. 564).

Tied together, these arguments lead to the conclusion that the specification of individual motivation is only of secondary importance. What counts is the mere possibility to engage in violence. Consequently, the authors exclusively focus on the opportunity (or synonymously viability) of rebellion as sole explanatory factor. Whether or not objective grievances exist does not decisively influence the emergence of civil war as the micro- (subjective grievances) and macro-level (objective grievances) are uncoupled. Consequently, the emergence of civil war is exclusively determined by the opportunity structure. Thus, Collier, Hoeffler, and Rohner (2009, p. 2) do not adequately portray their own approach when they write that the 2004 paper "was still rooted in the traditional focus on the motivation for rebellion."

The focus on structure is additionally justified by epistemological restrictions. Aware of the fact that indicators are still restricted to macro-level entities, Collier and Hoeffler (2004) argue that rebellions that are caused by the mechanisms of misperceived grievances and greed are observationally indistinguishable.

Figure 7.8: Explanatory model of Collier, Hoeffler, and Rohner (2009).

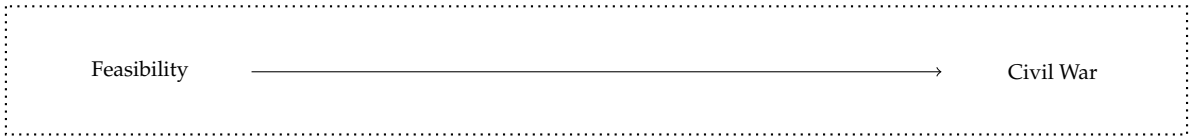

Figure 7.9: Explanatory model of Collier and Hoeffler (2004).

Beyond Greed and Grievance

In Collier, Hoeffler, and Rohner (2009), the authors finalize their theoretical turn away from micro-level theories of action to economic opportunity structures. The theoretical change culminates in the feasibility hypothesis: "Factors that are important for the financial and militarily feasibility of rebellion but are unimportant for motivation decisively increase the risk of civil war" (ibid., p. 3). The roots in economic theory that had inspired Collier and Hoeffler (1998) to model individual decisions with the help of a utility function, are finally cut in favor of an account that purely focuses on structures. Whereas in 1998 the authors modeled the decision processes of actors *en detail*, the specific motivation becomes arbitrary in Collier, Hoeffler, and Rohner (2009). In fact, the 2009 model resembles ecological arguments as the existence of structural niches is decisive in explaining the emergence civil war. Following Weinstein (2005), the authors propose a possible causal link between characteristics of structural niches and the type of motivation of emerging non-state actors. The link, however, is not substantially specified nor empirically investigated in Collier, Hoeffler, and Rohner (2009). In summary, neither a micro-mechanism nor the links between the macro- and the micro-level are specified or explained (see figure 7.9). Where mechanisms below the level of structures become arbitrary they too become meaningless. As a result, the theoretical argument can no longer be attributed to the camp of methodological individualism. This departure constitutes the most significant break with the early economic theory of Azam (1995) and Grossman (1991, 1995) and the arguments specified in Collier and Hoeffler (1998).

A side effect of this theoretical turn is that the theoretical and empirical focus entirely overlap. As the feasibility hypothesis does not entail a statement about the perception of actors, a specific theory of action, or the aggregation of individual acts to collective outcomes, the authors do not need to measure these factors empirically. Due to the restrictions of empirical investigations into the working of rebel groups, the feasibility hypothesis appears as a tempting offer to sideline methodological difficulties. At the same time, however, it loses empirical scope, i.e. it does not allow to make any substantial statements about the type of emerging actors, their motivation, or the link between individual participation and collective outcomes. What remains is a very simple theory of conflict emergence based on the existence of ecological niches.

7.1.4 Recent Advances

This section sketches recent advances in the debate on greed, grievance, and opportunities. The works by Gurr and Collier & Hoeffler influence the debate until today. Concerning Gurr's contribution, Østby (2013) observes that "relative deprivation theory remains the most prominent explanation that connects inequality (...) with conflict". Likewise, the greed and grievance dichotomy (or greed, grievance, and opportunity trichotomy) introduced by Paul Collier and Anke

Hoeffler—although increasingly criticized(Keen 2012; Murshed and Tadjoeddin 2009)—still forms a focal point in the debate [10]

Shortly after Gurr's seminal contribution in the 1970s, alternative explanations questioned the explanatory power of grievance-oriented explanations. This strand of research on social movements tilted the view toward economic incentives and feasibility. Availability of and control over material and immaterial resources were proposed as crucial for mobilization (McCarthy and Zald 1977). Others highlighted the importance of group-external political opportunity structures (Eisinger 1973).

Besides rising interest in the economic perspective, the link between collective identity and conflict was further investigated. Among the most fruitful ideas was to investigate into inequalities between identity groups. Along these lines, Horowitz (1985) differentiates between ranked and unranked ethnic systems depending on whether social class coincides with ethnic origin. A similar argument were presented by Petersen (2002).

Until a few years ago, economic approaches seemed to have the empirical evidence on their side. Among the earlier approaches, Weede (1981) could not find a relationship between household inequality and violence. Likewise, indicators of inequality such as ethno-linguistic fractionalization did not fare well in quantitative studies aimed at explaining intrastate conflict (cf. Fearon and Laitin 2003). Taydas, Enia, and James (2011) observe that although "well theorised, grievance factors such as inequality and repression have not found systematic, cross-national support from research." Likewise Blattman and Miguel (2010) hold that "[p]roxies for political grievances perform far more poorly at predicting individual behavior than economic factors in these cases. Existing data on political grievances are admittedly quite coarse (...), but this provides evidence against the view that political grievances are always decisive determinants of participation in armed groups." The turn away from grievance and toward resource mobilization and political opportunity was thus empirically substantiated.

Recently, however, the picture has changed. Grievance-based explanations and especially the role of inequality have re-emerged as research topic. This seems to be part of a greater trend, as inequality has also attracted great interest in other social science disciplines. For instance, Piketty (2014) presents a historical account on the development of income and wealth. Although not specifically addressing political conflict, Pikkety discusses the undermining effects of inequality on democracy. In their research on regime change, (Acemoglu and Robinson 2006; Boix 2003; but also see Haggard and Kaufman 2012) find evidence that inequality influences the chance of democratization. Moreover, research at the *Oxford Poverty & Human Development Initiative* has recently also contributed to the debate on multidimensional poverty management (Alkire et al. 2015).

In conflict research, the concept of *horizontal inequality* has proved to be the greatest challenger to the opportunity thesis. The concept of *horizontal inequality*, i.e. inequality coinciding with "identity based cleavages" (Østby 2008, p. 143), shifts the focus from changes in relative positions over time to synchronic inter-group inequalities (Boswell and Dixon 1990; Østby 2013). It constitutes one of the most important contribution to the recent debate on greed, grievance, and opportunity. Stewart (2000), working at the *Centre for Research on Inequality, Human Security and Ethnicity* at the University of Oxford, recently brought these issues into the debate. In essence, the concept of horizontal inequality merges measures of ethnic diversity and inequality. This allows to empirically assess the influence of inter-group inequalities.

Stewart's research spurred a number of empirical investigations into the role of horizontal inequality. Murshed and Gates (2005) present evidence that horizontal inequality influenced the intensity of the Maoist conflict in Nepal. Mancini (2008) finds influences results for ethno-communal conflict in Indonesian districts. Stewart (2008) presents several in-depth studies on the link between horizontal inequality and conflict. Studies with larger sample sizes complement the picture. Østby (2008) finds evidence that horizontal social inequality affects the risk of conflict in an analysis of 36 developing countries. Cederman, Weidmann, and Gleditsch (2011) extend the empirical analysis to the global scale and find evidence that relatively deprived as well as advanced groups engage in conflict more often. Based on a sample size of 100 countries, Gubler and Selway (2012) argue that conflict is more likely where ethnic identity, socio-economic status, and settlement patterns overlap. Taken together, the concept of horizontal inequality proved its explanatory power in case studies as well as large-n comparative analyses.

[10] The Social Science Citation Index counts almost 100 citations in 2015 alone.

Horizontal inequality, however, is a concept and not a theory.[11] We have seen in chapters 3 and 5, that concepts and theories are closely connected. However, we still need to make clear where the conflict-inducing effects of the structural configuration of horizontal inequality lies. And here, we can refer to some of the arguments of the grievance perspective as will be done in chapter 8.

7.2 Comparative Assessment

The above discussion has laid out three influential strands of research that dominate conflict research: grievance-based approaches explain the causal link between inequality, discontent, and (violent) political action; the economic perspective focusing on greedy actors; and the structurally oriented explanatory model that refers to the explanatory power of opportunity structure. These three schools have characterized the debate in recent years (cf. Ballentine and Sherman 2003; Bensted 2011; Berdal 2005; Irvin 2004; Murshed and Tadjoeddin 2009; Saxton and Benson 2008).

In this section we compare the three approaches in abstract terms. We argue that each exemplifies a more general explanatory approach. Carving out explanatory approaches allows for systematizing existing research. This is done in the following subsection 7.2.1. The subsequent subsection 7.2.2 discusses the level of complexity of the three explanatory approaches. As it turns out, the feasibility and the grievance approach, respectively, represent the lower and upper end on the continuum between simplicity and complexity. The economic approach lies in between. The last subsection 7.2.3 critically evaluates the three explanatory approaches from a critical realist perspective.

7.2.1 Three Explanatory Approaches

The economic, the feasibility, and the relative deprivation approach each exemplify a specific explanatory approach:

- The economic approach as advanced in Collier and Hoeffler (1998) follows the *individualist explanatory approach.*
- Relative deprivation theory (Gurr 1974, 2000) advances a *moderate collectivist explanatory approach* (cf. Albert 2005).
- The feasibility hypothesis as formulated by Collier, Hoeffler, and Rohner (2009) is an instance of the *collectivist explanatory approach*.

Besides their differences, all three explanatory approaches share two properties. First, the explanandum of all approaches is located on the macro-level. Political conflict is a collective phenomenon (cf. sec. 6.1). Second, all approaches not only refer to the collective explanandum but also to individuals and their motivation. As the following discussion shows, explicit reference to individual action is a *sine qua non* for the *individualist* and *moderate collectivist* perspective. Both are characterized by their individualist foundation. The *holist* paradigm is different. Although Collier, Hoeffler, and Rohner (ibid.) refer to motivations, it is not, in theoretical terms, a meaningful part of holist explanations. Apart from these two—or at least one and a half—common features, the explanatory approaches are markedly different.

The individualist explanatory approach regards motivation as given. Actors are assumed to strive for specific goods, often economic resources and/or power. The micro-mechanism then models the decision of rational actors to participate in rebellion. This micro-mechanism stems the explanatory load of the whole explanatory model. Individual rationality is often assumed to constitute a useful assumption that allows formulating parsimonious and elegant theories. The economic tradition of conflict research, at least as portrayed here, does not regard it as a useful assumption but merely as an adequate portrait of reality. This becomes obvious in the writings of Collier (2000a, p. 92):

> Successful rebel organizations place considerable emphasis on good public relations with the international community. Narratives of grievance play much better with this community than narratives of greed. A narrative of grievance is not only much more functional externally, it is also more satisfying personally: Rebel leaders may readily be persuaded by their own propaganda. Further, an accentuated sense of grievance may be functional internally for the rebel organization. (...) By playing upon a sense of grievance, the organization may therefore be able to get additional recruits more cheaply.

[11] We will develop our own measurement strategy in chapter chapter 9.

Although Collier assures that his argument should be interpreted mainly epistemologically in the sense that motivation cannot be inferred from narratives, his argument sets the tone for the theory of action advanced by the economic perspective. Where conflict participants justify conflict participation by pointing to grievances, these should not be interpreted literally. Rather, a reference to grievances should be seen as a means to further individual economic or power interests. This might even go as far as to obscure the strategic orientation for the strategic actors themselves. Following this view, even the utility-maximizing actor himself might think to act for a greater good although he objectively follows egoistic motives.[12]. Epistemologically, the principles guiding individual action are concealed. Behind the veil, however, actors are strategic automata. Put differently: Irrespective of what people say, their real motivations are fixed. The economic approach thus constitutes an individualist rationalist explanation in pure form.

Within the rationalist framework, structures constitute immediate strategic landscapes. In the process of implementing a utility-maximizing decision, actors take into account the respective structural environment. Typically, individual perception of structure is assumed to be perfect. There is thus no subjective dimension to the causal power of structural changes. Where structures change, cost-benefit ratios for individuals change. If, in consequence, certain courses of action, e.g. individual participation in rebellion, become a superior strategy, these are immediately pursued by actors.

Collective outcomes of individual decisions—in this case rebellion—are explained as a result of aggregated individual decisions. Individual decision-making and collective outcome are directly linked. The only factor that genuinely relates to the micro-macro link are the costs of coordination. Even these, however, are not external to the decision-making process of individuals but are integrated into their individual rational decision-making as transaction costs.

In summary, individualist explanation is exclusively substantiated by the micro-mechanism of rational choice theory. Neither do structures exert any formative role on individuals, nor does their emergence include anything unforeseen that might stand outside of the perception of actors.

The feasibility hypothesis abstains from specifying a specific micro-mechanisms. It is thus diametrically opposed to individualist explanations. To defend their exclusive focus on the macro-level, Collier, Hoeffler, and Rohner (2009, p. 3) point to the multiplicity of possible individual motivations: "The feasibility hypothesis leaves the motivation of the rebel group unspecified, its initial agenda being determined by the preferences of the social entrepreneur leading whichever organization is the first to occupy the niche." This notion is an instance of one of the two holist arguments for irreducibility portrayed in section 4.4.1: multiple realizability.[13] In this context, it is employed as an argument to exclude the micro-foundation from the explanation of civil war. This allows to bypass those mechanisms that are usually part of individualist explanations: What are individual preferences and what principles guide individual decision-making? To what extent do structures influence individual preferences and/or individual decision-making processes? How do individual decisions and acts aggregate to collective outcomes? Consequently, holist explanations are often much more parsimonious than individualist or moderately holist explanations. Whether they are adequate is another question, which is discussed below.

Although both theories substantially differ, relative deprivation theory is similar to economic rational choice theory in that it explicitly models the micro-level. Due to this fact, the differences between the grievance approach and the feasibility approach are far greater from the perspective of explanatory models. This is surprising since the feasibility approach and the economic approach are advanced by similar authors.

Gurr's dismissal of holist explanations is obvious. In a recently published 40th anniversary edition of his doctoral thesis "Why men rebel", Gurr (2010) looks back at his argument revealing a stark opposition to purely holistic arguments such as those brought forward in Collier, Hoeffler, and Rohner (2009):

> I was convinced then, and am convinced now, that to build more peaceful and secure societies, we need to begin by analyzing the minds of men—and women—who oppose bad governments and unpopular policies. But equally we need to know about the societies in which they live, their beliefs and cultural traditions, and the governments they oppose. (...) I continue to think that people, with all their diverse identities, desires,

[12] The assumption that individuals are not fully aware of the social or psychological principles generating their decisions and guiding their actions is an argument that is often found in moderately holist theories of action (cf. Bourdieu 1977, pp. 18, 79)

[13] Beyond that, Collier and Levitsky (2009) also refer to the possibility that structures might influence motivation. This is usually characteristic of moderate collectivism. Since the authors do not further pursue this argument nor include it in their theory, it is ignored here.

> and beliefs, should be central to our analyses of conflict. This means that individuals should be the prism through which to examine the effects of social structures, beliefs, and the possibilities for mobilization and political action. (...) [T]he essential first step in any analysis is to understand what people's grievances are and where they come from. This brings me to my second point, which is that to understand grievances we must first examine where people stand in society and what goods and bads they experience. It is not enough to point to economic and social structures as the 'explanation'. We need to understand how people interpret the situations in which they find themselves.

In Gurr's view, it is crucial to always formulate causal arguments in reference to the beliefs and the motivation of individuals. In this regard, the individualist and the moderately holist perspective agree. Both explicitly theorize decision-making processes. Due to this similarity, the following discussion carves out the grievance perspective in direct comparison to the economic perspective.

The rational orientation of individual actors in the economic perspective and the frustration-aggression mechanism are in both approaches assumed to be part of the conditio humana. With regard to the specification of individual preferences, however, both accounts substantially differ: In the economic approach, individual preferences are narrowly defined and the logic of decision-making is straightforward. The grievance approach, in contrast, is more firmly rooted in social psychological research and describes individual preference formation in greater detail. In direct comparison, rational choice theory is the more sparing theory pertaining to the micro-mechanism.

Differences with regard to aims or the logic of decision-making alone, however, do not constitute a decisive criterion to allocate the economic and the grievance perspective to different explanatory approaches. Whether the assumption of individual rationality or frustration-aggression theory adequately represent individual decision-making processes is an empirical question. Most likely, both mechanisms are not mutually exclusive. Be that as it may, the fact that the grievance theory is classified as a moderate collectivist theory is not grounded on the frustration-aggression theory. The latter is just an exogenous assumption of individual rationality.

The main difference between the individualist and the moderate collectivist framework lies in the specification of the macro-micro link. Individualist approaches regard structures exclusively as immediate strategic landscapes in which actors choose their actions based on fixed preferences. Moderate collectivist approaches likewise assume that individuals take into account their environment when making decisions. On top of that, however, they integrate formative effects of structures on individuals (Albert 2005, 2010a). The formation of individual preferences through structures—likewise a characterizing feature of constructivist approaches in international relations theory—is found in several parts of the grievance perspective.

First, Gurr assumes that value expectations are not entirely fixed. He denotes 'values' as those entities for which people strive. Self-evidently, some basic values such as, e.g. physical well-being, constitute non-alterable individual preferences. These types of values are thus not socially but biologically determined and are part of the conditio humana. Apart from that, however, value expectations—i.e. values to which individuals "believe they are justifiably entitled" (Gurr 1974, p. 27)—are not exogenously assumed but subject to change. This process is called conversion: "the abandonment of some or all the norms and beliefs that establish existing expectation levels (...) and their replacement by new beliefs that justify increased or different expectations" (ibid., p. 101).

The possibility for value expectations to change is a necessary but not sufficient conditions for downward causation. They leave open the question of *how* preferences are shaped. Here, Gurr refers to the role of beliefs. The influential role of beliefs in the formation of preferences is a characterizing feature of constructivist theories (cf. Wendt 1999). Gurr likewise underlines the importance of how individuals interpret the world (cf. Gurr 1974, p. 135). Beliefs are the key individualist variable to explain the transmission of societal norms to individual preference. The frustration-aggression mechanism provides an example. Violence is directed against *what individuals believe* to be the sources of deprivation (ibid., p. 13). As a second example, beliefs likewise form the basis for normative justifications, i.e. the justification of acts because they hold an intrinsic value.

Beliefs, in turn, are shaped by societal factors. An example of the formative effects of structure on beliefs and thus indirectly on individual preferences is exemplified in the conversion effect. The conversion effect denotes a change of value expectations that might occur due to the confrontation with new modes of life or the exposure to ideologies (ibid., pp. 92–122). The mechanism works through learning: "Men feel deprived with respect to what they have learned to value and

	Individualist	Collectivist	Moderate Collectivist
Theory of Action	Rational Choice	NN	Collectivist
Incentives	Fixed	Excluded	Variable
Aspired Goods	Narrow	Arbitrary	Broad
Point of Reference	Individual	Structure	Group

Table 7.3: Comparison of three explanatory approaches

to what they have learned to do. The beliefs and symbols that determine the timing, forms, and objects of violence are learned." (Gurr 1974, p. 36)

In summary, relative deprivation theory assumes that societal factors are able to significantly alter individual beliefs which in turn influence values and preferences. This mechanism of downward causation is the pivotal difference between methodological holist and individualist theories. In moderate collectivist theories, individual preferences are susceptible to change, while in economic theory they are regarded as fixed. Where rational choice theory focuses on individual material well-being as well as power, the grievance perspective advances the notion of beliefs and value expectations. What sets apart the economic and the grievance perspective is the endogeneity of preference formation and the definition and width of aspired goods (see table 7.3).

The fact that moderate collectivist theories allow downward causation while rational choice theory exogenizes motivation has profound consequences in the explanation of collective action. Rational choice theory assumes that individuals always act for their own profit. This entails important consequences for the explanation of collective action (Olson 1965). In the individualist perspective, individual participation in collective action, in general, and in conflict, in particular, must be rooted in individual incentives. Individuals simply do not act for a common good on behalf of a collective if they are able to attain that specific good without doing their part.

By including downward causation, grievance theories takes a decisively different approach. Individual rationality becomes one possible form of motivation among many. It is entirely possible that individuals calculate their profits before making a conscious decision. Likewise, however, the formative influences of values might lead individuals to see beyond their own nose. Gurr (2000, p. 67) explicitly addresses this phenomenon:

> It is true enough that claims made by ethnopolitical groups include material and political demands as well as claims based on their ethnocultural interests. But I do not think that what 'really' motivates the leaders and members of such groups is the quest for material benefits or power. The decisive factor is that ethnopolitical groups organize around their shared identity and seek gains or redress of grievances for the collectivity.

In line with the above discussion, the decisive notion in this quote is not the discrepancy between 'hard' material benefits and 'soft' grievances. Rather it is the notion that individuals might act *for a collectivity* although it might not be the best decision in terms of individual utility.

In comparison, Grossman (1991) underlines his firm roots in rationalism:

> The theory emphasizes the expected private returns to insurgents. Specifically, the analysis assumes that only active insurgents share in the booty taken in a successful insurrection. In this respect, the present theory contrasts sharply with theories that assume that successful insurrections produce mainly social benefits from which active insurgents cannot exclude nonparticipants. These social-benefit theories stress the importance of such factors as 'ideology,' class identification, and anomie in overcoming the free-rider problem associated with nonexcludability.

In summary, the choice of theory is an expression of significantly different views of the social world. This is especially true pertaining to the explanation of collective endeavors and thus the question of mobilization and individual participation in intrastate conflict.

7.2.2 Theoretical Complexity

Gurr's relative deprivation theory is among the most complex explanatory approaches in the field of conflict research. Especially his early contributions include a very large number of explanatory variables. The feasibility model of Collier, Hoeffler, and Rohner (2009), in contrast, embodies simplicity. Thus, both theories are positioned at different ends of the continuum between complexity and simplicity. It is not sufficient, however, to judge the complexity of a theory exclusively on the number of explanatory variables. What counts is the balance of explanatory means and consequences. Pertaining to theories, means comprise explanatory variables and mechanisms whereas

consequences denote the number of testable hypotheses and the empirical scope of dependent variables. Based on this criterion, the difference between both theories becomes smaller. Gurr derives over 80 testable hypotheses from his theory and the empirical scope of his theory encompasses the intensity as well as the type of political conflict. Furthermore Gurr formulates hypotheses pertaining to the micro-level as well as inter-level relations. The explanatory scope of the feasibility approach is decisively smaller. First, the motivation of individual or collective conflict actors, a variable that forms the core of relative deprivation theory, is explicitly excluded from the theory: "The feasibility hypothesis proposes that where rebellion is feasible it will occur: motivation is indeterminate, being supplied by whatever agenda happens to be adopted by the first social entrepreneur to occupy the viable niche, or itself endogenous to the opportunities thereby opened for illegal income" (Collier, Hoeffler, and Rohner 2009, p. 24). Second, the authors restrict their dependent variable on conflict onset. In summary, relative deprivation theory is by far more complex than the feasibility approach but likewise allows the formulation of more testable hypotheses with regard to a more extensive set of empirical phenomena.

7.2.3 Instrumentalism and Realism

Gurr (1974, p. 357) explicitly defends the complexity of his theoretical approach:

> From one epistemological point of view, the logical coherence, parsimony, and elegance of a theory are the criteria by which its adequacy is judged; its accuracy is both indeterminate and inconsequential. There is however a compelling need in the real world to be able to anticipate political violence and the consequences of various responses to it, a need common to rebels, incumbents, and those who simply want to live their lives in peace. Where I have faced what seemed to be a choice between "telling it as it seems to be" and the dictates of coherence, parsimony, or elegance, I have chosen the first on grounds that, given the present inadequacy of and need for systematic understanding of violence, it is the more fruitful and useful course.

What Gurr describes is basically the distinction between an instrumentalist position and a realist conception of explanation. According to the former, theories are tools. Empirical adequacy is irrelevant. What counts are good predictions. According to the latter, theories should reflect the real world. Applied to the discussion about theoretical parsimony, a realist account judges parsimony relative to ontology (cf. King, Keohane, and Verba 1994, p. 20). A simple account is not *per se* better than a more complex one even if it produces similar expectations. It is only preferable if the empirical evidence indicates that it matches reality better. Gurr decides against an understanding of parsimony that regards the simplicity of a theory as an end in itself. Instead, he includes all factors deemed relevant for the onset of political violence in his explanatory framework. The result is a theoretical framework that exhaustively models the emergence of political violence.

The feasibility argument is similar to relative deprivation theory in that it regards individual motivation *per se* as a necessary condition to explain political conflict. Nonetheless, Collier, Hoeffler, and Rohner (2009) exclude any notion of motivation from their formulation of the feasibility hypothesis. The argument is that the ubiquity of motivation makes it irrelevant as an explanatory factor. From a critical realist perspective, the omission of a variable that is regarded as causally relevant is problematic. This must not go as far as to include every single variable with any influence on a explanandum. In the end, the availability of oxygen is likewise a necessary condition for conflict and yet it would be plain silly to include it in a theory on conflict. Individual (and in our framework also collective) motivation, however, is the very mechanism that explains why subjects participate in political violence. It lies at the heart of a theoretical model of political violence. One cannot infer the hypothesis that motivation is ubiquitous from an exclusively structural empirical analysis. A regression of highly aggregated variables capturing macro-level properties simply cannot tell us enough about the micro-level. To understand why a sufficient number of individuals engages in violence, we need to investigate the very mechanisms that lead to their voluntary or coerced participation.

Referring to the argument of multiple realizability, one might argue that the multitude of functionally equivalent motivations at the micro-level preclude their formulation as meaningful theoretical statements. As discussed above: Where mechanisms become arbitrary, they become meaningless. In how far individual motivations are too numerous to be modeled meaningfully in theoretical terms, however, is an empirical question. As discussed in subsection 7.1.4, the evidence has shifted in favor of accounts that explicitly include motivations. Case study research has shown the explanatory value of grievance approaches both in qualitative case studies and in larger comparative designs. This turn away from structures is an indicator that individual mo-

tivations, although complex and differentiated, can be reduced to theoretically meaningful and sufficiently general theoretical mechanisms.

In summary, theoretical parsimony is only adequate if the real world corresponds to the theory. Moreover, essential properties should not be the candidates to exclude from a theory. Put differently, the theoretical and empirical focus must must overlap to produce suitable scientific explanations.

7.3 Summary

This chapter has taken a new perspective on the conflict research by focusing on explanatory approaches. Primarily based on our discussion in chapters 2, 3 and 5, we argued that theoretical discussions play a too minor role in current conflict research hindering progress with regard to the explanation of political conflict. To close this gap, we chose influential scholars in conflict research and focused on their theoretical work by closely examining their publications.

Focusing on two core nomological components of the respective theories—the influence of structures on (collective or individual) actors and the theory of action—allowed us to identify three explanatory approaches in conflict research: the individualist explanatory approach, the moderate collectivist explanatory approach, and the collectivist explanatory approach.

The individualist approach regards structures exclusively as strategic environments. It's core feature is a theory of action that exogenously assumes actors to be rational. Since individual incentives carry the explanatory load of the model, they are often quite narrowly defined. According to this approach, actors swiftly adapt to a changing strategic environment. Collectivist explanatory approaches, on the other hand, completely abstain from any nomological statements on the micro-level. Their view on structures resembles ecological arguments of structural niches. The moderate collectivist explanatory approach is similar to the individualist approach in taking into account structures as strategic environments. However, it also includes a formative influence of structures on individual intentions. Thus, the macro-micro link is divided. The moderate collectivist explanatory approach puts a specific focus on the downward causation. It fits well with the arguments on downward causation developed in the preceding chapters. A drawback of the moderate collectivist approach might be its complexity. However, theoretical parsimony is only adequate if the phenomena under study are simple. In the case of intrastate political conflict and non-state conflict actors this is likely not the case.

Chapter 8

Theory

This chapter joins the strands of the preceding chapters in developing a theoretical framework, which will in turn be tested in the subsequent empirical analysis. The main aim of what follows is to transfer our rather abstract ontological discussions into a concrete theoretical argument with specified explanantia.

The theory aims to explain under what circumstances non-state conflict actors emerge and what determines the dynamics of intrastate violent conflict. Given the large empirical extension of the phenomena to be explained and the great scientific and public interest in the topic of political conflict, it is evident that conflict research has addressed both questions from any imaginable perspective. One of the main arguments in the following explanatory model is that inter-group inequalities induce conflict. The role of inter-group inequality has been studied not only in conflict research—under the terms of relative deprivation (Gurr 1974), ranked ethnic systems (Horowitz 1985; Petersen 2002), and horizontal inequality (Cederman, Weidmann, and Gleditsch 2011; Stewart 2008)—but also in related fields of political science such as social movements (Melucci 1988). In a similar direction go cleavage theories on party formation (Lipset and Rokkan 1967). In view of the vast literature on inequality and conflict (cf. Østby 2013), what can the following discussion contribute?

First, it adds systematicity to the existing debate. Drawing on a differentiated version of the macro-micro-macro model, our discussion clearly locates concepts on different levels of analysis and discusses how they are related. This greatly facilitates the understanding of the different concepts and the causal pathway of explanation.

Second, it takes the notions of emergence and downward causation seriously. Introducing the concept of the collective subject, i.e. groups that have beliefs and volitions that are not necessarily reducible to the beliefs and motivations of their individual members, the following discussion defines the lower limits of the widely heard call for disaggregation (cf. Cederman and Gleditsch 2009). Interestingly, those who have propagated the need to empirically and theoretically hone in on the micro-level have predominantly argued that mobilization into rebel groups is a question of material incentives and of overcoming problems of collective action (Humphreys and Weinstein 2006; Kalyvas 2006; Lichbach 1998). Against these micro-level, rational-choice, and bottom-up perspectives, this thesis discusses the effects of emergent and irreducible social structures and collective subjects. This is not to say that we should come back to purely structuralist, collectivist theories. The point at which disaggregation leads to atomism, however, goes one step too far. There is more to groups than the individuals they comprise.

Third, the following more clearly demarcates constitutive and causal relations. For instance, a shared belief in group membership is not *leading to* group formation but rather *is* a group. Furthermore, conflicts should not be equated with interaction, but rather with an incompatibility of intentions. Causal and constitutive relations need to be more clearly differentiated. This is the undertaking of the following explanation.

Fourth, the following neither exclusively focuses on groups, i.e. people sharing a collective identity, nor exclusively on non-state actors, i.e. organized collective actors. It rather addresses the formation of groups and of collective subjects as two distinctive steps on the way to the onset of intrastate political conflict. This theoretically connects the debates on inter-ethnic conflict and non-state conflict actors.

Figure 8.1: Macro-micro-macro model

8.1 Basic Model and Theory

8.1.1 The Explanatory Model

As laid out in chapter 6, most social science research distinguishes two levels of analysis: a micro-level, encompassing the acting 'parts', and a structural macro-level. The theoretical argument of this thesis follows a qualified version of the macro-micro-macro model as reprinted in figure 8.1. The diagram represents an abstract model of the theory. It allows to structure the argument and to visualize the explanatory approach. Lines with an arrow symbolize causal relationships. Horizontal lines indicate same-level causal relationships. Diagonal lines stand for inter-level causal relationships. Downward pointing diagonal lines indicate downward causation (the 'logic of situation'), and upward pointing diagonal lines upward causation (the 'logic of aggregation'). This is the 'standard approach' to modeling theoretical explanations (Coleman 1990; Esser 1993).

The standard approach is extended by two elements: First, constitutive relationships are depicted by double lines. The vertical double lines refer to constitutive inter-level relations, such as the relation between the intentionality of individuals (micro-level) and social positions (macro-level). Since they depict constitutive relationships they have no extension on the 'x-axis', which can be regarded as a time-axis. Second, a meso-level of collective subjects is introduced. This is not only due to the fact that the emergence and tactics of collective subjects are the main explananda of the model, but also because they exist in their own right. This leads to the following picture: The micro-level consists of individuals, the meso-level of collective subjects, and the macro-level of the natural and the social space. The natural and social space can be further differentiated in contexts and fields, respectively.

The concepts and their constitutive relations have been discussed in the previous chapters. This chapter focuses on linking the different concepts causally by elucidating the main theoretical mechanism that leads from specific configurations of the social and natural space to individual cognitive (beliefs) and practical (motivations) intentional states and then to the emergence of collective subjects.

8.1.2 Joined Strands

The theoretical model essentially builds on three pillars: First, it strives for providing a theory which takes the nature of the social world seriously (cf. ch. 3 and 4). From the critical realist perspective, we can derive the need to engage in a more serious debate on the ontological foundations of conflict, conflict actors, and collective action. Satisfying these requirements, the second chapter laid out a theory that identified individual and collective intentionality as a constitutive element of the social world, in general, and groups and inter-group conflict, in particular. The extensive treatment of theory, constitutive relations, and concepts contrasts with the predominantly empirically—and practically—oriented view dominating conflict research. In journal articles, hypotheses often stand on weak, or at least vague, theoretical foundations. At times they even appear as mere side effects of expansive methodological and empirical discussions. Second, the theoretical argument aims at integrating the theoretical approaches laid out in chapter 2. This requires locating the argument in the wider landscape of theoretical debate and enunciating its innovative and adopted parts. Third, the theory arranges the concepts defined in chapter 6 in a coherent theoretical context. The pivotal challenges of theory formation rely on clearly demarcat-

ing the different concepts, positioning them within a more general explanatory framework, and investigating their conjoint and reciprocal causal effects.

8.1.3 Explananda

The thesis focuses on two explananda that are derived from the typical life cycle of collective non-state conflict actors. The first step in the 'life' of a collective non-state conflict actor, and our first explanandum, revolves around formation. Following up on the work on relative deprivation, cross-cutting cleavages, and horizontal inequalities (Cederman, Weidmann, and Gleditsch 2011; Gubler and Selway 2012; Gurr 1974, 1993, 2000; Østby 2008; Stewart 2008), I argue that *synchronic inter-individual inequalities* (Østby 2013, p. 214) trigger the formation of non-state conflict actors. Based on a moderate collectivist stance, I hypothesize that the formation of non-state conflict actors (NSCA) is facilitated by the overlapping of positions among individuals in the natural and social space. Where individuals are similar in various ways, they form collectives. Of course, such collectives do not necessarily engage in any forms of conflict. Being part of a group and acting together are two separate modes, the differentiation of which is expressed by the terms 'groups' and 'collective subjects'.

The second explanandum concerns the tactics of non-state actors and emerging *profiles of violence*. Although group formation is often a lengthy process, tactics within existing conflicts are often swiftly adaptable. I argue that the amount of resources at the disposal of non-state conflict actors, the internal organization of non-state conflict actors as well as features of their geographical surroundings determine the characteristics of conflict measures in intrastate conflicts. In analyzing conflictual interactions, the focus shifts from enduring structural patterns to the highly variable relationships and interactions between actors in political conflicts.

8.1.4 Sociological and Psychological Theories

The most advanced and empirically-tested theoretical arguments tackling group formation are developed in social psychological research (for a general overview see Forsyth (2010)). Consequently, the mechanisms proposed in this section primarily draw on this field of research yielding two main advantages.

First, socio-psychological theories are especially well suited for formulating micro-level theories, as states of mind and behavior constitute their main focus. Socio-psychological theories are thus closely related to methodological individualist theorizing in the social sciences. Despite the prevalence of methodological individualism in conflict research, however, the description of micro-level mechanisms often remains surprisingly vague. This gap can be filled by socio-psychological research. If one accepts the pivotal role of intentionality in explaining conflict-related phenomena, a shift toward social-psychological research is particularly relevant. Whereas the first chapters have extensively discussed the intentional underpinnings of the social world, they have not elaborated on cognitive processes.[1] Although the constitutive link between shared intentional states should have become clear, little has been said about how beliefs or motivations come about. Social-psychological research is perfectly suited to provide answers.

Second, resting the theoretical focus of social-psychological research upon the micro- and meso-level fortifies the foundation of empirical research. Given the difficulties of conducting micro-level studies in situations of violent political conflict, empirical research has predominantly focused on establishing macro-level regularities.[2] Obviously, psychological research faces the same obstacles. It can contribute to conflict research, however, by bringing in empirical results of social experiments. Evidently, experimental research brings up the question of external validity, specifically in conflict research. Moreover, founding the explanation of macro-sociological explananda on experimental research might be tricky, as causal forces might cancel each other out outside of experimental settings. This would not invalidate experimental results, but rather preclude expected results. From a critical realist perspective, however, these two objections do not loom large. Critical realist methodology demands a thorough development of concepts and a precise analysis of the inner functioning of the entities under analysis. Being aware of the mismatch

[1] This is due to the fact that the constitutive relations between the micro-level of intentional states, on the one hand, and the meso- and macro-level of groups and institutions, on the other, have not yet been adequately theorized. The structure-agency debate has predominantly focused on causal relations and widely neglected—or at least not adequately delineated—constitutive relations.

[2] A notable exception is the work of Humphreys and Weinstein (2008).

between the operation of causal mechanisms and constant conjunctions, critical realism re-orients theoretical research away from analyses of covariance and towards the mechanisms that underlie causal powers. In summation, social-psychological research allows for the mitigation of a pivotal problem in conflict research: the mismatch between theories formulating causal mechanisms on the micro-level, and empirical results exclusively focusing on macro-level regularities.

In light of these two arguments, the following applies Self-Categorization Theory (SCT) (Turner, Hogg, Oakes, et al. 1987) to explain the emergence of groups and the formation of collective subjects, respectively. The theory was developed with an interdisciplinary focus in mind and represents psychology's turn towards the social world (Reicher, Spears, and Haslam 2010). SCT thus seems specifically applicable in the present context.

Whereas Social Identity Theory (SIT) (Tajfel and Turner 1979, 1986) primarily focuses on inter-group relations, SCT thoroughly investigates processes of group formation (Turner, Hogg, Oakes, et al. 1987, p. 42). More precisely, SCT focuses on "mechanics of group identification, asking what exactly, psychologically speaking, a group is and what basic social-cognitive processes generate group identification and associated group processes and behaviors" (Levine and Hogg 2010, p. 729). Consequently, where SIT has been drawn upon to explain inter-group conflict, SCT is more appropriate to explain group formation. In general, however, SCT and SIT are closely linked.

8.1.5 Psychological Research on Conflict Participation

This is not the first study applying socio-psychological theories to conflict research. Some approaches referring to social psychology have been discussed in chapter 2. Examples include the frustration-aggression mechanism in Gurr (1974) or the reference to SIT in the theory of horizontal inequality (Cederman, Weidmann, and Gleditsch 2011; Stewart 2008). It would be worthwhile to provide a structured overview of psychologically-oriented research along the lines of the systematic evaluation of explanatory approaches presented in chapter 2. However, due to the sheer number of publications, the scope of this section will only provide a broad overview.

Psychological research on non-state conflict actors has predominantly focused on terrorism. Since terrorist groups are a subtype of non-state armed actors, study results can generally be assumed to have a certain degree of external validity with regard to the argument presented here. Just as in social science conflict research, psychological research on terrorism has put to test a large variety of independent variables and mechanism. This section aims to further delineate what kind of socio-psychological arguments are best suited for explaining individual participation in conflict actors. Furthermore, the following aims to provide mechanisms of group formation.

A first focus of psychological and psychiatric research has been placed on the role of mental disorders. Crayton (1983), Laqueur (1977), Lasch (1979), and Pearlstein (1991) have linked terrorist activity to narcissist traits. For Pearce (1977), a terrorist is often "an aggressive psychopath". Cooper (1978) argues that terrorism is a means of release for select psychopaths that do not find other outlets. Other approaches have linked terrorism to childhood abuse (deMause 2002; Feuer 1969; Kent and Nicholls 1977; Post 1984). Many of these findings, however, lack validity since they are not based on reliable diagnostics (Corrado 1981) or suffer from a general lack of empirical data (Dalgaard-Nielsen 2010; Silke 2008).

Crenshaw (1981), Ruby (2002), and Taylor and Quayle (1994) conclude that terrorists are generally not preponderantly affected by mental disorders. Heskin (1984) supports these findings in a study of members of the Irish Republican Army. Expanding the view from mental disorders to personalist traits more generally, Harris, Gringart, and Drake (2014) conclude that the "inability to form psychological profiles of individual members across a variety of extremist groups, as well as the recognition in extremism and terrorism research indicates that no adequate personality profile exists." Kruglanski and Fishman (2006, p. 193) conclude that "[t]errorists do not seem to be characterized by a unique set of psychological traits or pathologies." Thus, the majority of current research on terrorism seems to reject explanations based on mental disorders.

This yields, *ex negativo*, further support for an approach that takes into account the effects of social structure and groups. As Crenshaw (1988, p. 12) argues: "actions of terrorists are based on a subjective interpretation of the world rather than objective reality. Perceptions of the political and social environment are filtered through beliefs and attitudes that reflect experiences and memories." Presenting twelve social-psychological mechanisms of radicalization, McCauley and Moskalenko (2008, p. 415) state that "radicalization occurs in a context of group identification and reaction to perceived threat to the ingroup." In a similar vein, Silke (2008, p. 118) states

that a "sense of personal identity and social networks of potential recruits are both extremely important factors. Most terrorists become radicalized as members of a small group of like-minded individuals." This claim is also supported by Bakker (2006) and Sageman (2004) who argue that processes of radicalization stem from strong social identities tied to extremist groups. The only individual-level traits that seem to be robustly *correlated* to violence, although not exclusively terrorist activity, is youth (Budd, Sharp, and Mayhew 2005; Schönteich 1999; cf. Silke 2008).

Based on this overview, we can conclude with sufficient certainty that engagement in rebel groups is not an act of maniacs eluding any explanatory claims applicable to the mentally sane population. Psychopathological factors seem of no primary explanatory value. In contrast, socio-psychological theories that further investigate the interaction of individuals with their environment and focus on strong collective identities seem to hold more explanatory value.

8.2 The Formation of NSCA

Political conflict is an inter-group phenomenon. Likewise, political conflict necessarily involves some kind of interaction to emerge. Thus, for political conflict to exist, collective subjects must exist. Collective subjects, in turn, are a subtype of groups and empirically often emerge from groups. We thus formulate two distinct research questions:

1. What leads to the formation of *groups*?
2. Under what conditions do groups become *collective subjects*?

Both questions are addressed in succession.

8.2.1 The Social Dimension of Intentionality

Before delving deeper into the explanation of group formation, we must first clearly define our point of departure. Following the arguments in favor of moderate collectivism (cf. ch. 4), a theory on group formation cannot fall short of this meta-theoretical position. Beliefs and volitions as well as the specific human intentional traits depend on being related to others (Esfeld 2001; Tomasello 2014). Therefore, the theoretical point of departure is not the isolated, 'atomist' individual as in the individualist explanatory approach. Instead, an adequate explanatory model must take into account that our beliefs and volitions do not exclusively result from the biological makeup. It is, *a fortiori*, inadequate to model individual decision-making processes as being purely determined by biological needs, such as survival or a universal hard-wired predisposition to act on cost-benefit calculations (and this holds true with regard to whatever costs and benefits are measured). The ability to form adequate beliefs of the external world is dependent on there being others. Beliefs derive from our social environment, from what a sufficiently stable social collective holds to be an adequate interpretation of the world. The process of how individuals attach meaning to their perceptions is a result of their social environment. This allows to formulate an assumption that specifies the constitutive relationship between the micro- and the macro-level in our general explanatory model:[3]

> *The assumption of moderate collectivism: The specifically human intentional abilities necessarily depend on social relations.*

From this we can derive specific requirements for the general explanatory model: An explanatory approach that discards the social embeddedness of individuals is misguided. The same is true for an invariable theory of action, i.e. a theory of action that is assumed to be universally valid in spatial and/or temporal terms. An adequate theory of action should not exclusively focus on the intrinsic structure of individuals, but must take into account their social embeddedness, as well.

The assumption of moderate collectivism allows us to further specify three nested constitutive relations representing social conditions of which every individual is a part.

1. Individuals are embedded in the social space. There is no world in which an isolated individual with specific human mental abilities would be able to exist.

[3] Assumptions are here understood as probabilistic nomological statements that are not empirically in this thesis.

2. Individuals are contingently part of groups. Having a sense of group belonging is not a necessary, but an empirically ubiquitous fact.

3. Individuals are contingently part of collective subjects. With the exception of solitary 'lone wolves', individuals are often part of collective subjects on whose behalf they act.

These three relations are depicted as vertical double lines in figure 8.2. Last but not least, the collectivism assumption reminds us to theorize both macro- and micro-levels. Psychological mechanisms at the micro-level are key to understanding the phenomena of institutions, groups, and conflict. The macro-level allows us to understand how beliefs and intentions come about.

8.2.2 From Homology to Groups via Self-Categorization

The first causal mechanism to be explained is the link between the social space and psychological processes at the level of individuals which lead to group formation. The link between the configuration of positions in the social space and individual intentional states is an instance of downward causation, as indicated by the left-hand diagonal line in figure 8.1.[4] Linking sociological and psychological research, this subsection draws on the work of Pierre Bourdieu and Self-Categorization Theory (SCT). Both enable the understanding of the link between the configuration of relative positions in society and the development of certain intentional states.

From Bourdieu's work, we can derive two appearances of structure: First, structures as immediate strategic landscapes taken into account by actors in their decision-making processes. Second, structures as configurations forming relatively stable cognitive and practical intentional states over longer periods of time. Both aspects need to be taken into account in an integrative explanatory approach. However, due to his partly obscure language, Bourdieu's theoretical arguments often lack precision. Therefore, the specific mechanisms of group formation will be derived from SCT. This leads to a division of labor: While the broader conception of the macro-micro link is primarily based on the theory of Bourdieu, more specific mechanisms and empirical evidence are derived from socio-psychological research. In combination, both strands can be used to interweave the concepts of social and natural space, (collective) intentionality, group and collective subject, tactics, and political conflict.

The duality of structure

The move from similarities with regard to certain individual characteristics to identification with other individuals as a group or, more generally, to developments of a certain mind-set, is a central topic in sociological theory. It is found as early as in the traditional concepts of class according to Marx and Engels (1977) and Weber (2008). Whereas the focus on the economic dimension in class concepts reflects the pivotal importance of economic classes in the 19th century, the general question regards that of group formation, namely: Under what circumstances do classes transform from the state of a 'Klasse gegenüber dem Kapital' to a 'Klasse für sich selbst' (Marx and Engels 1977, pp. 180–181; cf. Vester 2008).

Bourdieu (1985, 1990) takes up these arguments. Although not completely disposing of the concept of class, he transcends the one-dimensional perspective on economic relations by introducing the logic of 'fields' (Bourdieu 1984b). Bourdieu's notion of fields fits well within the overall argument of this thesis, as it is inherently relational. In order to understand fields, it would not suffice to understand the properties of the individuals populating the field. Rather, it is important to set the occupants of positions in relation. Positions always must be theorized as *relative* positions. In this regard, Bourdieu's notion of fields as 'fields of forces' is most intuitive:

> Dans la mesure où les propriétés retenues pour construire cet espace sont des propriétés agissantes, on peut le décrire aussi comme champ de forces; c'est-à-dire comme un ensemble de rapports de force objectifs qui s'imposent à tous ceux qui entrent dans ce champ et qui sont irréductibles aux intentions des agents individuels ou même aux interactions directes entre les agents (ibid., p. 3).

We have already discussed the definition of field in section 6.3 where we adapted the more general idea of fields as a spatial model of relative positions. In the present context we are not

[4] This is different from the link between the micro- and the meso-level. Since groups are defined as collectives *sharing the belief of constituting a group*, the link between the individuals and groups is not causal but constitutive. Once a number of individuals believe to constitute a group, then that group exists in the capacity of this collective intentional state.

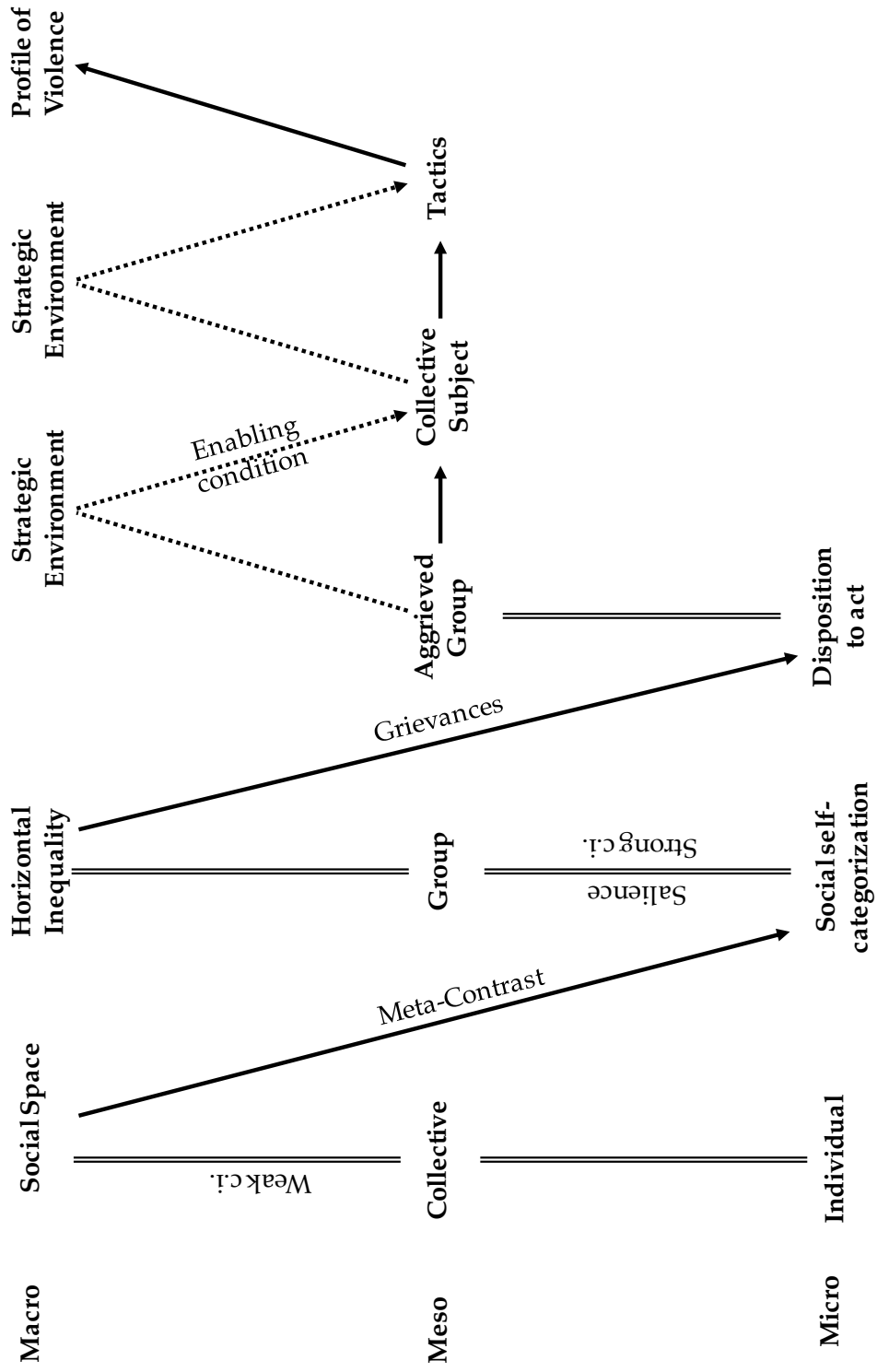

Figure 8.2: A moderate collectivist macro-micro-macro model to explain the formation of NSCA and profiles of violence.

interested in what fields are in general but rather how they impact individual and collective subjects. This is the question of downward causation.

The single most important insight of Bourdieu with regard to the formulation of theories—in the present context as well as with regard to social science theory more generally—is that we can differentiate two distinct manifestations of structure. First, structures constitute *immediate strategic environments* within which individual and collective subjects decide how to act based on their beliefs and volitions. We have identified this analytical perspective as typical of the *individualist explanatory approach* in sections 7.1 and 7.2. Second, however, Bourdieu reminds us that there is always another presence of structure he calls "incorporated structure" (Bourdieu 1990, p. 41), which is expressed in the concept of 'habitus'.[5] The habitus, as "a product of history (...) ensures the active presence of past experiences (...) deposited in each organism in the form of schemes of perception, thought and action" (ibid., p. 54). Bourdieu develops the concept of habitus to explain the asynchronicity between structural change and a change in practices. "He draws on the basic insight of the classical sociological tradition that maintains that social reality exists both inside and outside of individuals, both in our minds and in things" (Swartz 1998, p. 96). The concept of 'habitus' can thus be understood as the individualist/subjective pendant to the relational/objective conception of fields in the social space.

The concepts of habitus and field conceptually separate the blurred line between analytical levels. The often faint differentiation between the micro-level and the social dimension of the macro-level (the social space) directly results from fact that they are inherently linked by intentionality (cf. ch. 4). From an analytical perspective, however,—and we deal here primarily with levels of *analysis*—it is advisable to keep the levels separate.

Whereas structures in their role as immediate strategic landscapes do not fundamentally alter intentions of (individual or collective) subjects, the configuration of social fields *causes* the habitus. Here, we deal with genuine downward causation:

> The conditions associated with a particular class of conditions of existence produce habitus, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations that can be objectively adapted to their outcomes without presupposing a conscious aiming at ends or an express mastery of the operations necessary in order to attain them (Bourdieu 1990, p. 53).

Consequently, the habitus can be defined as a relatively stable set of cognitive and practical intentional states, as "a system of cognitive and motivating structures" (ibid., p. 53). It allows us to grasp how similar field positions possess the propensity to develop similar cognitive and practical intentional states. A pivotal difference between both manifestations of structure is the temporal lag between cause and effect. The notion of structures as strategic environments captures those structural influences that are short-term and to which subjects quickly adapt. This is different with regard to the habitus: There is a temporal lag between the formative influence of structures on individuals, on the one hand, and the situation in which the habitus becomes active and largely determines perception and motivation, on the other. Considering both perspectives, the necessity to modify the macro-micro-macro model of sociological explanation becomes evident. This is depicted in figure 8.1. More specifically, we need to differentiate between two separate macro-micro links. On the one hand, structures act as immediate strategic environments; on the other hand, structures form practical and cognitive intentional states in the long term. Bourdieu's focus on formative effects of structures sets his theory apart from both individualist approaches with a strong focus on micro-level assumptions, and holist approaches that abstain from any descriptions of the micro-level (cf. section 7.2). Based on these arguments we can formulate the following assumption that is characteristic for the moderate collectivist perspective (Albert 2010a):

The assumption of duality of structure: Structures always exist as immediate strategic environments and, resulting from past downward causation, as incorporated structures.

Before applying this assumption, it should be noted here that the notion of habitus has been subject to criticism. One of the most fundamental points of criticism surrounding the notion of habitus includes determinism (cf. Evens 1999; King 2000). The argument is that since structure forms the habitus and the habitus recreates structures, there is not much room to break out of this

[5] This view of structure bears resemblance to the constructivist view in International Relations theory (Wendt 1999) or the social identity approach in social movement research (Melucci 1988).

circle. Bourdieu's concept of habitus thus seems to entail a strong form of collectivism in which individuals merely reproduce rather than shape structures. Bourdieu's theoretical approach, as well as others that argue in favor of downward causation, such as the present author, have to deal with such criticism (cf. Bourdieu and Wacquant 1992).

First of all, a formative effect of structures in the form of downward causation neither entails that actions are predictable, nor that structures are always reproduced unchanged. Specific actions are not predictable, as they result from the interplay between incorporated structures and the immediate strategic landscape, despite the influence of individual beliefs and motivations via socialization. Incorporated structures are dispositions to act specifically according to a certain situation. They do not, however, limit the plausibly infinite amount of possible reactions in specific situations. Thus, the explanation of action is never a mere reduction to incorporated structures, but rather always takes into account the given situation. This leads to a second point. Where individuals act together, as is the case in all kinds of social action, the complex aggregation of individuals acting together can lead to trans-intentional effects on the macro-level. Collective results are often unforeseeable and partly governed by chance. The cycle of structure-habitus-structure, and downward causation more generally, thus does not imply the absence of change.

Bourdieu puts forward another argument which sets him apart from rational-choice approaches and has led to his view that structures tend to reproduce, namely, that individuals are mainly unconscious of their own habitus. In fact, the creation of practices on the basis of embodied rules rather than on conscious decisions is one of Bourdieu's central arguments: Human beings are conceived as $\frac{3}{4}$ automata (Bourdieu 1984a). This leads to the following picture: Bourdieu evades the 'determinist trap' with regard to downward causation by leaving us $\frac{1}{4}$ of autonomous decision making. However, the dividing line between being a slave of our dispositions, on the one hand, and being an autonomous agent with a clear self-perception, on the other, is not well elaborated. This is surprising, as this differentiation serves as the key to the mediation between structuralist and individualist theorizing. For the aim of this thesis, however, this fair criticism of Bourdieu's notion of habitus does not loom large. The present analysis rather focuses on objective indicators of social position without directly measuring intentions. The specific methodological approach thus allows us to navigate around this pitfall. Any research design that includes surveys on perceptions and volitions, however, needs to explicitly discuss this issue.

From the perspective of theoretical parsimony, one might object that including both perspectives is unnecessary or even that both approaches are mutually exclusive. However, strictly speaking, both types of macro-influences exert a causal effect in any situation, and should thereby both be employed in adequate theories (cf. sec. 7.2). However, depending on the respective explanatory focus, the relative weight of both perspectives varies. If one aims at explaining generalizable mechanisms about the formation of groups, long-term formative effects of social structures are comparatively more important. If the focus lies on specific decisions of collective subjects—such as the decision of a non-state conflict actor to perform a certain violent act—a more confined view on structures as strategic environments is more appropriate. In the latter case, formative effects on structures may be exogenized on methodological grounds but should not be ignored. Exogenization then takes the form of assuming motivations to be constant but not necessarily similar among actors. This allows for concentrating on interaction processes and concrete decisions by particular collective actors.

Having dealt with the most important objections against Bourdieu's approach, the following adapts the essential insight obtained in order to conceive of structure as immediate strategic landscapes and as forming the habitus. The assumption of the duality of structure allows us to systematically integrate the theoretical approaches presented in chapter 2.

In light of these more general contributions to adequate theoretical approaches in the social sciences, we can ask how valuable Bourdieu's theory is in the context of group formation. Bourdieu (1985, p. 725) argues that his theory interlinking social fields and habitus is capable of "explain[ing] and predict[ing] the practices and properties of the things classified – including their group-forming practices". In fact, Bourdieu's work provides significant insights into the co-evolution and perception of social structures, as well as how they influence practices. More specifically, Bourdieu (ibid.) formulates some expectations regarding the link between positions in the social space and groupings. He argues that groups of individuals who are similarly positioned are more stable. He reminds us of the difference between groups that are similarly positioned in the field (groups that exist on paper (Bourdieu 1990, p. 36), groups with a 'theoretical existence' (Bourdieu 1985, p. 725), or 'practical groups' (Bourdieu 1991, p. 130)) and groups that

are aware of their collective identity ('instituted groups' (Bourdieu 1991, p. 130)). He likewise discusses in detail how the subjective dimension of social structure enables researchers to challenge the dominant logic, the 'doxa', of fields by redefining the categories of what constitutes a low and a high relative position. He reiterates the social construction of collectives as existing "in thought" (Bourdieu 1985, p. 741) and underlines the importance of those who speak on behalf of groups.

All these contributions are valuable. When it comes to formulating specific hypotheses, however, Bourdieu's writings lack clarity. We can very well derive the necessity of adapting the macro-micro-macro model of explanation to account for the two logics of situation. But we cannot derive from it specific hypotheses as to the properties of social structure or as to determining which specific individuals bond together. As described above, this is the point at which social psychological research can be of assistance. For it is not only more thoroughly based on experimental research, but it also specifically deals with the question of group formation in sufficient clarity.

Self Categorization Theory

The mechanisms of group formation are described in Self-Categorization Theory (SCT). Building hypotheses based on SCT provides an added value for three reasons. First, it investigates into the cognitive mechanisms leading to a shared belief in group membership, thereby extending the sociological view by a psychological perspective. Second, it provides empirical support for the thesis of a double presence of structures that are characteristic of moderate collectivist explanations. Structures influence individual intentional states via both socialization and immediate environments. Third, SCT provides empirical support against the rational-choice perspective of cost-benefit-oriented individuals. It shows that neither mutual nor individual benefit, nor interaction constitute necessary conditions of group-formation or group-oriented behavior. Taken together, SCT allows us to understand how macro-configurations of positions in the social and natural space lead to the formation of individual belief in group membership on the micro-level.

The key term of self-categorization theory is 'categorization'. Categorization is the process of grouping according to 'homophily': grouping individuals like persons. More specifically, self-categorization describes cognitive processes of how individuals situate themselves with regard to others. SCT builds on the basic assumption that each individual has a self-concept in the form of self-categorizations, i.e. "cognitive groupings of oneself and some class of stimuli as the same (...) in contrast to some other class of stimuli" (Turner, Hogg, Oakes, et al. 1987, p. 44; for the following see Turner, Hogg, Oakes, et al. 1987, pp. 42–67). There exist multiple self-categorizations at each of a number of nested levels.[6] Two levels of self-categorization are of specific importance: the social self-categorization between in-group and out-group and the personal self-categorization between oneself and others.[7]

Self-categorization follows the process of meta-contrast: entities are grouped as to maximize perceived intra-category and to minimize perceived inter-category correlation with regard to those entities (stimuli) on which the categorization is based. The greater the perceived similarity of elements within a certain category *in comparison* to those entities outside of it, the more clearly demarcated a category becomes. Thus, it is not strictly the similarity between units within groups that counts, but also its ratio to inter-category differences. Put differently, all perceptions of similarity are made against an external standard. The more similar collectives perceive themselves to be in comparison to others, the higher the probability that they think of themselves as a group. The shared belief to be a group, in turn, constitutes a group following the definition of groups as collective intentional states laid out in section 4.3. Applying the principle to populations as a whole, we can assume that group-formation practices in populations follow the principle of minimizing mean pair-wise differences within groups. Based on this reasoning, we can formulate the following assumption:

The assumption of self-categorization: Self-categorization follows the principle of meta-contrast.

Self-categorization takes place both spontaneously and by processes of internalization (Turner, Hogg, Oakes, et al. 1987, pp. 52–54, 55–56). This provides further support to the adequacy of a

[6] Self-categorizations thus mirror a taxonomy with a number of classical subtypes on each level (Marradi 1990).

[7] Other levels, e.g. the self-categorization as a human vs. non-human are not of importance with regard to the explanatory goal.

moderate collectivist approach and against purely individualist rational choice approaches. Examples of group formation are indicative of the importance of spontaneous self-categorizations through designation based on trivial characteristics in the minimal-group paradigm (Billig and Tajfel 1973; Tajfel 1970; Tajfel and Billig 1974; Tajfel, Billig, et al. 1971). Even if individuals are assigned to groups on an arbitrary, ad-hoc basis, this leads to patterns of in-group favoritism and out-group discrimination. What is important in this context, i.e. with regard to the macro-micro link, is not that we can observe group behavior. It is rather how little is needed to create groups. Having been assigned to groups, the individuals in the experiment thought and acted as group members although they neither interacted, nor were they aware of the personality of the other participants. Furthermore, these individuals gained no personal benefits. Nonetheless, participants in the experiment allocated significantly more resources to members of the in-group than to out-group members. This supports the definition of groups as collective intentional states. Neither interdependence nor mutual benefit are necessary conditions for group membership to have an effect (Turner, Hogg, Oakes, et al. 1987, pp. 64–65). Other studies by Turner, Hogg, Turner, et al. (1984) have confirmed that group formation and cohesion are not dependent on group success. In a similar vein, McGuire and McGuire (1998) show that social self-categorizations are important in self-descriptions, adding further empirical evidence to the idea that people think of themselves as group members and not solely as individuals.

Individuals simultaneously hold several social and personal self-categorizations. For instance, I think of myself as a member of my department and at the same time as a doctoral student, differentiating me from the professors and students. Moreover, both types of self-categorizations exist at several levels. Due to this multitude of self-categorizations, it is important to identify which bears greatest importance. This consideration relates to the question of 'salience'.

Depending on the context, different levels of self-categorizations become salient. Whether we categorize ourselves as individuals or as group members is dependent on the context. An important factor in making a social self-categorization salient is the presence of out-group members. Given a specific situation, those characteristics that are similar among the members of a collective (defined by spatio-temporal proximity) are important drivers of social self-categorization therein. However, once out-group members are present, social self-categorizations become salient.

The salience assumption: The salience of social self-categorization is context-dependent.

A salient self-categorization accentuates the perception of similarity and dissimilarity within and between groups, respectively. This entails that perceived differences and similarities at other levels lose significance (Onorato and Turner 2004). If, for instance, social self-categorizations are salient in a certain situation, differences between individuals within the group are perceived to be comparatively smaller. The salience of levels of self-perception thus can be located on a continuum between the social and the personal level of self-categorization. In situations where I move toward social self-categorization on the continuum (i.e. social self-categorization becomes salient), this leads to *depersonalization*, "whereby people come to perceive themselves more as the interchangeable exemplars of a social category than as unique personalities" (Turner, Hogg, Oakes, et al. 1987, p. 50). In other words, individuals engage in self-stereotyping.

Similar to categorization, the mechanism of depersonalization pertains to oneself and others. Thus, in a situation of inter-group comparison, I do not only perceive members of an out-group according to a specific stereotypical image. I also perceive myself to resemble certain stereotypical characterizations typical of my group. This leads to the following assumption:

The depersonalization assumption: Salient social self-categorization leads to a higher perceived similarity with in-group members and accentuates differences with members of other groups.

In summary, self-categorization theory describes the cognitive mechanisms that lead to the development of salient social self-categorization and thereby group formation.

Social Space, Categories, and the Self

Bringing together the two-fold view on structures as strategic landscape and as habitus, on the one hand, and the social-psychological research on cognitive mechanisms of group formation, on

the other, permits the linkage of the macro-level, as constituted by the natural and social space, with the micro-level of individuals. An individual's relative position in the economic, cultural, and political field are the predominant categories underlying social self-categorizing processes. Following the concept of meta-contrast, homological positions of individuals on multiple fields, as well as a large contrast to other individuals (macro-level), provide stimuli for individuals to categorize themselves in a group (micro-level). This thereby makes group formation (meso-level) more likely.[8]

Suitable candidates for social self-categorization following the principle of meta-contrast are specifically two types of fields: the cultural and the economic field. There is ample evidence for the assumption that cultural stimuli such as language, religion, and heritage are important stimuli in self-categorization processes. Generally, cultural difference between individuals are more stable than other types of identities (Gurr 2000). This specifically pertains to heritage, but also extends to language and religion. Moreover, language is the most fundamental means of social interaction (Croissant, Schwank, et al. 2009). Psychological studies have added further empirical evidence for this claim by showing that individuals tend to inevitably categorize others based on the social categories of race, age, and sex (Quinn and Rosenthal 2012). It is likewise reasonable to assume that the relative position on the economic field is important in self-categorization processes. It is hard to deny that occupational status, the level of income, and the standard of living constitute pivotal elements to situate the self relative to others. Similarly to the cultural identity, economic status is often immediately apparent through status symbols, specific recreational activities, and many other situations in daily life.

Two conditional factors can be derived from the assumption of meta-contrast and the salience assumption. The former implies that categorization is a question of degrees. It is not always easy to tell people apart based on their differences, just as it is not always obvious to which group one belongs. However, the greater the differences and the larger the number of fields being available for discrimination, the easier categorization becomes. The salience assumption reminds us that categorization always depends on the local context. Social self-categorizations might be important in one area of a country and unimportant in another. In this sense, studies that focus on the nation-state might lose important local variance.

Speaking of group formation, a boundary condition applies: Where groups have already formed along the above-hypothesized mechanism, the probability of new group formations are greatly reduced. Apart from situations of swift societal changes—such as mass migration, technical innovation affecting configurations on the economic field, or revolutions—the overall configuration of positions in the social space changes gradually rather than swiftly. This specifically pertains to ethnic differences—language, religion, and descent are hard to change—-but often also to structural economic and political disparities. Thus, apart from situations in which populations go through a period of rapid transition, we can assume group identities to be stable over decades. The formation of new groups is thus not an empirical phenomenon to be expected frequently.

It is important to state that this reasoning pertains to the structural and not the individual level. Individuals might very well change their position in the social space throughout their lives and, following the above mechanisms, this likely affects their social self-categorization.[9] Due to the multiple realizability of groups as collectives, such changes do not, however, necessarily change the overall configuration of groups in a society. We can summarize the above in the following assumption:

The homology assumption: Groups form along similar positions in the social space.

8.2.3 From Groups to Collective Subjects

What mechanisms explain the emergence of collective subjects? The most obvious argumentative step to explain individual participation in collective subjects would be to follow the mechanisms

[8] The basic idea resembles the concept of imagined communities by Anderson (1988). In his eyes, nations are cultural artifacts grounded in collective acceptance rather than interaction. What differs, however, is the level of analysis. Whereas Anderson focuses on the bonds between individual members of nations, this theory focuses on inter-group conflict. We could thus speak of 'imagined groups'.

[9] An example of such a trajectory is captured by the proverb: 'Not to be a rèpublican at twenty is proof of want of heart; to be one at thirty is proof of want of head'.

described above. Following this idea, we would expect that just as a similarity in social positions between individuals increases their chances of belonging to a single group, it would also increase their chances of forming a collective subject. Put succinctly, "the probability of mobilization into organized movements (...) will be in inverse ratio to distance in this space" (Bourdieu 1985, p. 726).

Whereas this position might hold true for the emergence of collective subjects on a general level, it seems insufficient to base our reasoning for individual participation in collective subjects that engage in political conflict simply on personal similarities with regard to socio-economic, cultural, and political characteristics as well as living proximity. Although the minimal-group paradigm shows that group membership leads to discriminating behavior, it would be too implausible to assume that inter-group relations are necessarily conflictual. This would suggest that there is a direct link between the formation of groups and political conflict. Certainly, such an automatism is inadequate, as only a fraction of inter-group relations are characterized by political conflict.

Building on the assumption of a duality of structure, it rather seems adequate to define two necessary conditions that increase the probability of the emergence of collective subjects:

1. A shared we-intention to act on behalf of a group.
2. A strategic environment that allows the establishment of those procedures that characterize collective subjects.

The Emergence of Shared 'We-Intentions' Through Grievances

The first mechanisms describe the formation of a shared we-intention to act on behalf of a group. This means that we need to identify the factors creating a shared disposition of collective action among group members (compare section 4.5). Based on the discussion of different theoretical approaches to conflict research, two kinds of theoretical arguments are conceivable: the rationalist and the moderate collectivist view.

According to the instrumentalist view, the formation of collective actors is grounded in individual cost-benefit calculations (cf. Rabbie 1991). According to this nomological assumption on the micro-level, individuals act on behalf of groups when it suits their individual needs. Formation and disintegration of collective subjects thus becomes a function of aggregated individual benefits. A number of empirical results from psychological research, however, cast doubt on this perspective. First, we can again refer to the empirical findings of the minimal-group experiments that pertain to behavioral adaptation. The experiments show that group membership significantly affects individual behavior. Once individuals become members of a group, this leads to in-group favoritism and negative discrimination against other groups. Types of in-group favoritism include the maximization of resources of the own group and differences to other groups as well as the minimization of resources of other groups (Billig and Tajfel 1973; Tajfel 1970; Tajfel and Billig 1974; Tajfel, Billig, et al. 1971). Thus, the simple fact of thinking as a group member alters an individual's logic of selection. Since group membership is ubiquitous, a purely instrumentalist view ignores a common feature of social relations. Second, research has shown that individuals seem to stay in unsuccessful groups although they would have been able to leave (Ellemers, Spears, and Doosje 1997). Turner, Hogg, Turner, et al. (1984) find that if a group is to fail in a collective action, then its members even become more dedicated toward the group. The positive relation between failure and cohesion is contrary to what we would expect from individually rational group members. These empirical results are incompatible with rational choice theory, as the latter assumes the logic of selection to be constant, taking the form of cost-benefit calculations. Individualist rational-choice arguments thus preclude macro-determination of the logic of selection. In rational-choice accounts the assumption of rationality is introduced as part of the conditio humana. The empirical evidence in favor of mechanisms that describe cases of downward causation thus support a moderate collectivist perspective and speak against a rationalist view in explaining individual intentions in groups.

Instead of focusing purely on individual cost-benefit calculations, we should turn toward the interplay between the micro-, meso-, and macro-level to understand how an individual's disposition to act on behalf of groups emerges. A precondition is to agree that groups exist in the immediate environment. As described above, thinking as a group member accentuates in-group similarities and between-group differences. This results in a greater coherence with regard to cognitive and practical intentional states and leads individuals to adopt the values and norms of their

in-group. As Stewart, Brown, and Mancini (2010, p. 7) correctly state, "in many conflicts people are primarily motivated by their group identity—their religion or ethnicity—and consequently group motives are a vital driving force. For this to happen, group boundaries must be clearly defined and have some continuity over time."[10]

If we accept that similarity with regard to field position is a contributing factor but not a sufficient condition for the formation of conflict actors and that the empirical evidence speaks against the rationalist perspective, we are in need of a mechanism which explains the formation of conflict actors. The argument developed in the following section specifies that the main factor leading to the emergence of a shared we-intention to act on behalf of the group is defined by grievances. This argument can be derived from the recent and empirically well-founded research on "horizontal inequalities" (Cederman, Weidmann, and Gleditsch 2011; Gubler and Selway 2012; Østby 2008; Stewart 2008). The notion of 'horizontal inequalities' describes disparities coinciding with "identity based cleavages" (Boswell and Dixon 1990; Østby 2013). The grievance mechanism links a specific configuration of inter-group positions on the macro-level with inter-individually shared dispositions to act collectively via grievances.

Just as individuals, groups can also be characterized by their relative positions on the social space. It was argued above that the position on the cultural field, i.e. language, religion, and heritage, are of primary importance for group formation. The concept of horizontal inequality now broadens the view to include the political, the social, and the economic field. Horizontal inequality is defined as a situation in which groups, in different fields simultaneously, are either deprived or advantaged in comparison to other groups.

An example for this can be found regarding the racial group "Blacks" in South Africa during the Apartheid era. They constituted a relatively clearly demarcated group, were deprived of political participation, and were generally poorer and less educated than "Whites".

Configurations of horizontal inequality on the macro-level lead to grievances at the level of individuals. There are several arguments for why this might happen. Tajfel and Turner (1986) argue that social groups compare their status with other groups. More importantly, groups aim to maintain a positive social identity. Where the own group has a comparatively low status, individuals may follow different strategies. Apart from trying to switch groups with higher status or redefining the situation in a more positive light, they may strive to improve the relative position of their own group. The main mechanism that links relative status to grievance is thus that individuals inherently strive for a positive image of their own group. The results of the minimal group experiments showed that in inter-group competition for scarce resources, the dominant strategy was to maximize the difference to other groups without maximizing absolute gains. A relative advantage of one's own group vis-à-vis other groups thus seems to be a key force in individual action.

Cederman, Gleditsch, and Buhaug (2013, pp. 39–40) base their argument upon LeVine and Campbell (1972), Sherif and Sherif (1953), and Williams (2003). They argue that under conditions of scarce resources and the existence of clearly demarcated groups, differential treatment of groups leads to grievances. In essence, the mechanism states that unfair treatment along ethnic lines leads itself to grievances. Østby (2008) argues that horizontal inequalities both lead to frustration and simultaneously facilitate mobilization to overcome collective action problems. She thus argues to combine grievances (frustration) with opportunities (mobilization) (cf. Gurr 2000; Olson 1965; Stewart 2008). Although not explicitly founding his argument on the concept of horizontal inequality, Gurr (1974) argues that a mismatch between expectations and actual attainment of "goods and conditions of life" increases the chances of rebellion. The process that is assumed to underlie these alleged macro-level regularities is the frustration-aggression mechanism (cf. Dollard et al. 1939). Horowitz (1985) reminds us of a close link that might exist between social self-categorization and inequality. He argues that the identification of an individual with an ethnic group is highest for those individuals that have a lower socio-economic status. Such effects should further strengthen the cumulative effect of social self-categorization and horizontal inequality.

Following these arguments, we can define the grievance mechanism as follows.

[10] At this point, SCT can be linked back to the argument of rule-following in favor of holism. SCT assumes that individuals follow the norms and values of their in-group and thus identifies it as a human trait to conform to those standards that are collectively created within a group.

Grievance Mechanism: Horizontal inequalities, i.e. a configuration of homologically unequal positions in the political, economic, and social space, lead to the disposition to act against the sources of inequality.

It should be noted that Bourdieu proposed an important objection against this argument. He argues that through the formative effects of structure on individuals, occupied positions in the social space appear natural. Low relative positions in the social space are thus not necessarily the source of revolutionist thought. As Bourdieu (1985, p. 728) writes:

> The categories of perception of the social world are, as regards their most essential features, the product of the internalization, the incorporation, of the objective structures of social space. Consequently, they incline agents to accept the social world as it is, to take it for granted, rather than to rebel against it, to counterpose to it different, even antagonistic, possibles.

This ties in with the discussion of determinism in Bourdieu's theory. His argument directly challenges the proposed grievance mechanism. Following Bourdieu we would assume that, as long as configurations of positions at the macro-level are stable, they appear as 'set in stone' and not as a source of the disposition to alter the given order. From this follows a possible focus on social change: We would assume social change—for instance where social mobility increases or social order breaks down due to conflict—to lead to a higher awareness and reflectiveness of one's own position. This argument cannot be further pursued here, however. The focus remains on relative positions and dispositions rather than on trajectories of sudden changes.

With regard to the overall argument, the grievance mechanism forms the socio-psychological underpinning, which links a specific configuration of groups in the social space to the individual level of intentional states. It argues that individual group members have the disposition to compare themselves with other groups and strive for a comparatively good position of their own group. Where groups have a low position in the social space, i.e. if they are politically excluded, economically deprived, or culturally marginalized, they form the disposition to change the configuration on the macro-level. In order to capture the idea of a group consisting of individuals that share the disposition both to act against existing horizontal inequalities and thus also to change the status quo of inter-group positions in favor of the own group, we can use the term 'aggrieved group'.

In line with the overall argument, the disposition to act on behalf of the group needs to be clearly differentiated from a purely atomist cost-benefit calculation. It is not assumed, e.g. along the lines of the collective-action problem (Olson 1965), that individual reasons to act on collective grievances are predominantly motivated by individual gain. To the contrary: It is the group that is deprived and it is for the promotion of the ends of the group that individuals share a disposition to act. In a sense, strong social self-categorization together with horizontal inequality leads individuals to develop a form of *collective rationality*. They cast off the blinkers of individual cost-benefit calculations and begin to think as group members. This allows for the understanding of how people come to form or join groups that are engaged in violent conflict. Violent conflicts are situations where individual risks are specifically high. In line with this, why should individuals join an armed group—be it the army or a non-state conflict actor—knowing that this decision might risk their lives? If we assume collective rationality to supersede individual rationality, then individual conflict participation can be understood.

We can rephrase the argument in the language of the critical realist framework: All individuals hold the power, though not the tendency, to partake in collective violence. Salient social self-categorization and horizontal inequality are two mechanisms at the meso- and the macro-level, respectively. Taken together, the two mechanisms change individual practical intentional states via downward causation. As an effect, individuals develop the tendency to act against the source of the inequality.

Collective Subjects

Aggrieved groups are still mere groups. They are thus not able to act as collectives *per se*. The ability to act is the defining feature of collective subjects. Agency of a collective, in turn, requires procedures to form adequate cognitive intentional states (i.e. beliefs that more or less mirror the real state of affairs), practical intentional states (i.e. consistent order of preferences), and mechanisms to identify individual members to act on behalf of the collective subject.

In cases where the propositions on which to decide are logically connected, and assuming that all members of a group have their say, the functions to develop group intentions can become complex (List and Pettit 2011). In these cases, groups can adopt views that might even go against the majority of the views of their members. In these cases, it makes sense to speak of genuine collective subjects. *Collective subjects are more than aggregates of individuals and they are more than groups.* Due to the irreducibility of the beliefs and motivation of collective subjects to the individual cognitive and practical intentional states of their members, the formation of collective subjects entails a step from the micro- to the meso-level.

Drawing on the assumption of the duality of structure, we argue that whether an aggrieved group forms a collective subject is a question of the immediate strategic environment. What is important to have in mind is that we deal with conflict actors. These actors are characterized by an incompatibility of intentions with each other and are willing to challenge the existing order outside of established procedures of regulations (cf. sec.6.1). This entails that it is in the intrinsic interest of the state to prevent the formation of non-state conflict actors. Since motivations are sufficiently given by aggrieved groups, what determines the step from groups to collective subjects is the ability to create the necessary organizational capacity.

To conceptualize the strategic environment, we draw on our taxonomy of the macro-level (cf. sec. 6.3) and here specifically on the natural space. More specifically, we argue that the transformation of aggrieved groups into collective subjects becomes more likely if group members are sufficiently close as to enable interaction (anthropological context), if there is a relatively large share of youth among the population that can be mobilized (anthropological context), and if the natural environment provides enough cover from being dismantled in the early phase of formation (geographic context). The following elaborates on these three variables.

A shared geographic position, which belongs to the *anthropological context* since it is human-related, is a necessary condition for the formation of collective actors as it facilitates the interaction necessary for the organization of collective subjects. While it is possible for actors to adopt a decentralized relational structure once formed, such a structure is not feasible for the process of formation itself. One may argue that the status of geographical proximity as a necessary condition has been weakened by the growing importance of new media. While this is certainly an important empirical trend not to be overlooked by research on mobilization, current research on the role of new media in the context of the revolts in Northern Africa, however, warns against overemphasizing the role of the media at the cost of other important factors: Personal interaction between individuals is a *sine qua non* concerning the internal organization of collective actors. Although literature on the formation of non-state conflict actors that investigates processes of interaction is rare, there is evidence that close relationships are a key driver in the formation of groups. Schlichte (2009a) empirically demonstrates that groups are often formed by people that know each other from other settings such as school, university, or the army. Staniland (2014, p. 9) argues that "[i]nsurgent groups are built by mobilizing prewar politicized social networks", and that these pre-war forms of organization largely determine the further development of groups. These results thus point to the importance of interaction within existing organizations before the emergence of non-state conflict actors. Consequently, we would expect that the link between horizontal inequality and the formation of non-state conflict actors is a local, rather than a national process. Whereas grievances might be felt nationally, the ability to act upon them collectively depends on personal interaction.

A second factor that might explain the emergence of collective subjects is youth bulge, i.e. a demographic profile characterized by a relatively large share of young people. Conflict research has argued that youth bulges are linked to higher risk of political conflict (Goldstone 1991; Heinsohn 2003; Huntington 1997; Urdal 2006; Wagschal, Metz, and Schwank 2008). The specific causal mechanism that links youth bulges to conflict is a subject of debate. Specifically, two general lines of arguments can be discerned (Østby and Urdal 2014). A first approach argues that youth bulges reduce recruitment costs, as opportunity costs of young people in large cohorts are generally lower and thus facilitate mobilization of fighters into armed groups (Collier 2000b; Collier and Hoeffler 2004). A second approach focuses on frustration that arises from bottlenecks in the labor market (Cincotta, Engelman, and Anastasion 2003; Goldstone 1991). All causal mechanisms share the expectation that youth bulges will increase the probability of conflict. Systematizing the causal mechanisms with the help of the explanatory approach proposed in this thesis allows for the systematization of two different loci of influence. First, we expect youth bulges to facilitate the formation of non-state conflict actors, since young people are physically more able to fight,

and since their opportunity costs to join a collective subject are generally lower. These arguments hint toward youth bulge as a property of the strategic environment in the explanatory step from aggrieved groups to collective subjects. Second, we expect younger people to be more receptive with regard to grievances due to inequality. Concerning the explanatory model, we would thus expect that the grievance mechanism is more effective where we deal with younger populations.

A third factor related to the anthropological factor is the size of the population. According to our systematic review in chapter 2, it is one of the factors that is most robustly related to political conflict and is therefore introduced as a control variable.

Besides geographical proximity, youth bulges, and population size, the nature of the terrain is an important determinant in the formation of collective non-state actors as is likewise evidenced by our research synthesis in chapter 2. Buhaug (2010), Buhaug and Gates (2002), Buhaug, Gates, and Lujala (2009), Buhaug and Lujala (2005), and Fearon and Laitin (2003) argue that rugged terrain limits the ability of states to project their power. This is due to a lack of infrastructural development, more complicated access by vehicles, and a resulting difficulty of police and military control. Building effective procedures to deliberate on strategies and tactics, to define and discuss goals, and to establish mechanisms to form adequate beliefs about the strategy of other actors requires a place of secure refuge. This is specifically important for non-state conflict actors. Areas with a dense infrastructure that facilitate policing by the state will generally hinder the formation of collective subjects. Where government control is tight, this requires aggrieved groups to develop in secret. Drawing on these arguments we can thus expect that inaccessibility of terrain facilitates processes of formation of collective subjects. Thus, we would generally expect that the transformation of aggrieved groups to non-state armed conflict actors takes place predominantly in rugged areas. Where actors form in environments that make them prone to be discovered, it is very likely that they are only loosely organized, act in great secrecy, and do not establish territorial bases.

A second possible mechanism that links terrain to the formation of non-state actors is that it complicates the effective provision of public goods. Following this argument, terrain ruggedness leads to negative externalities that indirectly affect the populations willing or unwilling to support non-state actors. Populations that are deprived of public goods might be easier to mobilize and more likely to turn against the state themselves[11] (Collier and Hoeffler 2004). Since we are able to measure the provision of public goods more directly with individual-level indicators of inequality, however, we can assess these effects more directly on our empirical analysis. Thus, whether or not this effect is valid, it is captured in the empirical analysis.

Following these arguments, we can define the opportunity mechanism as follows.

Opportunity mechanism: Strategic environments facilitating interaction, mobilization, and organization make the transformation of aggrieved groups into collective subjects more likely.

Bringing together the grievance mechanism and the opportunity mechanism, we can formulate the following hypothesis concerning the formation of non-state conflict actors:

H1a: Horizontal inequalities make the formation of non-state conflict actors more likely.
H1b: A strategic environment that facilitates interaction, mobilization, and organization makes the formation of Non-State Conflict Actors more likely.

8.3 Dynamics of Violence

Having described the formation of non-state conflict actors, we now turn to the explanation of conflict intensity. As described in section 6.1, conflict intensity is a property of a sum of conflict measures in a geographical and temporal space. In chapter 2, we learned that the great majority of quantitative comparative conflict research focuses, in decreasing order, on the explanation of

[11] The possibility of a close empirical link between the inaccessibility of a terrain and its socioeconomic development makes it necessary to check for cross-correlation in statistical analyses.

conflict onset, incidence, and termination. In contrast, intensity dynamics to date have almost completely been neglected (cf. ch. 1).[12]

Given the lack of research, the study of intensity dynamics should have a more central role in conflict research. Based on the concept of political conflict, we can see that whereas conflict items and conflict actors mainly represent the structural, synchronic dimension of conflict, conflict intensity is inherently linked to the processual dimension of conflict. Certainly, new actors might join a conflict and replace others, actors may switch sides, and the items of conflict may change in the course of a conflict. All these changes might be subsumed under 'conflict dynamics'. Conflict intensity, however, is the only property of political conflict that is hard to grasp in the synchronic perspective. As a property of an *aggregate* of conflict measures, it can only be understood with reference to a temporal and geographical space. Because it directly results from acts, it can only be studied in a diachronic perspective (cf. ch. 4). This makes conflict intensity the 'most dynamic' attribute of political conflicts.

Conflict intensity is located on the macro-level, as it is a property of an aggregate of conflict measures that subsequently emerge from the interaction of different conflict actors. One of the main challenges is to adequately model the relation between decisions and acts taking place on the meso-level and conflict intensity. The simplest approach would be to conceive the latter as a simple result of individual decisions. Such an approach, however, fails to take three characteristics of the logic of aggregation into account: the multiple realizability of conflict intensity, the fact that intensity is constitutively defined by the means and consequences of conflict measures, and the results of interaction.

Conflict measures and conflict intensity stand in a relation of supervenience, as there cannot be a change in conflict intensity without a change in conflict measures. At the same time, however, the same intensity level can be instantiated by highly diverse kinds and combinations of measures. Multiple realizability is even found in two relations: between measures and the five intensity attributes, and between these attributes and the overall intensity level. This entails two things: Since conflict intensity *supervenes* on conflict measures, it suffices to analyze the acts of the involved actors and their consequences. Due to the *multiple realizability*, however, we cannot simply reduce conflict intensities to conflict measures. The fact that intensity includes the consequences of conflict measures entails that conflict actors cannot always foresee results of their actions. Intensity does not exclusively result from what actors do, but also from how it impacts their environment.[13] In summary, an adequate analysis of conflict intensity starts with the aims and actions of conflict actors, but does not end there. It also needs to take a closer look at the specific profile of violence, i.e. the specific configuration of means and consequences leading to a certain conflict intensity, as well as structural characteristics that influence the impact of actions and communications by conflict actors.

From what has been said so far, the analysis of conflict intensity appears to be a complex endeavor. The complexity stems from the aggregation from the meso- to the macro-level. There is, however, also a factor that reduces explanatory complexity: Downward causation only plays a minor role. Although formative effects shape actors' dispositions, they generally do not change in the short term. This view is also supported by Weinstein (2007), who argues that the conditions in which rebel groups emerge—specifically available resources—lead to a strong path dependence with regard to organizational features. Following this line of reasoning, the explanation of conflict intensity can thus primarily focus on actor characteristics and structures as immediate strategic environments.[14]

8.3.1 Natural and Social Space and Conflict Intensity

Before delving deeper into the relations between NSCA and conflict dynamics, we formulate hypotheses on the basis of existing research. We do not intend here to theoretically discuss the

[12] Much research focuses on specific conflict types, such as one-sided violence or terrorism (Wencker, Trinn, and Croissant 2015). However, these phenomena are often introduced as separate concepts and then put under scrutiny with the usual approach, leading to analyses of the onset of one-sided violence, the incidence of terrorist events, and so on.

[13] Means, on the other hand, are largely explainable via reference to actor characteristics. The employed personnel and weapons are largely determined by the availability of man- and firepower and the choice of tactics.

[14] Within a critical realist framework such an approach is not entirely satisfying (cf. sec. 5.2). However, as evidenced by the literature, there are good empirical reasons to *primarily* focus on an individualist framework. Moreover, an adequate study of how varying motivations of individuals affect dynamics of violence would require in-depth case studies. This lies beyond the scope of the present analysis.

entirety of proposed relations between characteristics of the macro-level and conflict dynamics. This is beyond the scope of this thesis. Rather, we briefly discuss results of previous analyses based on our summary of chapter 2 to put the subsequent theoretical arguments on the relation between NSCA and conflict dynamics on a more stable footing. With data availability in mind, the discussion focuses on a subset of explanatory factors.

We have already elaborated on the link between the anthropological and the geographical context, on the one hand, and NSCA formation, on the other hand, above. It makes sense to assume that these factors, which relate to the immediate strategic environment, also affect conflict incidence. Therefore, we can formulate the following hypotheses with regard to the anthropological and the natural space:

H2a: Youth bulges make the occurrence of violent intrastate conflict more likely.
H2b: Rugged and inaccessible terrain make the occurrence of violent intrastate conflict more likely.

With regard to the explanation of conflict dynamics, two more fields seem to be of importance as previous research shows (cf. ch. 2): the economic field and the political field. Regarding the economic field, our research synthesis points toward the importance of economic development and the existence of resources. Concerning the former, existing research has identified a strong negative relationship between economic development and conflict (cf. ch. 2). Concerning the latter, Ross (2004, p. 352) concluded in his theoretical review (cf. h. 2) that the presence of oil seems to make conflict onset more likely, whereas gemstones, opium, coca, and cannabis would prolong wars. We should therefore keep in mind that different resource types can have different effects. In our empirical analysis in chapter 9, we are able to test for differences between different resource types. This leads to the following hypotheses:

H2c: Violent intrastate conflict is less likely in economically developed regions.
H2d: The presence of resources makes the occurrence of violent intrastate conflict more likely.

With regard to the political field, research has largely focused on the regime type and here specifically on the quasi-linear Polity index. Two main arguments stand out. First, although intrastate political violence occurs more often in autocratic regime, this does not necessarily entail a causal relation. And in fact, our research synthesis in chapter 2 shows that research has failed to identify a robust relationship between both variables. Fearon and Laitin (2003) and Hegre, Ellingsen, et al. (2001) argue that anocracies, i.e. regimes that are neither purely democratic nor starkly autocratic regimes, are more prone to experience violence. This finding was an important and often replicated result of conflict research as evidenced by our research synthesis. Recently, however, the argument has come under heavy criticism due to endogeneity (Vreeland 2008) and can thus be considered a statistical artifact. The empirical analysis tests for the effect of regime type as well as for the effect of anocracies based on a modified regime variable proposed by Vreeland (ibid.). We should certainly not conclude that the regime type is irrelevant given the yet unexploited potential of new regime typologies (cf. Fjelde 2010). With regard to the rather undifferentiated approaches based on the aggregated Polity Index, however, we should be skeptical of any relation. In light of the theoretical ambiguity, measurement issues, and methodological problems, we shall refrain from formulating any hypothesis. We expect, however to find no effect when using the Polity index as well as the revised anocracy measure based on Vreeland (2008).

8.3.2 Relative Strength

We may now turn to more specific hypotheses that explicitly take into account conflict actors. This subsection argues that the strength of NSCA, i.e. their ability to reach their goals with violent means, shapes their tactics and thereby conflict intensity (cf. Wencker 2010). The explanation comprises three steps: the perception of relative strength by conflict actors (macro-meso link), the tactical decisions of conflict actors (meso-meso link), and the effect on conflict intensity (meso-macro link).

We can generally expect collective subjects to be well informed about their relative strengths. Two arguments are most important in this context. First, collective subjects need to form a consistent structure of beliefs and volitions to 'act as one'. This requires processes of deliberation within

the group, which in turn can be assumed to improve the perception of their immediate environment. We can furthermore assume that individual misperceptions cancel each other out in the aggregates; the so-called 'wisdom of the crowds' (Galton 1907). An argument against this line of reasoning, however, points to psychological mechanisms that lead to a convergence of perception within groups. Where individual decisions are not independent from one another, the median estimates of groups loses precision due to a reduction of diversity and overconfidence (Lorenz et al. 2011). These processes run counter to the 'wisdom of the crowds' mechanism.

In light of this ambiguity, we can turn to a second argument. Conflicts are situations of great mutual awareness and often involve a high level of interaction. These interactions yield information on relative strength. Following this argument, we can expect the perception of relative strength to be quite good. From this the following assumption can be derived:

> *The assumption of quasi-perfect information: Opponents in intrastate conflicts are generally well informed about their relative strength.*

Having described the macro-meso link, we can now turn our view to agency. Whereas the specific goals of NSCA may largely differ, as is expressed by their different orientations and the conflict items, the specific choice of tactics can be assumed to follow cost-benefit calculations. The assumption of collective rationality guiding the choice of tactics might not be true for unorganized collectives such as mobs. It can, however, be assumed to hold true for collective subjects, since these have procedures to form and pursue coherent preference structures. It is thus reasonable to assume that conflict actors employ their means in a way that best suits their strategic goals. Such an assumption might appear trivial. It does, however, differentiate our theoretical approach from those who argue that violence in war is an end unto itself (cf. Crefeld 1998).

> *The assumption of collective rationality: conflict actors qua being collective subjects employ their means to best suit their strategic goals.*

To systematize the wealth of different tactics of NSCA, we can carve out three different types of tactics in intrastate political conflict (Wencker 2010):

- Avoidance, i.e. the attempt to stay away from any direct confrontations with the enemy.
- Guerilla, i.e. the attempt to harm the respective opponent while at the same time avoiding open confrontation.
- Confrontation, i.e. the attempt to openly confront the enemy.

Bringing together the assumption of quasi-perfect information and the assumption of collective rationality, we can assume conflict actors—not necessarily only NSCA—to chose their tactics based on a consideration of relative strength. It is reasonable to differentiate between three types of configurations of relative strength.

Where conflict actors are far more inferior in strength, these actors pursue a tactic of avoidance. Not having the necessary means to stand against the enemy in a violent encounter, it is best to fall back on a tactic of evasiveness. A high level of mobility, the use of the civil population as camouflage, dispensing the use of any symbols such as flags or uniforms, concealing weapons, and reducing the communication to a minimum are forms of a tactic of avoidance.

Cases in which conflict actors are slightly inferior in strength, they pursue a guerrilla tactic. In a situation of slight inferiority, conflict actors know that they would not stand a situation of direct confrontation but are at the same time aware of the fact that they are able to hurt the respective enemy. They therefore engage with the enemy but do so with specific tactics allowing them not to "fight on the same plane" (Kalyvas 2005, p. 91). Typical instances of a guerrilla tactic include the use of small units that are able to move quickly and to hide when necessary, the use of small arms that cannot be easily destroyed by the respective opponent, and hit-and-run tactics rather than set battles.

Situations of parity and superiority in strength lead to confrontational tactics. In the case of superiority, it is obvious that conflict actors will try to engage the enemy directly. In set battles,

the superior side can be confident in its own victory, as it is easy to identify the enemy. Moreover, the combat area is clearly demarcated facilitating the use of heavy weapons.

The choice of tactics in a situation of parity is less clear. In structural realism of International Relations theory, an equal distribution of power between state coalitions is assumed to lead to stability. This is especially true for proponents of 'defensive realism' (cf. Waltz 1979) but likewise holds for 'offensive realists' (cf. Mearsheimer 2001). Transferring this argument to the realm of intrastate conflict would lead to the assumption that situations of power parity lead conflict actors to refrain from violent action. Whereas the validity of structural realism in the realm of international politics is debated, it is highly inadequate to explain the choice of tactics in intra-state conflict. First, chances of success in battle increase with relative power. Consequently, inferior conflict actors will try to not throw all resources into battle, but rather to efficiently dose their use of violent means, i.e. weaponry and personnel. The more equal actors become in terms of strength, however, the more confident an actor becomes that his use of resources will bring him a comparative advantage. Second, clashes between actors of equal strength are far more important with regard to the overall outcome of a conflict than clashes between actors that are highly asymmetric in terms of power. In cases where small differences can tip the balance in one's favor, putting to use the entirety of available means is important. Third, in situations of power parity, conflict actors usually control territory. Territorial control, in turn, needs to be defended. Avoidance or guerrilla tactics are obviously not well suited here. In light of these arguments, we can expect that in situations of superiority or parity, actors choose confrontational tactics.

The assumption of tactical decisions: The choice of tactics of conflict actors is largely determined by relative strength. Far more inferior conflict actors choose a tactic of avoidance, slightly inferior conflict actors choose a guerrilla tactic, and conflict actors that are en par or superior choose confrontational tactics.

Having described the choice of tactics in dependence of the distribution of power, we can now turn to the question of how the choice of tactics affects conflict intensity. The motivating assumption behind the logic of aggregation is that the inferior actor can largely determine the way in which a conflict is fought. A confrontational tactic simply cannot be implemented against an opponent who aims to evade precisely such kinds of confrontations. Where inferior actors hide from the opponent possibly among the civil population, heavy weapons are of no use. Thus, whereas confrontation might be dictated by the choice of conflict actors, implementation hinges on the tactics of the inferior party.

The 'David Assumption': The weaker side determines how a conflict is fought.

Bringing together the assumption of quasi-perfect information, the assumption of collective rationality, the assumption of tactical decisions, the David Assumption, and the three types of tactics, we can formulate the following hypothesis:

H3: The more balanced the distribution of power between conflict actors, the more likely higher conflict intensities are.

8.3.3 Rebel Governance

In a last analytical step, we can derive hypotheses on the role of territorial control and organizational structures of NSCA (cf. Kalyvas 2006).[15] In contrast to our above hypothesis, we do not focus on the aggregated conflict intensity, but formulate expectations about what kinds of violence dominate intrastate political conflict.

We have argued in section 6.2 that organizational structures to develop consistent beliefs and preferences as well as to identify individuals to act on behalf of the group are a fundamental attribute of collective subjects. The Disaggregated Conflict Actor Dataset (DISCA) which is used in

[15] As argued in chapter 6, territorial control should not be considered a constitutive but a contingent property of NSCA. This allows us to empirically assess variance in territorial control.

the empirical analysis differentiates between hierarchically-organized and decentralized NSCA. In the former, competencies are clearly allocatable from top to bottom. In the latter, no clear hierarchical structure exists. We can expect a decentralized structure as well as a lack of territorial control to complicate the employment of violent means by NSCA. The employment of troops requires their coordination and with larger numbers comes greater organizational complexity. This, in turn, requires efficient organizational structures and/or territorial control for adequate training. Likewise, only NSCA that control territory are able to maintain heavy weapons. They are certainly not well suited for NSCA that hide among the local population. We can thus formulate the following hypothesis:

H4a: Non-state conflict actors that are centrally organized and control territory are more able to act in larger units and to operate heavy weapons than those NSCA that are decentralized and lack territorial control.

Furthermore, territorial control by NSCA might also affect the local population. In fact, the relation to the local population is of great importance since it affects mobilization and resource extraction (Weidmann 2014a, p. 60). As shown in the literature (Balcells 2011; Humphreys and Weinstein 2008; Kalyvas 2006), reasons for civilian targeting by NSCA are manifold and can range from secretive targeting of individuals to indiscriminate violence. Overall, it seems plausible that territorial control by rebel groups leads to flight at least among parts of the population. Hence, we can formulate our final hypothesis:

H4b: The higher the degree of control over a certain territory by a non-state conflict actor, the higher the number of refugees or internally displaced persons.

8.4 Summary

As a result stands an explanatory model that details the synchronic and diachronic relations between the micro-, meso-, and macro-level to explain the formation of NSCA and profiles of violence in intrastate political conflict. On grounds of a moderate collectivist argument—the hallmark of which is to differentiate between structures as embedded in habitus and strategic environment—we formulate an integrative explanatory model that explains actor formation and profiles of violence in three main steps.

First, we need to understand group formation. We argue that group-formation processes in populations follow the principle of minimizing mean pair-wise differences (meta contrast) within groups leading to social self-categorization. Depending on the context, self-categorizations become salient and lead to depersonalization, i.e. a higher perceived similarity with in-group members. In the conceptual framework developed in chapter 6 this leads to the arguments that groups form along similar positions in the social space.

In a second step we seek to explain how groups become collective subjects. Here, the main argument is that horizontal inequalities, i.e. a configuration of homologically unequal positions in the political, economic, and social space, lead to the disposition to act against the sources of inequality. In cases where the strategic environment allows aggrieved groups to develop procedures to form beliefs and volitions as well as mechanisms to act through individuals, collective subjects in the form of NSCA emerge.

In the explanation of profiles of violence in a third step we can ignore the micro-level since NSCA are genuine actors. In contrast to the explanation of actor formation, strategic considerations determine the choice of one of three main strategies: avoidance, guerrilla, or confrontation. Since in intrastate conflicts the weaker side can largely determine how conflicts are fought, the relative strength of NSCA determines conflict dynamics. Moreover, internal characteristics of NSCA and their immediate environment influence profiles of violence. The arguments derived from these considerations are put under scrutiny in the following empirical investigation.

Chapter 9

Empirical Analysis

Having described the state of research, laid out the philosophical, ontological and methodological groundwork, and formulated a theoretical approach, we can now put our argument to an empirical test. This chapter demonstrates that the realist approach proposed in this analysis and the real definitions derived thereof are more than a philosophical game; they directly contribute to bettering our understanding of dynamics of intrastate conflicts.

The present chapter is divided into two parts. The first part describes the empirical measurement of the pivotal concepts. It specifically addresses the first and the fourth aim of the present analysis: By developing measurement strategies and both discussing and implementing data collection, the following discussion complements the real definitions developed in chapter 6.

The second part puts the data to use by empirically testing the arguments developed in the last chapter 8. It thereby illustrates that the realist approach defended in this analysis directly contributes to current questions in research on intrastate political conflict.

The first part consists of three sections. Section 9.1 develops a new approach to the measurement of horizontal inequality. It draws on the world's largest population database holding spatially disaggregated microdata from census record (Minnesota Population Center 2013), making some 178 million individual-level data points available for Asia and Oceania. Since the concept of horizontal inequality describes a relationship between collectives, the individual-level data need to be carefully aggregated. Based on survey statistics, the section discusses sources of statistical error in detail and describes how they are accounted for in the final measure. This allows for specification as well as possible future improvement on the measure. As a result stands a multidimensional measure of horizontal inequality stands that allows the assessment of horizontal inequality on an unprecedented level of detail.

The subsequent section 9.2 uses highly disaggregated data on the natural space. Based on the most recent disaggregated population data, it first develops indicators of population size and youth bulge that are geographically precise. Second, drawing on satellite data on land classes, it advances a new variable to measure terrain inaccessibility that has not been tested before. Third, it integrates a measure of terrain ruggedness by Nunn and Puga (2012) and data on resources from varying sources.

Section 9.3 briefly introduces DISCA, a new database on 78 non-state conflict actors in Asia and Oceania since 1945 which was specifically developed for this thesis. It gives an overview of the coded variables and shows possible applications.

The second part begins with section 9.4. Investigating the empirical relationship between horizontal inequality, the strategic environment, and the emergence of non-state conflict actors, it puts all four sources of data described to an empirical, comparative test of H1.

Section 9.5 presents a comparative analysis of profiles of violence drawing on the the new DISCON dataset (Trinn, Wencker, and Schwank 2016). DISCON brings forward a multi-dimensional measurement of conflict intensity on a subnational and monthly level. This addresses the fourth aim of complementing current conflict research by a multi-dimensional and multi-indicator approach of conflict intensity. A latent class analysis allows for the identification of four genuine profiles of violence that characterize political conflicts in Asia and Oceania between 2000 and 2014. A multi-level model finally allows to test our hypotheses H2a-d

A final analytical step brings together data on non-state conflict actors and political conflicts in an effort to bring forth one of the first comparative empirical analyses investigating the link between characteristics of non-state conflict actors and dynamics of violence (cf. Wencker 2010).

In summary, this chapter contributes to our understanding of the complex processes that govern the emergence of conflict actors, the dynamics of violence, and the ways in which NSCA fight in intrastate political conflicts.

9.1 Measuring Horizontal Inequality with Survey Data

9.1.1 Survey Data

The measurement of the independent variable of horizontal inequality draws on survey data provided by IPUMS-International (Minnesota Population Center 2013). The dataset integrates data from 36 surveys. In the following, the calculation of the independent variable of horizontal inequality is illustrated by one of the samples: the survey in the Philippines in 2000. The calculation for other surveys only differs with regard to the survey designs that need to be taken into account. The Philippine survey of 2000 provides an adequate illustration, as it follows a design that is typical for most of the surveys used in this study. Ten percent of the households were systematically sampled following a one-stage cluster sampling plan. The sample includes 7,417,810 individuals and 1,511,890 households.

A comparative analysis of samples is based on three prerequisites. First, similar variables should be comparable across samples. Second, values of different variables should be comparable across variables. Third, means and standard errors need to be adequately computed based on the sample design. Among these three points, the former two can easily be addressed. Conversely, achieving the third prerequisite involves a rather complex process. Comparability of variables *across samples* is facilitated by the fact that IPUMS has integrated similar variables across samples. This study exclusively focuses on these integrated variables.[1] Comparability of values *across variables* is achieved through recoding:

- Columns containing information regarding ethnic identity and mother tongue were summarized in the columns `ethn` and `mtong`, respectively.
- Values for missing data were harmonized across variables by setting them to `NA`.
- Names of country, subnational unit, mother tongue, and ethnic identity were added and merged in one column.
- Variables were harmonized as follows: Variables indicating the availability of a radio, a television set, a toilet, and electricity, as well as those indicating the literacy and employment of a person were harmonized and dichotomized with '1' and '0' indicating the presence or absence, respectively. All those individuals with at least secondary education were coded as '1', all those with primary or less than primary education as '0'. Concerning employment status, those coded as 'inactive' (e.g., students or housewives) were coded as '1' together with those that were 'employed'.[2]

After these steps, all datasets have a harmonized structure. The third prerequisite, i.e. the calculation of means and standard errors on grounds of the integrated data, is described as follows.

9.1.2 Horvitz-Thompson Estimator

In survey analysis, population characteristics are inferred from a probability-based sample. The inference founds on the idea that an individual unit of observation u_i is sampled from the population with a specific probability π (notations are summarized in table 9.1). In the rather simple

[1] The following IPUMS variables are used in the analysis: country = unique country id; year = year of survey; sample = unique sample id; serial = unique household (hh) id; hhwt = hh weight; geolev1 = unique id for subnational unit; electric, tv, radio, toilet = availability of electricity, at least one television set, at least one radio, or a toilet in hh; perwt = individual weight; age = age of respondent; religion(d) = religion; lit = literacy; edattain(d) = educational attainment; empstat(d) = employment status; countryname = country name; geoname = subnational unit name; ethn = name of ethnic group, mtong = name of mothertongue; The 'd' suffix indicates a more detailed classification of the respective variable.

[2] Due to dichotomization, values of other variables were also collapsed: for the variable `tv`, information on the number of television sets and their quality (black-white or color); for `toilet`, information on the quality (flush or latrine).

Population values or parameters	
u_i	i^{th} element in the population
X	Variable in the population
X_i	Value of variable X for i^{th} element in the population
N	Population size
μ_X	Mean of population values of X
τ_X	Total of population value of X
σ_X	Standard deviation of population variable X
σ^2	Variance of population variable
M	Number of clusters/strata in the population
N_k	Number of elements in k^{th} cluster/stratum
Sample attributes or statistics	
n	Sample Size
x	Variable in the sample
x_i	Value of i^{th} element in the sample
S	Set of samples
p_i	Probability that element u_i is selected from population in a single draw
π_i	Probability that element u_i is in the sample
π_{ij}	Probability that elements u_i and u_j are in the sample
$\bar{x}$	Mean of sample values of x
$\hat{\mu}_X$	Estimate of mean of population values of X
$\sigma_{\bar{x}}$	Standard deviation of sample mean
$\hat{\sigma}_{\bar{x}}$	Estimated standard deviation of sample mean
SE	Standard error of the mean
s	Standard deviation of a variable in the sample
$\hat{\tau}$	Estimated total

Table 9.1: Notation.

case of random sampling with replacement from a population of N, the probability that a given unit u_i is in a sample of n can be calculated as

$$\pi_i = 1 - (1 - p_i)^n$$

where the selection probability p_i refers to the probability that u_i is selected in a single draw.[3]

The majority of survey research—and the IPUMS International (IPUMS-I) samples used in the subsequent statistical analysis constitute no exception—does not employ random sampling with replacement. Instead, units are sampled without replacement and selection probabilities are unequal between units of observation. These two deviations from simple random sampling with replacement complicate the calculation of sampling probabilities (Horvitz and Thompson 1952). This leads to a more general formulation of the calculation of sampling probability. Given a sample size of n from a population of N units of observation and taking into account the order of the draw, there exist $n! \binom{N}{n} = S$ possible samples. A specific unit of observation u_i is included in a subset of $n! \binom{N-1}{n-1}$ of these samples. Accordingly, the probability that a unit of observation u_i is included in a sample can be expressed as the sum of the probabilities of the individual samples in the subset.[4]

$$\pi_i = \sum_{S:i \in S} P(S).$$

A general formulation to estimate population characteristics from a sample population is the estimator proposed by Horvitz and Thompson (ibid.). It applies to a large variety of different sampling designs and takes different sampling probabilities of units of observations as well as

[3]For instance, if two out of three units are randomly sampled (selection probability = $p_i = 1/3$) with replacement, five of the nine possible resulting samples include the first unit of observation, u_1: [u_1,u_1][u_1,u_2][u_1,u_3][u_2,u_1][u_3,u_1]. The sampling probability is $\pi_1 = 1 - (1 - 1/3)^2 = 5/9$.

[4]For example, if 2 out of 3 units are sampled without replacement and the order of sampling is taken into account, there exists an overall of $2! \binom{3}{2} = 6$ possible samples: [u_1,u_2][u_1,u_3] [u_2,u_3][u_2,u_1][u_3,u_1][u_3,u_2]. A subset of $2! \binom{3-1}{2-1} = 4$ samples includes a specific unit of observation, say u_1:[u_1,u_2][u_1,u_3][u_2,u_1][u_3,u_1]. The sampling probability of u_1, π_1, is given by summing up the probabilities of the samples that include u_1: $1/3 \times 1/2 + 1/3 \times 1/2 + 1/3 \times 1/2 + 1/3 \times 1/2 = 4/6$.

sampling from finite populations into account. According to the Horvitz-Thompson estimator, a population total τ_X is estimated as

$$\hat{\tau}_X = \sum_{i=1}^{n} \frac{x_i}{\pi_i}$$

where n refers to the sample size and x_i to the i^{th} observation in the sample. To estimate a mean, the estimator is given by:

$$\hat{\mu}_X = \frac{\hat{\tau}_X}{N} = \frac{1}{N} \sum_{i=1}^{n} \frac{x_i}{\pi_i}$$

Simple random sampling, for instance, can be subsumed under the Horvitz-Thompson (H-T) estimator as a special case, illustrating its general applicability. Since $\pi_i = n/N$ in random sampling, the H-T estimator for the mean of a population variable becomes

$$\hat{\mu}_X = \frac{1}{N} \sum_{i=1}^{n} \frac{x_i}{n} N = \sum_{i=1}^{n} \frac{x_i}{n} = \bar{x_i}.$$

In many designs, however, π_i differs between units in the population. The more general formulation of the estimator adjusts for these differences. As the formula shows, the larger the sampling probability of a unit in the sample, the smaller the influence of the unit's value on the estimated population value. In this way, the estimator corrects for unequal sampling probabilities. In summary, the H-T estimator allows to adequately estimate population totals and population means in cases of sampling without replacement and unequal selection probabilities.

As can be illustrated with the data on the Philippines for the year 2000, the estimation of totals and means is simple since sampling probabilities are provided in the IPUMS datasets.

This allows us to compute some basic statistics: The total population is estimated to be 76,313,481. and the mean household can be estimated to consist of 4.906 people. This illustrates the generally large sample sizes of the census data. Table 9.2 illustrates the estimation of means for subpopulations. It lists the share of individuals owning a radio by religious belief and the size of the subpopulations. Whereas the estimation of means and totals is rather straightforward, the sampling error greatly complicates the analysis. The following subsection discusses sampling errors.

religion	radio avail.	size
No religion	0.54	61,161
Buddhist	0.82	56,021
Muslim	0.68	3,823,147
Christian	0.77	70,712,647
Other	0.69	1,420,103

Table 9.2: Size and radio availability for religious groups in the Philippines

9.1.3 Sampling Error

Aside from estimating values for population variables such as the mean or the total, survey statistics need procedures to estimate the precision of these estimates. Sample estimates might differ from population values, as the former are derived from a subset of units from the population. This difference is the sampling error (cf. Lohr 2009, pp. 16–18; Krotki 2008). Generally, two types of sampling errors exist: sampling variance and sampling bias. The former refers to the random fluctuations of estimates in different samples. The latter describes systematic deviation of sample values from population values. Although certain estimators—such as the H-T estimator (cf. Horvitz and Thompson 1952)—are unbiased, sample estimates that are derived from samples smaller than the population necessarily vary. Consequently, this section focuses on the estimation of the variance of sample estimates.[5]

[5]Even population values might differ from true values, as the former are subject to non-sampling errors (Kish 1965, p. 9). Examples for non-sampling errors are errors in reporting, data processing, or non-response.

The variance of sample estimates is mainly influenced by the way the units in the sample are selected. Put differently, the survey design mainly determines the precision of sample-based inference. A useful way to express how great estimated values deviate from a population characteristic is the standard error of the mean. Standard error and standard deviation are two mathematically related but distinct informations that are not always clearly differentiated A few words on their specification and notations are needed (cf. Buskirk 2008; Kish 1965; Little 2008). For instance, we might want to estimate the mean μ of a given variable. To do so, we draw a sample of n instances of the variable from the population. For example, if we are interested in the mean household income, μ_X, in a given country, we draw a sample of n households and identify the income. Assuming equal sampling probability, the estimated mean income of the population $\hat{\mu}_X$ is the mean of our observations: $\hat{\mu}_X = \frac{x_1+x_2+...+x_n}{n} = \bar{x}$. If we drew many samples, we would get many different values for $\bar{x}$. The distribution of these values is the sampling distribution expressing the variance of the sample means. If n is large enough, $\bar{x} \approx \mu X$. The deviation between the means of our equally sized samples is inversely related to the size of the samples. In other words, the smaller the size of the samples, the greater the difference between their means. To quantify this deviation we can refer to the standard error of the mean, SE. It describes the precision of our sample mean, $\bar{x}$, in dependence of the sample size n. More specifically, the standard error of the mean equals the standard deviation of the sample means of equally sized random samples from the population: $SE = \sigma_{\bar{x}}$. A large standard error of the sampling distribution indicates that sample means are not very precise estimates of the population mean. A small standard error, in contrast, indicates that an estimated mean, $\bar{x}$, is close to the real mean of the population. If we had the information, we could calculate the standard deviation of sample means from the standard deviation of the population means, σ_X, and the sample size: $\sigma_{\bar{x}} = \frac{\sigma_X}{\sqrt{n}}$. As the formula indicates, larger sample sizes lead to a smaller standard deviation of sample means. [6]

However, the standard deviation of the respective population variable, σ, is usually unknown, as we often only have information on our sample. Consequently, the population standard deviation is estimated (as indicated by the hat) based on the standard deviation of the sample, s. This gives the following formula for the estimate of the standard deviation of sample means: $\hat{\sigma}_{\bar{x}} = \frac{s}{\sqrt{n}}$. Put differently, we draw on the standard deviation and the size of our individual sample to estimate the precision of our estimates. Consequently—and this is the source of some confusion—the standard error of the mean, often simply called standard error (SE), equals the standard deviation of the sampling distribution of the sample means ($\sigma_{\bar{x}}$) and is estimated ($\hat{\sigma}_{\bar{x}}$) by the quotient of the standard deviation and the square root of a single sample ($\frac{s}{\sqrt{n}}$). Hence,

$$SEM = SE_{\bar{x}} = \sigma_{\bar{x}} = \frac{\sigma}{\sqrt{n}} \approx \hat{\sigma}_{\bar{x}} = \frac{s}{\sqrt{n}}.$$

In the following, we refer to this as the 'standard error'.

Generally, the standard error of an estimate is the square root of the variance of that estimate. To calculate it according to the H-T estimator, we need the probability that two units u_i and u_j are in a single sample, the joint sampling probability π_{ij}. For random sampling the joint sampling probability is[7]

$$\pi_{ij} = \pi_i + \pi_j - (1 - (1 - p_i - p_j)^n).$$

For sampling without replacement the joint sampling can be calculated as[8]

$$\pi_{ij} = \sum_{S: i \in S \wedge j \in S} P(S).$$

With the joint sampling probabilities at hand, we can calculate the variance for the H-T estimator (Horvitz and Thompson 1952) of a population total:[9]

[6] Note that $\sigma_{\bar{x}}$ refers to the standard deviation of the sample means (= standard error of the mean) and is thus a description of samples and dependent on the research process. σ_X, in contrast, refers to the standard deviation of the population variable X and describes a population characteristic (hence the use of small and large Roman letters, respectively).

[7] In the simple example that was introduced above, two of the nine possible resulting samples include u_1 and u_2: ([1,2][2,1]). We can calculate the joined sampling probability as $\pi_{1\cap2} = 5/9 + 5/9 - (1 - (1 - 1/3 - 1/3)^2 = 2/9$.

[8] In the example of selecting two out of three units without replacement, there exist $2! \binom{N-2}{n-2} = 2$ samples that include u_1 and u_2: [u_1,u_2][u_2,u_1]. The sampling probability $\pi_{1\cap2}$ is the sum of both sample probabilities: $1/3 \times 1/2 + 1/3 \times 1/2 = 1/3$.

[9] If the joint sampling probabilities are not known, an alternative estimation methods is proposed by Hájek (1981). Here, π_{ij} is estimated via π_i and π_j. In some cases, the Horvitz-Thompson estimator for the variance yields negative values.

$$\hat{var}(\hat{\tau}_X) = \sum_{i=1}^{n} \frac{1-\pi_i}{\pi_i^2} x_i{}^2 + \sum_{i=1}^{n} \sum_{\substack{j=1 \\ j \neq i}}^{n} \frac{\pi_{ij} - \pi_i \pi_j}{\pi_{ij} \pi_i \pi_j} x_i x_j$$

The variance estimator for a population mean is

$$\hat{var}(\hat{\mu}_X) = \frac{1}{N^2} \left[\sum_{i=1}^{n} \frac{1-\pi_i}{\pi_i^2} x_i{}^2 + \sum_{i=1}^{n} \sum_{\substack{j=1 \\ j \neq i}}^{n} \frac{\pi_{ij} - \pi_i \pi_j}{\pi_{ij} \pi_i \pi_j} x_i x_j \right]$$

Both variance estimators only work for sampling without replacement and if each element of the universe has a chance to become an element of the sample, i.e. $\pi_i > 0$. This condition is fulfilled in the samples used in the present study. For the t-tests used later in the analysis, standard errors are needed. They can easily be calculated by taking the square root of the variance of the Horvitz-Thompson estimator:

$$\hat{\sigma}_{\hat{\tau}} = \sqrt{\hat{var}(\hat{\tau}_X)}$$

$$\hat{\sigma}_{\hat{\mu}} = \sqrt{\hat{var}(\hat{\mu}_X)}.$$

As, ceteris paribus, the standard error is inversely related to sample size, the following analysis benefits from the relatively large sample size—usually ranging between five and ten percent of the population—of the IPUMS-International samples (see table 9.6). However, some characteristics of the estimation make sampling errors non-negligible. First, inferences are drawn about subunits of the sample, such as religious groups and subnational units. If these subunits, also called domains, are small, the effect of the sample size becomes an issue. Second, inferences of characteristics of individuals are affected by clustering: in the majority of cases, not individuals but households are selected. Subsequently, all members of the selected households are included in the sample. The clustering of units of analysis decreases the precision of estimates. Primarily for these two reasons, the effect of the sample design must be taken into account in order to minimize the danger of invalid inferences due to sampling error.

9.1.4 Sample Design

The sample design of the surveys used differs both between countries and years. The type of sample design influences the probability that a given unit in the universe, usually a household or an individual, is in the sample. For example, in a simple random sample, every unit in the population has the same sampling probability, $\pi_1 = \pi_2 = ... = \pi_N = n/N$. The sampling probability influences the variance between samples and thus determines the precision of estimates (Cleveland, Davern, and Ruggles 2011; Lumley 2010). To correctly interpret and to ensure comparability across samples, three common characteristics of sample designs need to be taken into account:

1. relative sample size
2. clustering, i.e. groups of units of analysis
3. adjusted sample sizes for pre-defined strata

The importance of sample sizes, clustering, and stratification and how each affects the precision of estimates of population parameters is described in the following. The discussion presents the strategies to incorporate the three characteristics in the estimation of population values. Differing proportions of samples relative to population are accounted for by finite population correction, clustering by specification of the primary sampling unit (PSU) and—if applicable—the secondary sampling unit (SSU), and stratification by adding information on the strata. We address each of the three strategies in turn, beginning with sample size.

On the practical side, all estimations are done with the 'survey' package for R by Lumley (2015). As above, the practical implementation is included in the following discussion as a running example.

Due to this, some have argued that it would be better to estimate the variance via the estimator proposed by Yates and Grundy (1953). The 'survey' package for R allows to estimate variance according to Horvitz and Thompson (1952) and Yates and Grundy (1953) by specification of the svydesign object. (Lumley 2015)

Sample Size

In contrast to most statistics, the statistics of survey sampling builds on the fact that a finite population is sampled (cf. Neyman 1938). If the sample size n, i.e the number of units of observation in the sample, is large relative to the population N, this reduces variance between samples and the uncertainty of inferred population characteristics. This has to do with the fact that the variance which is calculated for the estimated population value is only applied to the *unobserved part* of the finite population (Lumley 2010, p. 18; Kish 1965, pp. 43–45; Knaub 2008). Put differently, the lack of precision that results from the fact that we only have a sample of the total population expresses the lack of accurate knowledge about the unobserved part. Consequently, variance estimates vary inversely with relative sample size.

The reduction in standard error estimates is reflected by the *finite population correction* (fpc)

$$\text{fpc} = \sqrt{\frac{N-n}{N-1}}.$$

The finite population correction factor can be integrated into the formulas to estimate standard error estimates. To estimate the standard deviation of the sampling variance in random sampling *without replacement and for finite populations*, we simply multiply the fpc with the respective estimate for sampling with replacement:

$$\hat{\sigma}_{\bar{x}} \text{ (with fpc)} = \frac{s}{\sqrt{n}} \sqrt{\frac{N-n}{N-1}}.$$

Thus, the fpc simply adjusts standard error estimates in dependence of relative sample size. Strictly speaking, missing values reduce the relative sample size and the fpc needs to be adjusted. To take missing data into account, the fpc is adjusted by subtracting missing values from the relative sample size. As we will see below, in case of the illustrating example, 18 percent of the observations of the variable 'educational attainment' are missing (see table 9.4). This effectively reduces the relative sample size and leads to an accurate fpc of $\text{fpc} - (0.18 \times 0.1) = 0.082$ instead of 0.1.

How great is the effect of the fpc? In a census, for instance, the sample size equals the population size, $n = N$. In this case, the standard deviation of sample means and hence the standard error becomes zero. This makes sense, since there is no sampling error in samples that equal the population. There is simply only one possible sample. A substantial reduction of standard errors begins with about 5 percent of the population being sampled. In the case of random sampling, a sampling proportion of $n/N = 0.05$ reduces standard error estimates by $\approx 2.5\%$, a sampling proportion of 0.1 leads to a reduction of $\approx 5\%$, and so on. As the majority of IPUMS-I samples encompass five percent or more of the population, we correct for finite population sampling.

The reduction of standard errors through finite population correction can be illustrated by the H-T estimator as implemented in the 'survey' package. Estimating the mean radio availability for the Muslim population in Western Mindanao with and without finite population correction with the `svymean` function of the survey package yields the same estimates of means with different standard errors.[10] Figure 9.1 illustrates the different estimates of standard errors by showing the estimated means and the 95% confidence intervals. The figure shows that the estimation of means is precise due to the large absolute sample size as indicated by the small margin of the confidence intervals. In large sample, the gain by introducing finite population correction is existent but small. It reduces the width of the confidence interval by only 4.2 percent.

Clustering

All of the samples included in the analysis, except Pakistan 1981, follow a one-stage cluster design: Households are selected as primary sampling units (psu), and all members of the household are sampled as secondary sampling units (ssu).[11] Clusters are natural groups of individual population units that are relatively similar with regard to the variables of interest. Cluster designs make use of the fact that units of observation in the population are clustered in larger units by randomly sampling psus and then observing all ssu in a selected cluster.

[10] The estimation of subsets of the population—in this case, all Muslims in Western Mindanao—takes the overall sampling design into account.

[11] This differs from two-stage cluster designs, where only subsets of individual population units within clusters are selected.

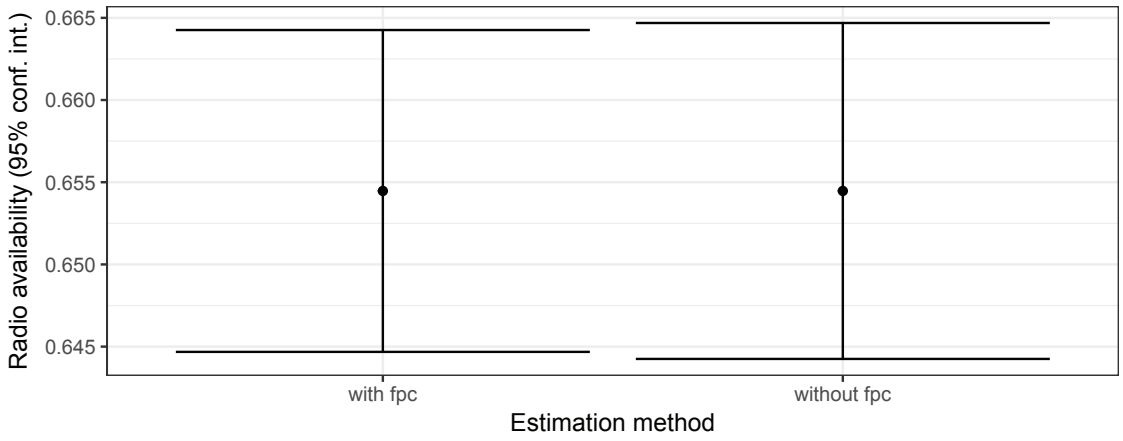

Figure 9.1: Effect of finite population correction on estimation of mean radio availability of Muslims in Western Mindanao. The large sample size leads to small confidence interval and only a small effect of finite popuation correction.

Typically, cluster designs minimize survey costs but increase the standard error of estimates (Lumley 2010, p. 40; Lohr 2009, pp. 165–218; Kish 1965, pp. 148–216). If individuals in the population were sampled randomly, interviewers would need to travel from household to household between interviews. With clustering, however, all individuals in selected households are interviewed, greatly reducing costs. This is of specific importance with regard to nation-wide surveys, such as those used in the present analysis. If clusters were relatively similar representations of the population, cluster sampling would be an efficient strategy to yield precise estimations. However, clusters rarely resemble a true 'microcosm' of the greater population. This is specifically true to households. Many of the variables of importance in the present analysis—religion, language, ethnicity, level of education, literacy, and educational attainment—do not vary greatly between individuals within the same household. Some variables—such as the availability of a radio, a television, or electricity—are only observed at the household level and thus cannot vary within households per design. The estimation of standard errors for variables that are highly correlated between household members is most heavily influenced by clustering. In summary, cluster designs make the sampling process more convenient, but allow to extract less information per observed unit. Put differently, the reduction in costs brings a reduction of precision as a pay-off.

Due to the loss of precision in cluster designs, the standard error estimates need to be adapted, whereas the estimators for population values remain largely unchanged. To estimate population totals based on a sample of m out of M clusters, we simply summarize the cluster totals:

$$\hat{\tau}_X = \sum_{k=1}^{m} \frac{\tau_{X_k}}{\pi_k}$$

where τ_{X_k} denotes the total of the values of variable x in the k^{th} cluster and π_k the sampling probability of the k^{th} cluster.[12] Since in one-stage cluster sampling, all secondary sampling units within a cluster are observed, the totals are known. If we assume that the sampling probability of clusters, π_k, is equal among clusters as is the case in random sampling of clusters, i.e $\pi_1 = \pi_2 = ... = \pi_m$, then we can simplify the estimation of totals as follows

$$\hat{\tau}_X^{Clu} = \frac{M}{m} \sum_{k=1}^{m} \tau_{X_k}.$$

The adapted estimation of variance, and thus standard errors, for estimates of totals in one-stage cluster designs is also unproblematic. Since all units within sample clusters are observed, the selection of secondary sampling units in one-stage cluster sampling does not add uncertainty to our estimation. As above, we are able to draw on the population value of τ_{Xc} and not on its

[12]The total of a cluster τ_{X_k} is denoted with a large X since the population value of a given variable *within* a given cluster is known.

estimate $\hat{\tau}_{X_c}$. In a clustered survey design on households, for instance, we know the exact total of an observed value, say income, for every household in our sample, because every individual in a selected household is observed. There is no added uncertainty. Thus, the Horvitz-Thompson variance estimator for a total in a one-stage cluster sample design is the same as the one introduced above. We simply substitute τ_{X_k} for x_i and use the sampling probabilities of clusters, π_k and π_l as they constitute the primary sampling units:

$$\hat{var}(\hat{\tau}_X^{Clu}) = \sum_{k=1}^{m} \frac{1-\pi_k}{\pi_k^2} {\tau_{X_k}}^2 + \sum_{l=1}^{m} \sum_{\substack{k=1 \\ k\neq l}}^{m} \frac{\pi_{kl}-\pi_k\pi_l}{\pi_{kl}\pi_k\pi_l} \tau_{X_k}\, \tau_{X_l}.$$

We now turn to the estimation of means. Whereas in the estimation of totals, differing cluster sizes are not important, they obviously need to be taken into account in the estimation of means. To estimate means, the svyymean function in the 'survey' package draws on a model-based estimator (Kauermann and Küchenhoff 2010, pp. 168–170, 184). Consequently, we exclusively focus on this type of estimator. The model-based estimator of a population mean in a one-stage cluster design is given by

$$\hat{\mu}_X^{Clu} = \frac{\sum_{k=1}^{m} \tau_{X_k}}{\sum_{k=1}^{m} N_k} = \bar{x}$$

where N_k denotes the number of elements in the k^{th} cluster and $\bar{x}$ the arithmetic mean of the values of all secondary sampling units. Thus, to estimate the mean of the population values of x, μX, we simply draw on the arithmetic mean of the sample values. The corresponding estimate of variance is given by

$$\hat{var}(\hat{\mu}_X^{Clu}) = \frac{1}{\bar{n}} \frac{1}{m(m-1)} \sum_{k=1}^{m} (\tau_{X_k} - N_k\, \hat{\mu}_{X_k}^{Clu})^2$$

where $\bar{n} = \frac{1}{m} \sum_{k=1}^{m} N_k$ denotes the mean cluster size.[13] Since the estimation draws on the variance of cluster means and not the single values, differing cluster sizes are taken into account.[14]

The size of the effect of clustering on standard errors depends on the homogeneity within clusters. It can be estimated by the intracluster correlation coefficient, ρ, which reports Pearson's correlation coefficient of unit pairs in a cluster (Lohr 2009, pp. 174–175). Since the effect of clustering depends on the intra-cluster correlation, it differs between variables. This was already discussed above. It appears obvious that the increase in standard errors due to clustering is also dependent on the type of the cluster. In general, we can expect homogeneity to be far greater within households than within regions. In consequence, it is of far greater importance to account for household clustering than for geographic clustering to prevent type I errors, i.e. the rejection of a null-hypothesis that is true (cf. Neyman and Pearson 1928).

As we have seen above, survey designs that include cluster sampling can inflate standard errors. Overestimation of precision can lead to unwarranted inferences. This is of pivotal importance for the subsequent empirical analysis. One part of the analysis investigates differences with regard to the availability of household appliances between individuals of different religious groups. The data comes from a one-stage cluster design. Since household appliances are shared within households, individuals within a household are homogenous with regard to this variables. In contrast to simple random sampling, the inclusion of more than a single individual from each household does not yield any added information. Introducing the false assumption of simple random sampling of individuals would thus greatly reduce the estimation of standard errors. In effect, such an overestimation in precision might yield significant differences between individuals that do not reflect real differences in the population. This would be a type I error.

Taking clustering into account leads to a significant increase in confidence interval estimates, as shown in figure 9.2 on page 156. It extends the width of the confidence interval by about 166 percent.

[13] If all cluster sizes, N_k, were known, we could draw on the mean cluster size of the population $\bar{N}$.

[14] This becomes obvious when transforming the last term in the estimator: $(\tau_{X_k} - N_k \hat{\mu}_{X_k}^{Clu})^2 = N_k^2 (\mu_{X_k} - \mu_X)^2$ (cf. Kauermann and Küchenhoff 2010, p. 169).

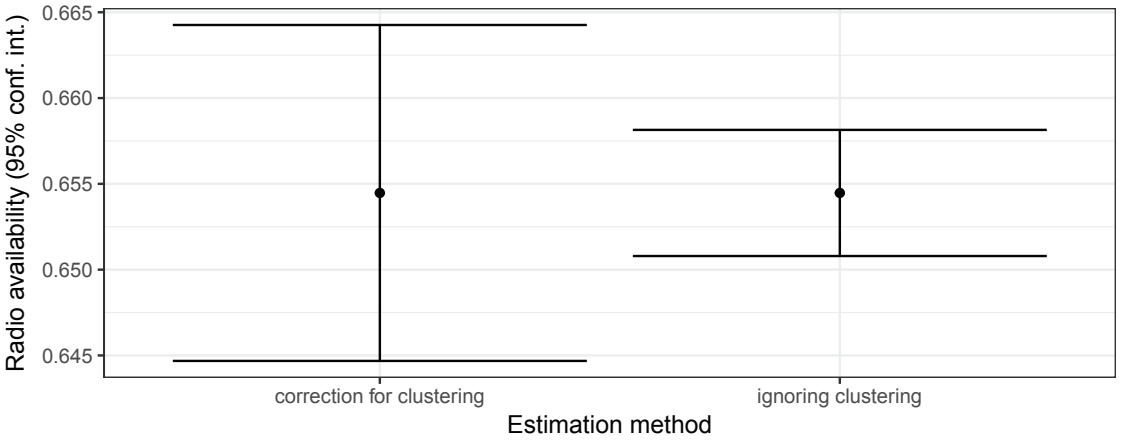

Figure 9.2: Effect of clustering on estimation of mean radio availability of Muslims in Western Mindanao. Taking clustering into account significantly increases confidence intervals.

Stratification

After finite populations and clustering, stratification is the third characteristic of sample designs that needs to be taken into account in standard error estimation. Stratification describes a technique by which the population is first divided into mutually exclusive strata according to specific characteristics before the elements within each stratum are selected. In other words, stratification describes the adjustment of sampling probabilities of elements in the universe depending on their group membership (Thompson 2012, pp. 141–156; Lohr 2009, pp. 73–115; Kish 1965, pp. 75–112; Lumley 2010, pp. 21–23). For instance, the population might be divided into rural and urban population and then an adequate sample size for reliable estimates is taken in both groups. This intentional, i.e. non-random, technique assures that the number of cases for small groups in the population is not too low to yield acceptable estimates. More specifically, stratification leads to lower standard errors if strata are selected as to minimize variance between elements within strata. Thus, whereas homogeneity within clusters increases standard errors, homogeneity within strata decreases it. In the case of clusters, the inclusion in the sample of multiple units from single homogenous clusters does not add new information leading to higher standard errors. The case of stratification differs in this respect. The sampling scheme is deliberately adjusted to optimize the sample size for the subpopulation of interest. Statistically, the standard error estimation for the population exclusively rests on the sum of the independent standard error estimations for the strata. The gains from stratification are thus largest where differences pertaining to the variable of interest are minimized within and maximized between strata.

In the IPUMS-I samples, two types of stratification occur: implicit stratification due to systematic sampling, and explicit stratification. Both are addressed in turn.

Primary sampling units in the IPUMS-I samples are often systematically, and not randomly, sampled (Minnesota Population Center 2015a). In contrast to simple random sampling, systematic sampling strategies select every m^{th} primary sampling unit from a list after selecting a random starting point (Thompson 2012, pp. 157–170; Lohr 2009, pp. 50–51). The sampling interval m is usually fixed. For a relative sample size of 0.1, for instance, every tenth household on an enumerated list of households is selected after a random start. Just as with cluster sampling, systematic sampling is often the method of choice in surveys of large populations, as it is easy to implement. Similar to random sampling, the sampling probability of each primary sampling unit is equal; for, the starting point is selected at random. In contrast to simple random samples, systematic sampling puts stratification that exists in the ordering of primary sampling units into effect (Kish 1965, pp. 114–115). If the enumerated list of households follows a geographical pattern, as in many of the IPUMS-I samples, systematic sampling leads to a geographically more evenly distributed sample of households than would random sampling. This is a form of implicit low-level geographic stratification (Minnesota Population Center 2015a). Implicit stratification leads to more precise estimates and, consequently, to lower standard errors. More specifically, implicit stratification through systematic sampling improves the precision of estimates of those

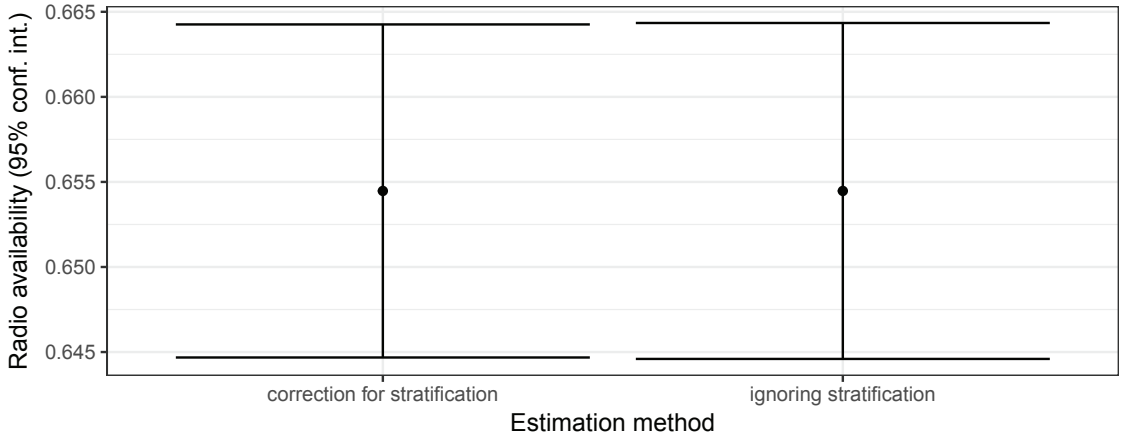

Figure 9.3: Effect of stratification on estimation of mean radio availability of Muslims in Western Mindanao. Stratification only marginally increases the precision of estimates.

variables that are directly related to or correlated with geography. In the IPUMS-I samples, this specifically pertains to "race, ethnicity, education, household utilities, and dwelling characteristics" (Minnesota Population Center 2015a). In effect, systematic sampling moderates the loss of precision due to household clustering.

A second type of stratification that is present in some of the IPUMS samples is explicit stratification. In explicit stratification, the population is split into strata according to criteria of interest. A case of explicit geographic stratification, for instance, is the oversampling of rural areas. To be able to account for stratification requires slight adjustments of the H-T estimator. As described above, stratified samples in effect consist of multiple independent subsamples. To estimate a population total or mean, these subsamples need to be added up. Consequently, the estimators for a population total and population mean become

$$\hat{\tau}_X^{Str} = \sum_{k=1}^{m} \hat{\tau}_{X_k}$$

and

$$\hat{\mu}_X^{Str} = \frac{\hat{\tau}_X^{Str}}{N}$$

respectively.[15]

To estimate standard errors, the H-T estimator aggregates the standard error estimates for the different strata. As above, the estimations for strata are treated as if they were independent samples:

$$\hat{var}(\hat{\tau}_X^{Str}) = \sum_{k=1}^{m} \hat{var}(\hat{\tau}_{X_k})$$

$$\hat{var}(\hat{\mu}_X^{Str}) = \frac{1}{N^2} \hat{var}(\hat{\tau}_{X_k})$$

where $\hat{\tau}_{X_k}$ refers to the estimated total of variable X within the k^{th} stratum. Since sampling strategies might differ between strata, the respective estimators of the standard errors of totals and means for substrata, $\hat{var}(\hat{\tau}_{X_k})$ and $\hat{var}(\hat{\mu}_{X_k})$, might also be different between strata and need to be specified according to the survey design. These estimators were already described above and will not be repeated here.

For most surveys the strata variable holds information on pseudo strata that account for systematic sampling. In some cases, such as the survey in India, the variable includes information

[15] In order to avoid unnecessary complications, the notation remains unchanged to the notations for clusters: 'Stratum' simply substitutes 'cluster'. The same applies to the estimation of totals and means within strata. Depending on whether clustering, simple random sampling, or weighted sampling is employed, the respective estimators were introduced above.

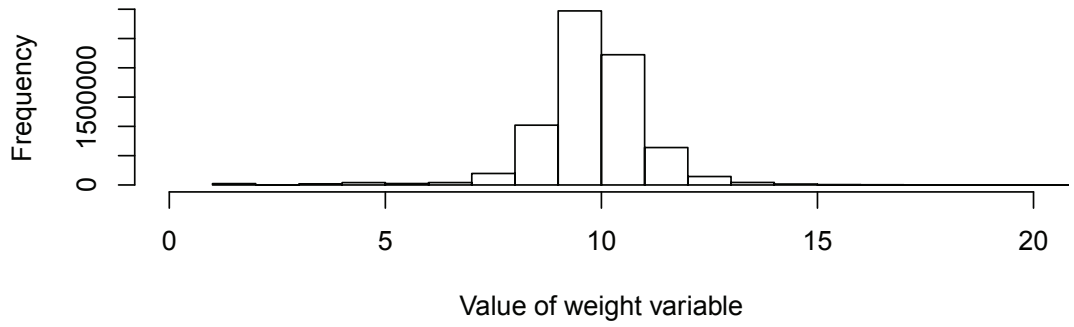

Figure 9.4: Distribution of weights in Philippines 2000 survey data. X-axis cut at 20.

on explicit strata. As illustrated in figure 9.3, the consideration of implicit stratification leads to a marginal decrease in standard error estimates. It reduces the width of the confidence interval by 0.86 percent.

Sampling weights

Thus far, we have assumed that the sampling probability of units is similar across units. The finite population characteristic introduced above considers the size of the sampling probabilities. It does not, however, reflect differing sampling probabilities *between* population elements. Unequal probabilities for different elements might be intended as in the case of deliberate oversampling of small populations. Other effects that make sample weights necessary is non-response or the underenumeration of specific sampling units in the census. The Horvitz-Thompson estimators for population values and variances account for unequal sampling probabilities, as they include the sampling probability π_i. To account for these effects, sampling weights are supplied by IPUMS-I and are taken into account in all of our calculations.

The distribution of weights is illustrated in Figure 9.4. Since the sample includes ten percent of the population, the mean value of weights, 10.29 is quite close to 10. Each person in the sample represents roughly 10 people in the population. Only 0.6 percent of the sample units have an assigned weight smaller than 5, and 0.21 percent have a weight larger than 15.

9.1.5 Horizontal Inequality

This section illustrates the calculation of the independent variable *horizontal inequality* for the 2000 survey in the Philippines. The variable is designed to include as much information as possible, while simultaneously taking account of all characteristics of the sample design affecting standard error estimation. It is thus as precise as possible and at the same time as conservative as necessary.

Under the condition of data availability, the estimation of horizontal inequality draws on up to seven indicators. Five of the indicators allow for the measurement of the economic position of individuals, whereas the other two is used as an instrument for the social position of an individual. All indicators are shown in table 9.3.

An indicator is excluded if more than half of the observations are missing. In the Phillipines 2000 survey, for instance, respondents were not asked for their employment status (see table 9.4).

The cross-correlation of the indicators of horizontal inequality is displayed in figure 9.5 on page 159. All but two correlation coefficients are negligible or weak: The availability of electricity strongly and positively correlates with the ownership of a television set, which moderately and positively correlates with radio availability. This indicates that each indicator adds genuine information.

The mean of the correlation coefficients between indicators of economic position is 0.33 whereas the correlation coefficient between the two available indicators of the social position is 0.25. In

Economic position

- availability of radio in household (`radio`)
- availability of television set in household (`tv`)
- availability of electricity set in household (`electric`)
- availability of a toilet in household (`toilet`)
- employment status, i.e.whether a person is currently not unemployed, i.e. employed or inactive (`empstat`)

Social position

- literacy, i.e. the ability to write and read (`lit`)
- educational attainment, i.e. level of schooling completed (`edattain`)

Table 9.3: Inequality indicators.

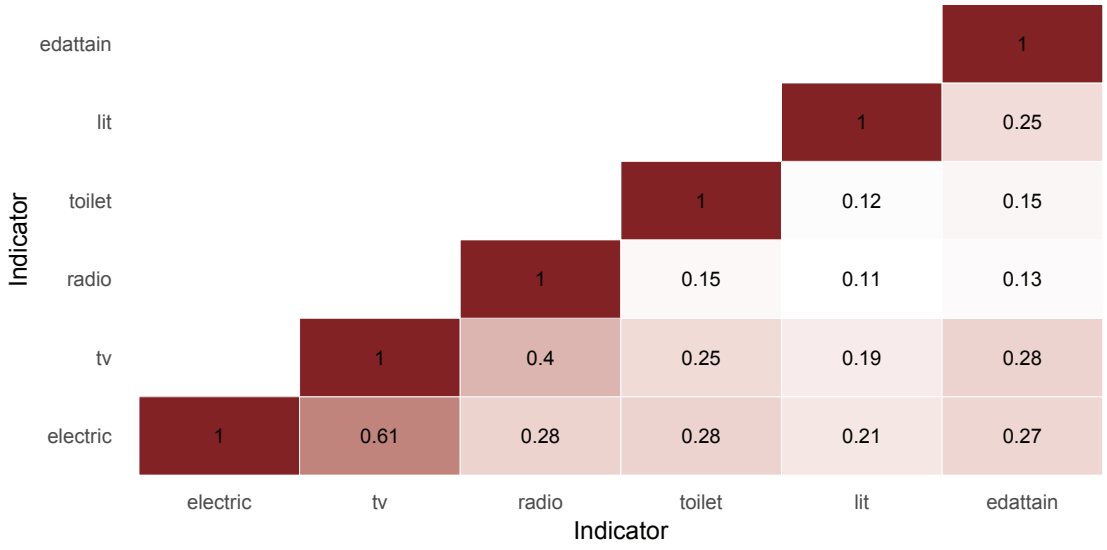

Figure 9.5: Cross-correlation table for horizontal inequality indicators. All but two correlation coefficients (electricity and television set, radio and television set) are negligible indicating that each indicator adds information.

type	var	values	missings	perc.missing
economic	radio	7,417,810	0	0
economic	tv	7,417,810	0	0
economic	electric	7,417,810	0	0
economic	toilet	7,417,810	0	0
economic	empstat	0	7,417,810	100
social	lit	6,482,233	935,577	13
social	edattain	6,094,149	1,323,661	18

Table 9.4: Data availability for Philippines 2000 survey

comparison, the mean of the correlation coefficients between indicators belonging to different indicator groups (e.g. tv and literacy) is 0.18 and thus smaller than each of the two within-group correlations. Although the difference is not large, it indicates that the two indicators measure different dimensions of inequality. Moreover, the rather low correlation coefficients among most of the indicators illustrate the added value of using multiple indicators where possible.

All information on horizontal inequality are summarized in figure 9.6 on page 161 : the estimated ratios of the availability of a radio, a television, electricity, and a toilet; the literacy rate as well as mean educational attainment broken down by region; and religious group with 95 percent confidence intervals. The dashed and the solid line indicate the regional and population mean, respectively. Confidence intervals of mean estimates are indicated by a shaded area around the lines. Due to the large sample size and low resultant standard errors, they are barely visible.

To estimate whether the difference between the estimated mean of an indicator for a specific subpopulation in a specific region (the group mean $\hat{\mu}_x^{group}$), and the estimated mean of that very indicator for the whole population in that region (the regional mean $\hat{\mu}_x^{reg}$) is due to chance, we rely on Students' t-test. The analysis includes the following steps: First, we estimate the difference between the group and the regional mean. Obviously, the best estimate is their difference: $\hat{\mu}_x^{group} - \hat{\mu}_x^{reg}$.

Second, we calculate the variables needed for the t-test. Degrees of freedom are calculated based on the number of distinct households in the sample: $m - 1$. This corrects for the clustered nature of the survey. Whereas the units of observations are ultimately individuals, the observations are clustered in households. Households thus represent independent pieces of information.[16] The standard errors of the estimates for the group mean $SE_{\bar{x}}^{group}$ and the regional means were calculated with the 'survey' package as presented above.

To take into account the standard error of the estimate of the regional mean, the t-test was repeated 1,000 times for each individual population mean. In each run, a different random value of $\hat{\mu}_x^{reg}$ is drawn based on the standard error estimate of the regional mean. If at least 950 of the t-tests reject the null-hypothesis of no difference with a p-value smaller than 0.05, then we consider the difference between the regional and the population mean to be significant.

Figure 9.8 displays a subset (we cut the x-axis) of the results of the repeated t-tests against the results of a single t-test with $\hat{\mu}_x^{reg}$. The x-axis shows the p-value of the t-test comparing the estimated group mean $\hat{\mu}_x^{group}$ with the estimated regional mean $\hat{\mu}_x^{reg}$. These would be the results if the standard error of the estimate of the regional mean were not taken into account. Put differently, $\hat{\mu}_x^{reg}$ is in this case erroneously regarded a fixed population value and not an estimated value. The y-axis shows the number of t-tests rejecting the null hypothesis of no difference with a p-value smaller than 0.05. The dashed lines show the five percent threshold of p-values for both tests. The gray area highlights those cases where a t-test falsely assuming $\hat{\mu}_x^{reg}$ to be a population value would reject the null-hypothesis of no difference and the repeated t-test does not reject the null-hypothesis. A single t-test against $\hat{\mu}_x^{reg}$ would have incorrectly rejected the null hypothesis (type I error). The cases are shown in table 9.5. As expected these are all cases where the difference between the regional and the group mean is small (compare figures 9.6 on page 161). These results illustrate the importance of integrating standard errors in the estimation of differences.

[16] For indicator values that might differ between people within the same household, i.e. educational attainment, literacy, and educational attainment, the followed approach underestimates the degrees of freedom. This, however, is unproblematic for two reasons. First, it leads to conservative estimates. Second, the mentioned variables can be expected to be highly correlated within households.

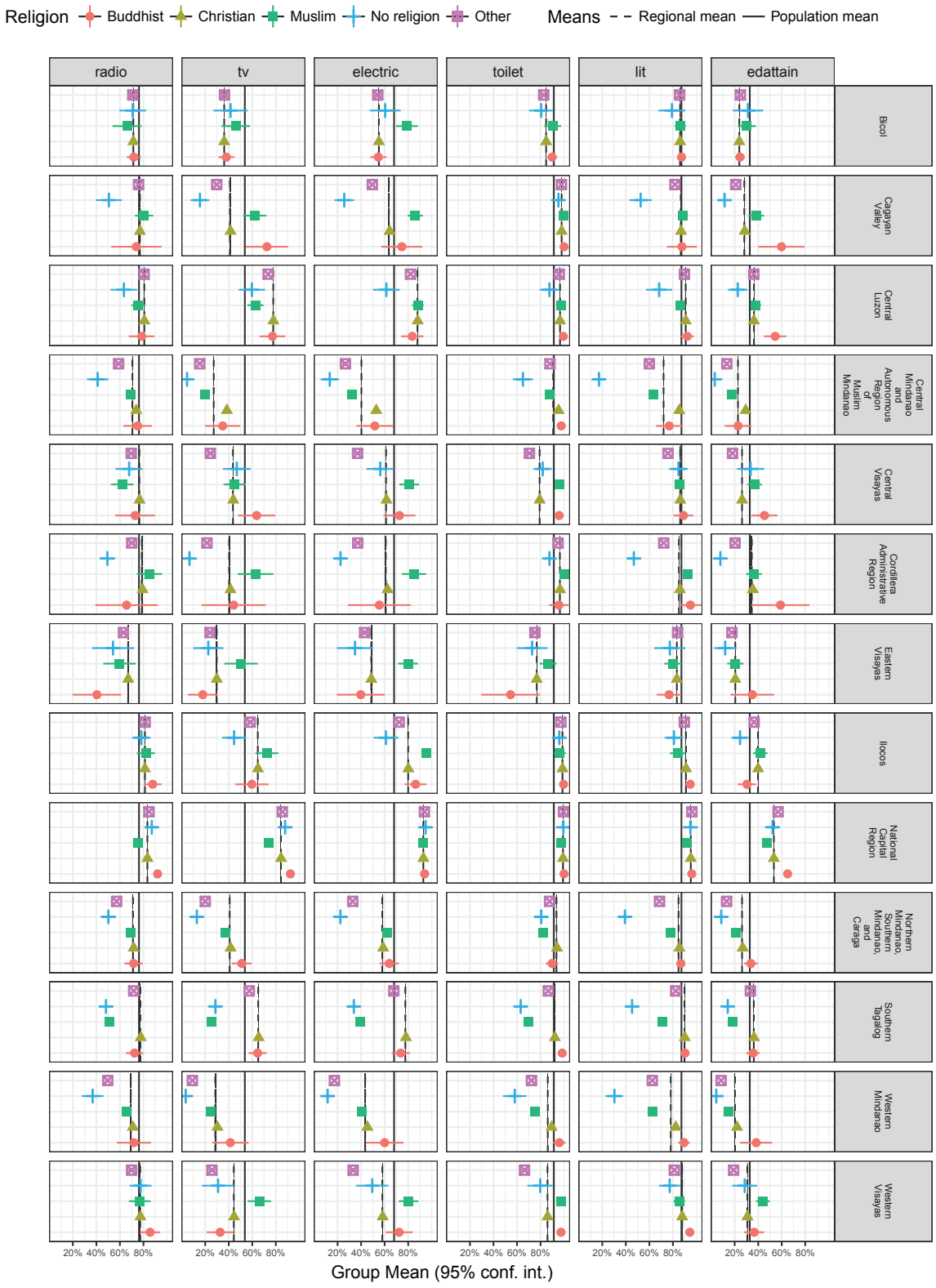

Figure 9.6: Means for indicators by region and religion. Non visible error bars are due to very small SE.

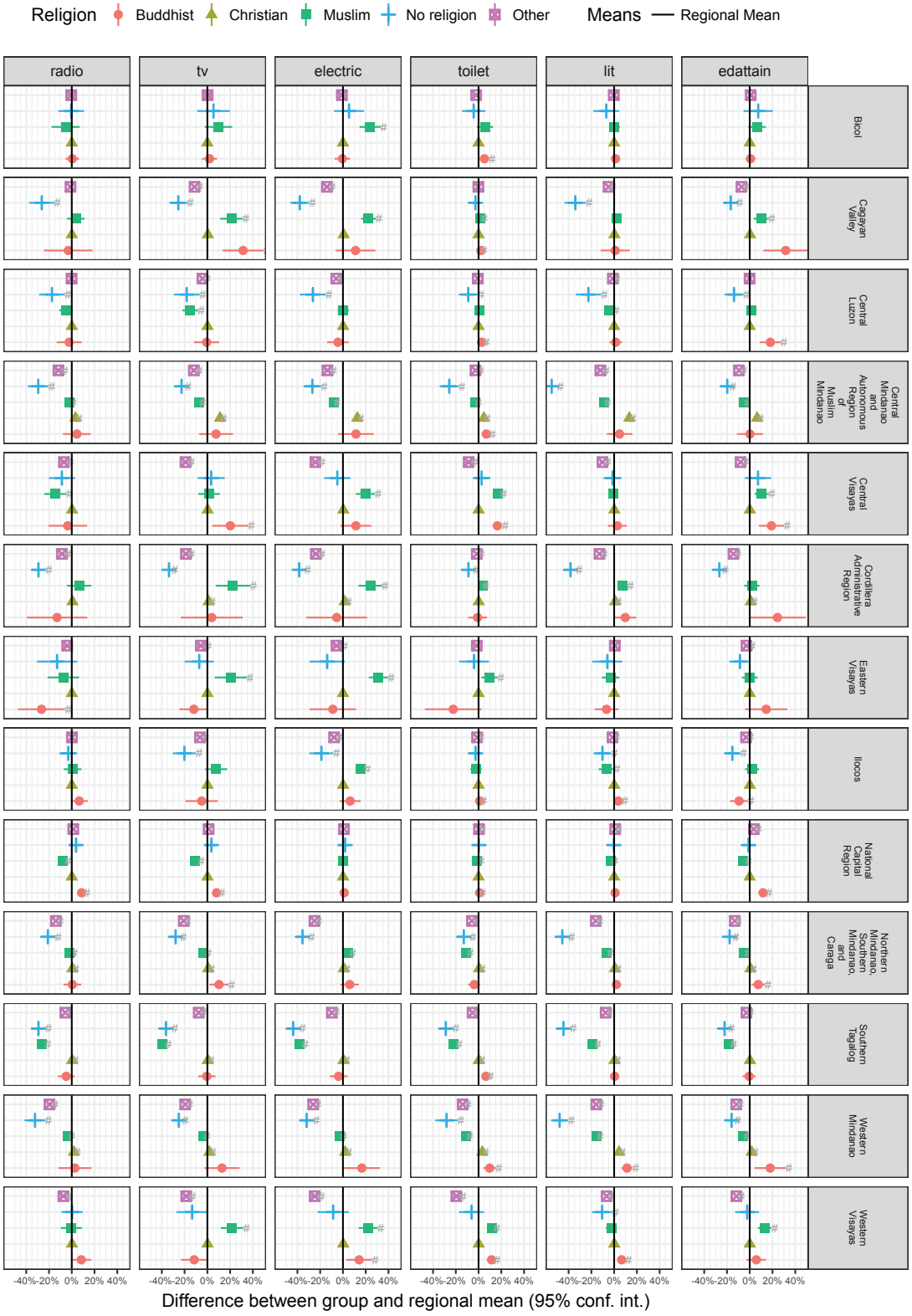

Figure 9.7: Estimated difference between group and regional mean. Error bars not visible due to very small SE. Hashtag marks cases where null hypothesis of no difference is rejected with 95 percent confidence.)

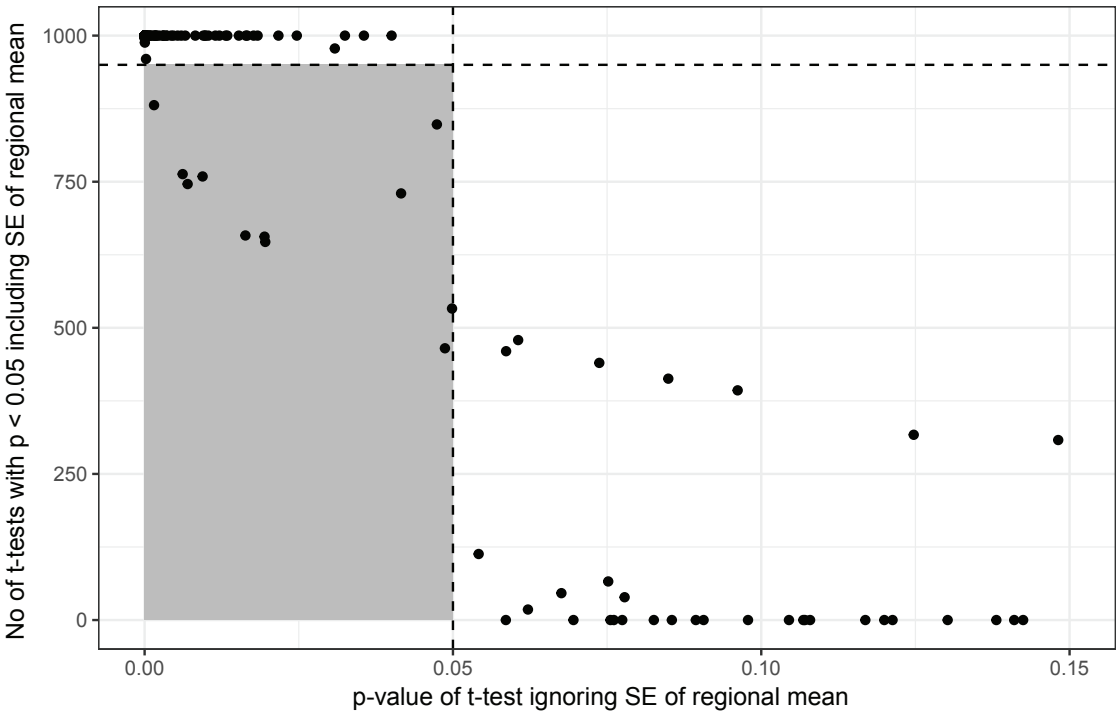

Figure 9.8: Effect of standard error of regional mean. Gray area indicates cases where the inclusion of standard errors prevented possible type-I errors.

As a final step, we can now turn to the results of the analysis. Figure 9.7 shows the estimates for the differences between the group means and the regional means together with the 95% confidence intervals for each estimate. Cases where more than 95% of the repeated t-tests rejected the null hypothesis of no difference are indicated by a hashtag. The analysis identifies positive and negative non-random deviations of the group from regional means. The analysis of the Philippines yields 390 different estimates. For 213 cases, the t-test rejected the null hypothesis of no difference. 76 of these are above and 137 below the regional mean. The amount of difference ranges from -55% to 32%. The distribution of estimated differences by significance is shown in figure 9.9 on page 164. By large, it shows the expected picture. Differences identified as a possible result of random variation cluster around zero, whereas the relative share of significant differences increases further away from the center. However, there are also significant differences with small effect sizes and vice versa. This underlines the importance of integrating both, the level of precision of estimates and the size of the estimated effect in the analysis. Ignoring either of the two dimensions might result in false inferences.

Figure 9.7 on page 162 shows the estimates for the differences between the group means and the regional means together with the 95% confidence intervals for each estimate. Cases in which more than 95% of the repeated t-tests rejected the null hypothesis of no difference are indicated by a hashtag.

The figure presents a highly detailed picture of inequality in the Philippines. It is based on data of more than 7 million survey respondents in more than 1.5 million households. All characteristics of the sample designs are taken into account in the calculation of the estimates. The data is disaggregated in two ways. First, it takes the ethnically defined region-group as the unit of analysis and is thereby geographically precise. Second, it includes inequality along multiple dimensions and is thus very broad.

The aforementioned estimation procedure described in this section is applied to all samples under analysis. This is briefly summarized in the next subsection.

religname	geoname	variable
Buddhist	Western Visayas	tv
Buddhist	Western Mindanao	electric
Christian	Cagayan Valley	edattain
Christian	Cagayan Valley	electric
Christian	Cagayan Valley	lit
Christian	Cagayan Valley	tv
Christian	Central Luzon	electric
Christian	Southern Tagalog	edattain
Christian	Central Visayas	electric
Christian	Cordillera Administrative Region	radio
Other	Central Luzon	toilet

Table 9.5: Cases of falsely rejected null hypothesis

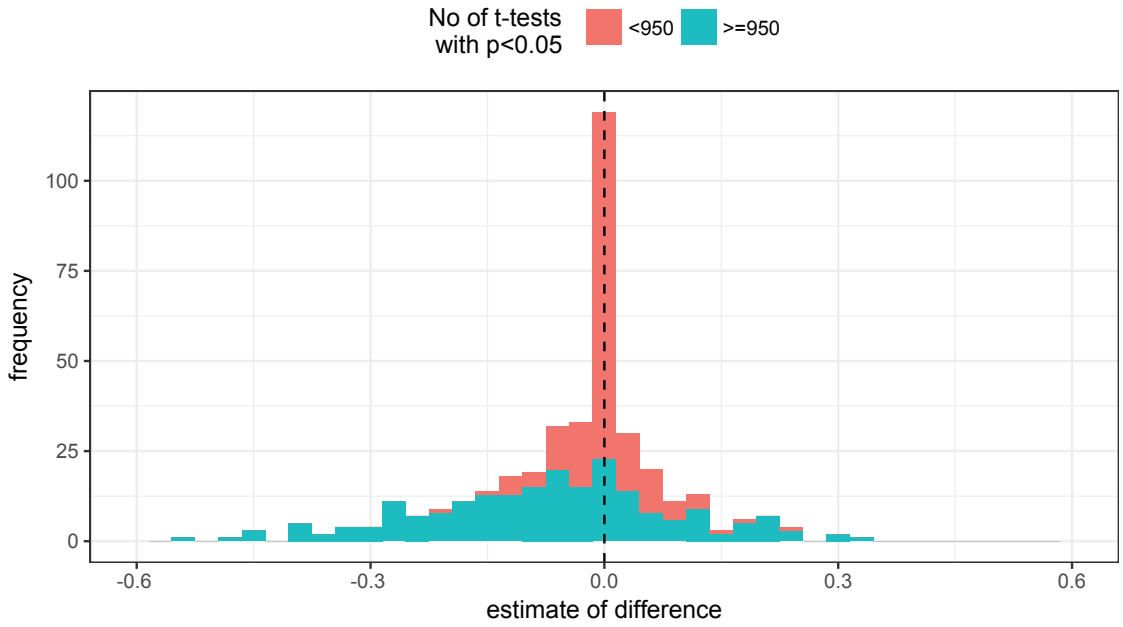

Figure 9.9: Distribution of estimated differences between group means and regional means. Colors indicate whether at least 950 out of 1,000 t-tests rejected the null hypothesis of no difference at a level of p<0.5

9.1.6 Generalization

The procedures described above can now be applied to all samples. This subsection describes how this was done. The generalization involves five steps:

1. Exclusion of cases due to missing data
2. Determination of availability of inequality indicators
3. Sample-specific specification of survey design
4. Identification of variables to distinguish groups
5. Computation of means and standard errors for available inequality indicators by group

The analysis, as illustrated above for the Philippines 2000 survey, could in principle be conducted for all 39 datasets that are available for Asia. Due to missing data, however, some of the datasets are excluded: The survey Pakistan 1973 is excluded since no data on groups, i.e. language, religion, or ethnicity, is available. In the Philippines 1995 sample, data on religion is missing that is available in the surveys 1990 and 2000. To ensure comparability, the 1995 dataset is excluded.

	Fraction	Systematic	Stratification	Geo. Clustering	HH Clustering	Weighting	Inclusion
Bangladesh 2001	0.10	X	-	-	X	-	X
Bangladesh 2011	0.05	X	-	-	X	-	X
Cambodia 1998	0.10	-	X	-	X	-	X
Cambodia 2008	0.10	X	-	-	X	-	X
China 1982	0.01	X	-	-	X	-	X
China 1990	0.01	-	-	X	X	-	X
India 1983	0.00	-	-	X	X	X	X
India 1987	0.00	-	-	X	X	X	X
India 1993	0.00	-	-	X	X	X	X
India 1999	0.00	-	-	X	X	X	X
India 2004	0.00	-	-	X	X	X	X
Indonesia 1971	0.00	-	X	X	X	X	X
Indonesia 1976	0.00	-	X	X	X	X	X
Indonesia 1980	0.05	-	-	X	X	X	X
Indonesia 1985	0.00	-	-	X	X	X	X
Indonesia 1990	0.00	-	-	X	X	X	X
Indonesia 2000	0.10	X	-	-	X	-	X
Indonesia 2010	0.10	X	-	-	X	-	X
Kyrgyz Republic 1999	0.10	X	-	-	X	-	X
Kyrgyz Republic 2009	0.10	X	-	-	X	-	X
Malaysia 1970	0.02	X	-	-	X	-	X
Malaysia 1980	0.02	X	-	-	X	-	X
Malaysia 1991	0.02	X	-	-	X	-	X
Malaysia 2000	0.02	X	-	-	X	-	X
Mongolia 2000	0.10	X	-	-	X	-	X
Pakistan 1981	0.10	-	-	-	-	X	X
Pakistan 1998	0.10	X	-	-	X	-	X
Philippines 1990	0.10	-	-	X	X	X	X
Philippines 2000	0.10	-	-	X	X	X	X
Thailand 1970	0.02	-	X	-	X	X	X
Thailand 1980	0.01	-	X	-	X	X	X
Thailand 1990	0.01	-	-	X	X	X	X
Thailand 2000	0.01	-	-	X	X	X	X
Vietnam 1989	0.05	-	X	X	X	X	X
Vietnam 1999	0.03	-	X	X	X	X	X
Bangladesh 1991	0.10	X	-	-	X	-	X
Pakistan 1973	0.02	-	-	X	X	X	-
Philippines 1995	0.10	X	-	-	X	-	-
Vietnam 2009	0.15	-	X	X	X	X	-

Table 9.6: Survey Designs

In the Vietnam 2009 sample, the ethnicity variable takes the value of either 'Kinh' or 'Others' and thus cannot be used to differentiate groups. This leaves us with 36 individual surveys (see first column of table 9.6 on page 165).

As a second step, the availability of horizontal inequality indicators needs to be compared across samples. As summarized in table 9.3, the estimation of horizontal inequality draws on up to seven indicators conditional on their availability.

In a third step, the estimation of standard errors needs to be adjusted according to the characteristics of the sample designs. Table 9.6 provides an overview over the sample designs as described by the Minnesota Population Center (2015b). The first three columns describe the sampling fraction, whether units were systematically sampled, and the use of complex stratification techniques, respectively. The fourth and the fifth column indicate clustering by household or geographic region, respectively. As described above, large sample fractions as well as implicit and explicit stratification yield smaller standard errors. Clustering, in contrast, inflates standard errors. The last column indicates whether a sample is included in the final analysis.

The fourth step consists of determining how to distinguish groups. As with the other variables, the availability of variables to discern groups (religion, language, and ethnicity) and the number of categories within each of the variables (e.g., Buddhist, Christian) differs between samples.

The tables show that, due to restricted data availability, the categories to distinguish groups necessarily vary between samples. Whereas the respondents religion is widely coded, information about language and ethnicity are seldom available. Whether it is possible to compare the samples thus hinges upon the question of whether the different categories are functionally equivalent between samples. From a more general point of view, all three of the used variables—i.e. `religion`, `language`, and `ethnicity`—refer to comparatively stable and hard to change individual characteristics that are important in the formation of collective self-concepts (Gurr 1974). However, the relative importance of religion, language, and ethnicity differs between countries. For instance,

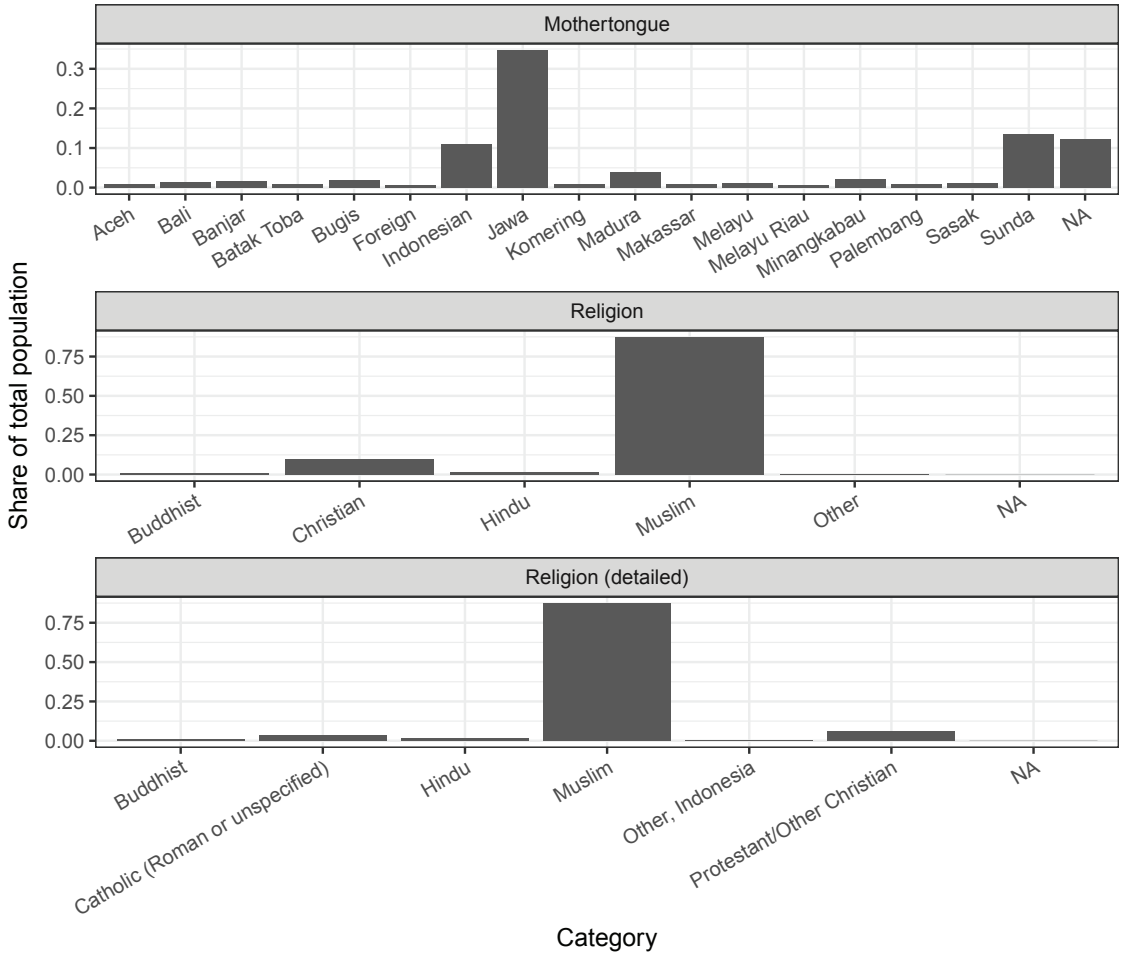

Figure 9.10: Share of groups by split variable

religion forms an important part of collective self-categorization in the Philippines. It differentiates the Moros living in the Southern Philippines from the majority of Christians predominantly populating the other parts of the country. A similar approach to differentiate groups in Indonesia, however, would be problematic. The ethnic Acehnese in Indonesia, for instance, share their Sunni faith with the dominating part of the Indonesian population. Characteristic for the Achenese, however, is, besides their own language and cultural practices, a decidedly stricter interpretation of Islam (Croissant, Schwank, et al. 2009, p. 123). The categories of the variables `religion` or `religiond` do not reflect these differences as all Muslims are subsumed under a single category. Consequently, it makes more sense to distinguish subgroups by language than by religion in the case of Indonesia.

Figure 9.10 plots the share of groups of the total population for three categorizing variables for Indonesia 1990.[17] The barplot in the second column shows that all Muslims in Indonesia, an estimated 87 percent of the population (based on the 1990 survey), are coded as 'Muslims'. The detailed coding of the variable `religion` which is shown in the third column simply splits the category 'Christian' into 'Catholic' and 'Protestants/others', but does not further differentiate the category of Muslims. The coding does not reflect empirically important differences between groups. Consequently, other variables are needed to define groups. Arguably, the variables language (`lang`) or ethnic groups (`ethnic`) better reflect collective identities in Indonesia. Here, however, data availability is restricted: Information on language is only available for the sample of 1990, whereas information on ethnicity is only available for 2000.

Apart from data on split variables, the number of categories becomes an issue. The 1990 sample differentiates more than 170 languages and the 2010 sample more than 660 ethnic groups. If

[17] The estimation corrects for the varying sampling weights. Consequently, it does not depict the share of sampling units but the estimated share of the size of the groups. In this case, standard errors are negligible.

the number of categories becomes too large, type I errors become more frequent. This is because the number of categories influences the estimation of standard errors via reduced sample sizes. To minimize this problem, the number of categories is reduced by excluding small groups. In the sample of Indonesia 1990, the exclusion of groups that make up for less than 0.5 percent of the population reduces the number of differentiated languages to 17.

A threshold of 0.5 percent might appear small. However, the subpopulation of those that speak Acehnese— 0.98 percent of the population—encompasses an estimated 1,762,490 people, 11,799 of which are in the sample. The group is thus neither negligible in size, nor does the analysis suffer from too small sample sizes. The estimated share of groups defined by language of the total population is shown in the first column of figure 9.10 on 166 . In summary, the selection of a variable to select groups needs to take into account the availability of variables, the number of categories, and the empirical importance of available variables in the respective countries.

The fifth and last step encompasses the computation of means and standard errors for available inequality indicators for the chosen subpopulations. The procedure for each sample mirrors the procedure that was described in the illustration. One issue that might arise in this step is a lack of comparability of the values of the variables across samples. However, the Minnesota Population Center (2013) has integrated variables across samples so that they become comparable. The sampling design, however, needs to be adjusted for each individual sample according to table 9.6 on page 165.

In summary, the five steps described above allow for an estimation of means and standard errors that can be compared across samples.

9.2 Measuring the Strategic Environment with Disaggregated Geospatial Data

Horizontal inequality is the main property of the macro-level to explain the motivation of individuals to found, join, or partake in collective action in a political conflict. Apart from the horizontal inequality, however, the decision is also influenced by the strategic environment. These opportunity structures are the macro-level patterns influencing immediate decision-making processes. In this study, the following five indicators are employed to account for the strategic environment:

- Youth bulge (subsec. 9.2.1)
- Population size (subsec. 9.2.2)
- Land class (subsec. 9.2.3)
- Ruggedness of terrain (subsec. 9.2.4)
- Resources (subsec. 9.2.5)

9.2.1 Youth Bulge

A first factor of the strategic environment possibly influencing the formation of non-state actors is *youth bulge*. Apart from some research that has disaggregated data below the national level (Urdal 2008), research on the effect of youth bulges on conflict has exclusively been cross-national (cf. Collier and Hoeffler 2004; Croissant, Wagschal, et al. 2010; Fearon and Laitin 2003; Urdal 2006; Wagschal, Metz, and Schwank 2008). This is hardly surprising since spatially disaggregated data on demographic structures was not available until recently. However, this has changed with the release of grid-based data on age distribution (Alegana et al. 2015; Deville et al. 2014; Gaughan et al. 2013; Stevens et al. 2015; Tatem et al. 2013). The data is estimated based on census data, household survey, and covariates (Alegana et al. 2015).

The rastered data has a resolution of 0.00833 decimal degrees which is about 1 square kilometer at the equator and is available in the form of 28 raster layers for each year of observation. Each layer represents the estimated total population of an age group defined in five-year steps for a single sex (0-5 years & male, 0-5 years & female, 5-10 years & male, 5-10 years &female, ..., above 65 & male, above 65 & female).

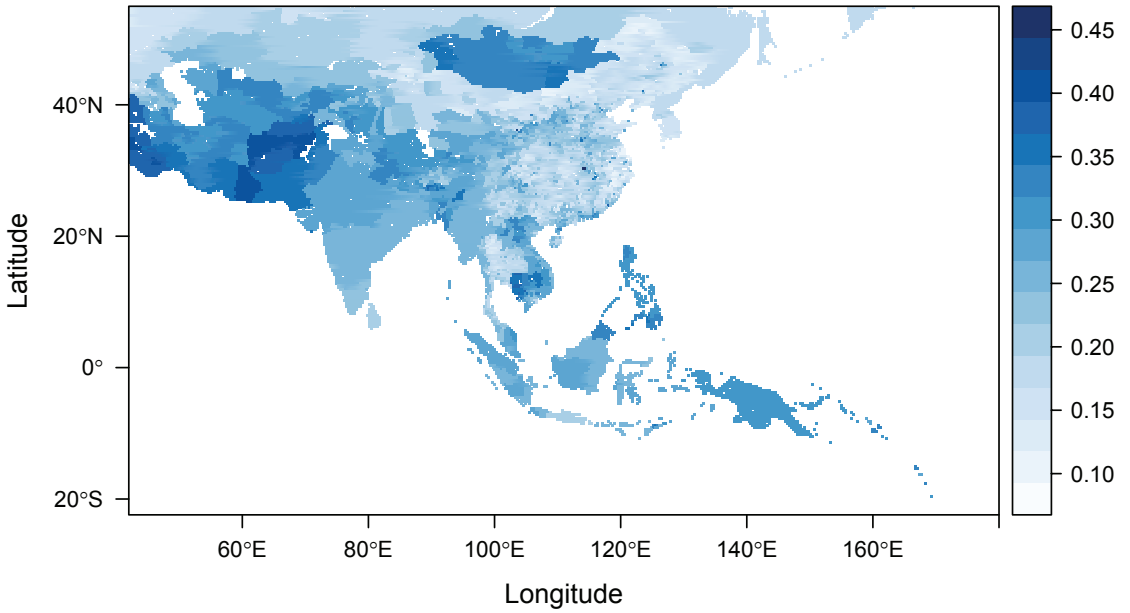

Figure 9.11: Youth Bulge in Asia and Oceania,2000

Youth bulge is operationalized as the relative share of those aged 15-25 of the total population older than 15 years. To retrieve the respective estimates, the layer data was summarized accordingly, resulting in a single layer holding the youth bulge measure in the original resolution. The data was then aggregated to the level of subnational units by calculating the arithmetic mean in each unit. Figure 9.11 shows a map of the youth bulge in Asia and Oceania in the year 2000.

9.2.2 Population Size

The size of the population is among the variables most robustly related to conflict (cf. ch. 2). The population of a region can easily be estimated from the surveys with the Horvitz-Thompson estimator as described above. Since the measure is calculated from censuses, it should lead to valid population figures for subnational units. To test for the validity, an alternative measure for the size of the population in each subnational unit can be derived from the same source that was used for data on youth bulge. Figure 9.12 on page 169 shows this data. To mitigate the effect of the great dispersion of population size, the natural logarithm of the variable is included in the analysis.

9.2.3 Land Class

A third variable that affects decision-making processes of NSCA is the terrain of an area. Two types of land classes have gained specific attention in conflict research: mountains and forested areas.

Whereas early analyses of the link between geographical properties and political conflict have focused on rather coarse indicators, such as the percentage of national territory covered by forest (Buhaug and Gates 2002) or a country's percentage of mountainous terrain (Buhaug and Lujala 2005; Collier and Hoeffler 2004; Fearon and Laitin 2003), satellite sensor-derived land class data allows to construct indicators with far greater precision.

Land class data describe topography by classifying it into a number of categories. This analysis rests on data by Tateishi et al. (2014), who developed a raster specifying the class of land cover into 20 different types (see first column in table 9.7). The classification process, in turn, primarily rests on data from the Moderate Resolution Imaging Spectroradiometer (MODIS), i.e. satellite sensors.

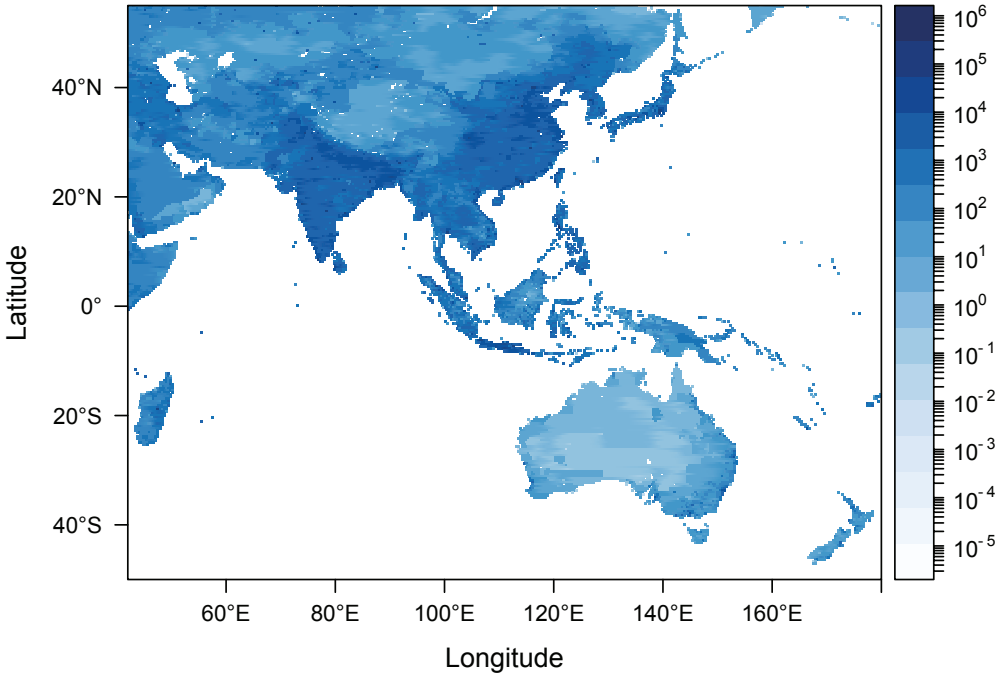

Figure 9.12: Population in Asia and Oceania,scale log transformed

Processing the data, Tateishi et al. (2014) additionally made use of existing land cover data and data such as, e.g., nightlight to classify urban areas.[18]

To suit the needs of the present analysis, the classification scheme has been simplified by aggregating classes. As depicted in table 9.7, the 20 existing classes were aggregated to five classes based on the criterion of land accessibility. For instance, forests, mangroves, rock-, snow- or ice-covered land were grouped in one category. This reclassification is not only a more valid measurement of the explanatory variable, land accessibility, but also increases the accuracy of the dataset. Whereas the overall acccuracy of land classification based on the original classification scheme can be estimated to be about 78 percent (ibid., p. 116), a great deal of inaccuracy results from classification errors between classes that are summarized for the purposes of this analysis.[19] Since the overall accuracy of the given data is already quite high and reclassification greatly improves accuracy on the cost of precision, we can assume the data to be reliable. Figure 9.13 shows the land cover of Asia and Oceania.

9.2.4 Rugged Terrain

Broadening the classes subsumed under inaccessible terrain arguably increases the validity of the indicator 'landclass'. One of its main and most widely used components, however, is flawed: mountainous terrain. Although mountains are obviously correlated with inaccessibility, the indicator fails to correctly classify mountain plateaus.

Due to these shortcomings, this analysis additionally draws on terrain ruggedness. A good measure is the terrain ruggedness index as developed by Riley, DeGloria, and Elliot (1999). The index expresses height differences of a given point to eight adjacent points that are located, equally spaced, around the point of interest. More specifically, it is defined as the square root of the sum of the squared height differences between these points.

Raster data based on 30 arc-seconds cells is provided by Nunn and Puga (2012). The variable used in the analysis is the mean of the terrain ruggedness of the region. Water areas are excluded based on the landclass data described above and the data is weighted for cell size.

[18] For a detailed scheme of how the data was produced see Tateishi et al. (2014, p. 104).

[19] In the single most inaccurate class 'tree open', for instance, 40 of 69 cells were incorrectly classified. 22 of these 40 incorrectly classified cells, however, lie within the broader category 'Forest/Mangrove/Rock/Snow' that is used in this analysis.

Original Class	New Class
Broadleaf Evergreen Forest	Inaccessible Land
Broadleaf Deciduous Forest	
Needleleaf Evergreen Forest	
Needleleaf Deciduous Forest	
Mixed Forest	
Tree Open	
Mangrove	
Wetland	
Bare area,consolidated(gravel,rock)	
Bare area,unconsolidated (sand)	
Snow / Ice	
Shrub	Small or sparse vegetation
Herbaceous	
Herbaceous with Sparse Tree/Shrub	
Sparse vegetation	
Cropland	Cropland
Paddy field	
Cropland / Other Vegetation Mosaic	
Urban	Urban
Water bodies	Water

Table 9.7: Reclassification scheme for land class. The original classes of the data from Tateishi et al. (2014) are aggregated to five new categories.

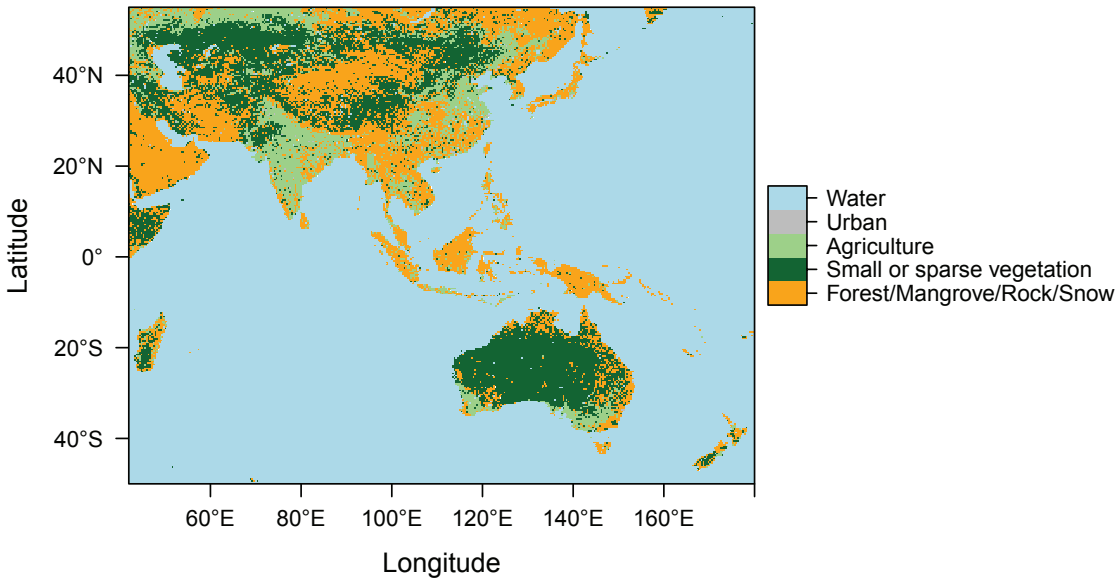

Figure 9.13: Land Class in Asia and Oceania

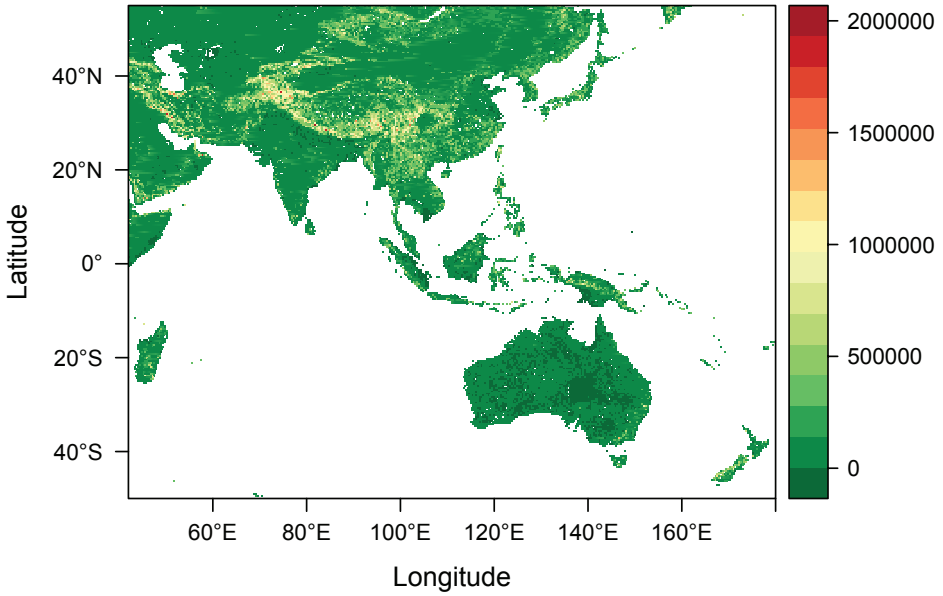

Figure 9.14: Terrain Ruggedness in Asia and Oceania

9.2.5 Resources

To assess the role of resources, we included point data on diamonds (Gilmore et al. 2005; Lujala 2009), gold and tantalum (Frank 1999), cannabis and opium polygon data (Buhaug and Lujala 2005), as well as on the presence of oil (Lujala, Rød, and Thieme 2007).

9.2.6 Validity and Missing Data

All of the five variables described above are derived from georeferenced raster or even point data. The use of raster data has its greatest advantages in conflict research where it can be linked to point specific information. Information on the location of camps of NSCA, for instance, can directly be linked to those cells of the raster that hold the information for that very area. This provides huge improvements in the validity of indicators in comparison to highly aggregated measures such as the percentage of a country covered by trees or mountains (cf. Collier and Hoeffler 2004; Fearon and Laitin 2003). Moreover, raster data also allows deriving measures for areas. It can easily be aggregated to any geographical unit by taking the mean—or any other adequate function—of those cell values falling in the area of interest.

As a trade-off, however, disaggregated data is not always available. This primarily affects the temporal dimension and—due to the nature of the measured phenomena—the demographic indicators 'youth bulge' and the alternative measurement of the total population. Lack of time-series is less of a problem pertaining to indicators that hardly change over time, such as land class and time invariant indicators such as terrain ruggedness.

9.3 Non State Actors

We now turn to our data on NSCA. Chapter 6 elaborated on a detailed conceptualization of non-state conflict actors. The concept clearly reflects the critical realist approach to definitions and its foundation in the philosophical discussion of collective intentionality. As a result, the definition is neither particularly parsimonious nor exclusively designed to guide empirical research. As the following discussion shows, however, the concept is well-balanced: It carves out the essential properties of non-state conflict actors while at the same time providing a strong foundation for empirical analysis. Whereas the former has been discussed in detail, the latter still has yet to be proven.

9.3.1 Disaggregated Conflict Actor Database

Empirical data on non-state conflict actors is stored in the *Disaggregated Conflict Actors Databse* (DISCA). Taking the above definition as a point of departure, DISCA was designed from scratch for the purpose of explaining the emergence and dynamic development of non-state conflict actors over time. It includes data on 73 distinct non-state actors in Asia and Oceania in the period since 1945 (see table B.1).

The dataset stands out in four regards. First, it does not investigate conflict dyads but focuses on single actors. In the NSA-Database by (Cunningham, Gleditsch, and Salehyan 2009a), for instance, the strength of actors is coded relative to the government. We instead focus *on the actor* to take into account the that NSCA might be engaged in different conflicts.

Second, the period of observation is determined by foundation and disbandment of NSCA and not by the fact that they are engaged in conflict. The indicators to discern foundation are derived from the concept developed in chapter 6. This allows for a precise and valid assessment of when actors emerge and disband.

Third, the dataset is time-variant by allowing for entirely flexible coding of intervals. This improves existing databases that only code single data points for long periods of observation. Moreover, since the conflict data in DISCON is disaggregated by month, this allows to analyze dynamics with great detail. Figure 9.16 illustrates the time variant data on size and weaponry for selected Philippine NSCA.

Fourth, the data on non-state conflict actors is stored in a PostGIS enabled relational database with PostgreSQL as the managing system.[20] On the one hand, this allows to link DISCA to databases on horizontal inequality, the strategic environment, as well as other conflict databases to facilitate its use in analyses. On the other hand, the dataset is geographically disaggregated. It holds information on the location of headquarters as well as territorial control for all of the included conflict actors. Figure 9.15 maps all coded headquarters of the included non-state actors.

Apart from these four main advantages, DISCA also comprises data on relations of NSCA. Here, we differentiate two types of relations: endogenous relations (e.g., the extraction of resources in an area or extortion of the population) as well as exogenous relations (e.g. receiving support from other state or non-state actors). Moreover, we coded the aims of actors. Tables A.1 – A.6 describe the database tables and variables.[21]

[20] A relational database consists of tables. Each table holds information on specific characteristics of non-state actors and consists of multiple columns storing values of variables. A single row in a table holds a unique piece of information on the respective characteristic of non-state actors. IDs relate the tables.

[21] The codebook for DISCA is included in the Appendix of this chapter.

Figure 9.15: Headquarters of NSCA

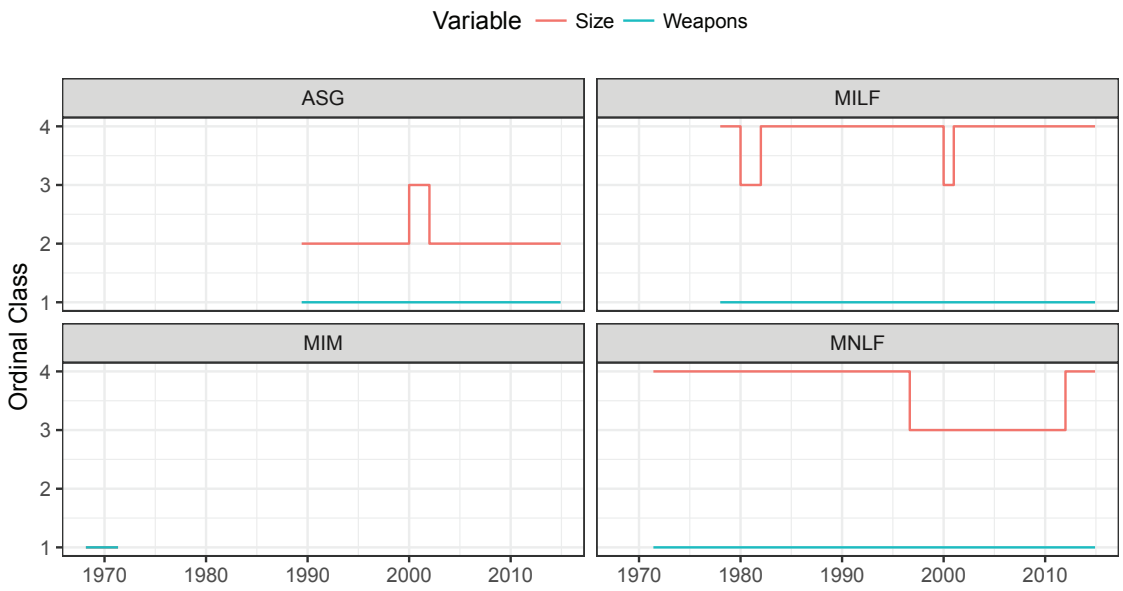

Figure 9.16: Size and weaponry of NSCA

9.4 Horizontal inequality, the strategic environment, and the formation of NSCA

Having described the measurement of the main concepts, we now turn to the analysis of the empirical relationship between horizontal inequality, the strategic environment, and the emergence of non-state conflict actors.

One of the main innovations of the following analysis is that it makes use of the most disaggregated data available. The measurement of horizontal inequality is based on individual-level data and not group-level (Cederman, Weidmann, and Gleditsch 2011) or country-level data (Collier and Hoeffler 2004). The measurement of the strategic environment uses grid-based data with a very high resolution and thus allows to derive measures that are highly valid. The data on non-state actors was specifically collected for this analysis and does not derive data on the formation of non-state actors from existing conflict datasets. The main unit of analysis is the group-region, i.e. a population in a given region manifests a case in the dataset.

The main focus of the statistical analysis lies on the link between horizontal inequality and the strategic environment, on the one hand, and the emergence of non-state conflict actors, on the other. Two causal relations proposed in the theory are not tested and consequently take the status of assumptions: First, the formation of groups (not NSCA) is not empirically analyzed. Rather, it is assumed that groups form along religious, linguistic, or ethnic lines as discussed in chapter 8. Furthermore, since data availability differs between countries, it is assumed that these three characteristics are functionally equivalent between individual societies.

Second, individual grievances and thus, by extension, the existence of aggrieved groups is not empirically tested. Although it would be possible to infer individual grievances in populations via value surveys, this is not done here. Such an analysis remains an important step for future analyses.

Based on these assumptions, the following analysis investigates the link between horizontal inequality and the formation of non-state conflict actors.

To test the effect of horizontal inequality, the following variables are constructed. They all are characteristics of a group in a region: *regional inequality* denotes the mean value of the differences from the regional mean for all available indicators measured in standard deviations. *Economic inequality* and *social inequality* are the mean values for those indicators belonging to the respective categories. Values below zero indicate the amount of deprivation, values above zero a privileged position. In addition, each indicator of inequality is included separately.

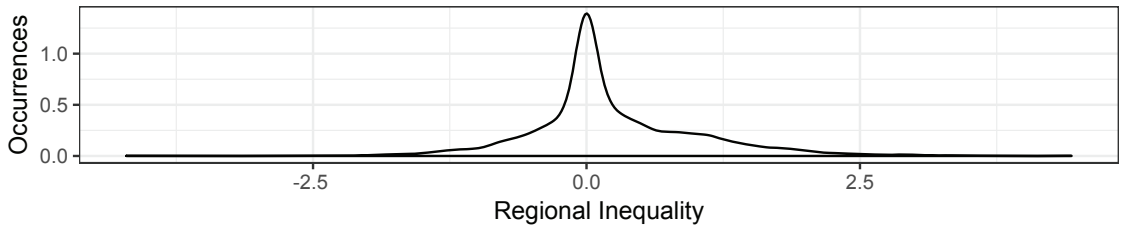

Figure 9.17: Distribution of inequality measure

To test for the influence of the strategic environment, we include the variables *inaccessible terrain* and *rugged terrain* for the geographic context and *youth bulge* for the anthropological context. Population is added as a control variable.

9.4.1 Descriptive Statistics

Table 9.8 shows the descriptive statistics for the data. Figures 9.17 plots the distribution of the inequality measure.

Table 9.8: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Inequality	3,464	0.226	0.756	−4.207	−0.101	0.556	4.434
Inaccessibility	3,464	0.550	0.255	0.009	0.394	0.774	0.936
Terrain Ruggedness	3,464	1.269	1.135	0.0003	0.443	1.733	5.539
Population (log)	3,464	14.918	1.626	9.986	13.830	15.935	18.893
Youth Bulge	3,464	26.411	4.585	14.041	24.025	29.797	37.820

9.4.2 Linking NSCA and Inequality

To investigate whether horizontal inequality leads to the formation of non-state actors, the latter needs to be linked to the former. The research question is not whether regions with deprived groups host *any* NSCA, but rather whether deprived groups form NSCA.

NSCAs and a regional population from the sample were considered to be related on two conditions. First, an NSCA existed that fought in the name of the respective population or mainly consisted of that population. This link is an M:N relationship. A population can have multiple NSCA fighting in its name such as, for instance, the MNLF and the MILF fighting for the Muslim Moro population in the Southern Philippines. Likewise, a single NSCA can fight for multiple populations such as, for instance, the MNLF fights for the various sub-tribes of the Moro population in the Southern Philippines. In addition, the presence of a headquarter or major base of the respective non-state actor is introduced as a necessary condition. Information on headquarters is available in DISCA as seen on figure 9.15 on page 173. Second, there had to be a headquarter or major base in the respective region. A population is only linked to an NSCA if the latter has a main basis in that very region. Following the above example, for instance, the Muslim population is only linked to the MNLF in the subnational unit 'Central Mindanao and Autonomous Region of Muslim Mindanao'. The polygons for the subnational units are taken from the Minnesota Population Center (2013).[22]

[22]These polygons do not necessarily correspond to subnational units of today since, for reasons of consistency, some units where merged. Varying borders of subnational units over time pose a large problem to panel analyses, especially when working with different datasets. Since data on headquarters are available as spatial points, the position of headquarters is linked to the regions by a spatial relationship. More specifically, it selects those regions that contain the respective geographic point that is coded (via latitude and longitude) as the location of the headquarter or a main base. Thus, a non-state actor is coded as existent in a given region if it is linked to a population of that very region and if it has a major base there.

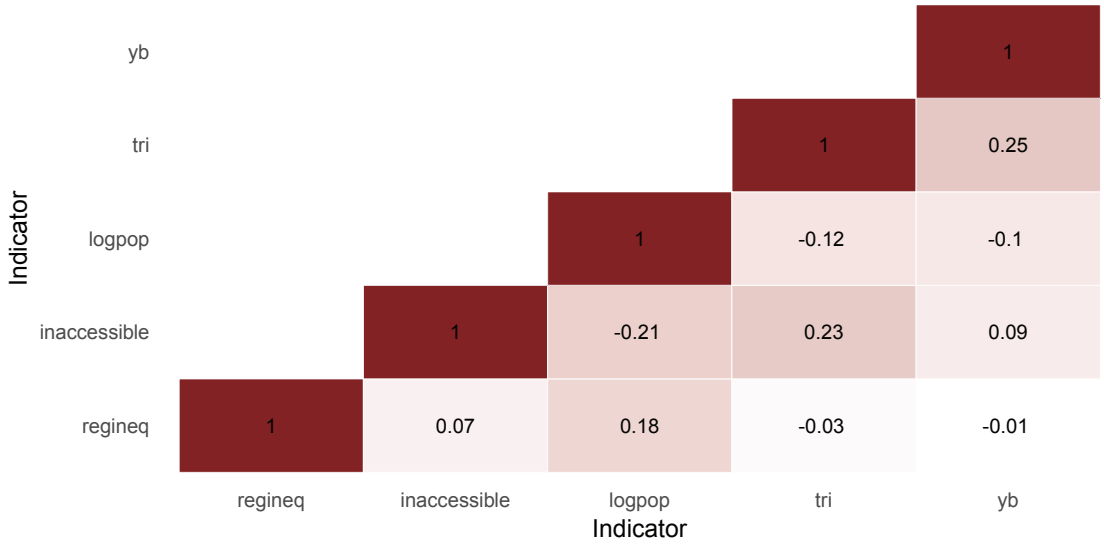

Figure 9.18: Test for multicollinerity

9.4.3 Regression Specification

Having linked the two datasets, we can proceed to the regression analysis. The first step consists in checking whether the assumptions applicable to logistic regression hold.

Moderate multicollinearity only occurs where it was to be expected (see figure 9.18). The maximum variance inflation factor of 1.12 is well below the threshold of 2 (Cohen et al. 2003). The correlation between the two different measures of inaccessibility of terrain, terrain ruggedness index and land class, indicates that they are complementary rather than alternative measures of inaccessibility. Consequently, both are included on the right hand side. We moreover include inaccessible terrain, terrain ruggedness, the size of the population, and youth bulge as indicators for the strategic environment in the analysis.

Fixed effects are included to control for country and year specific effects. These fixed effects capture heterogeneity across countries and years and thereby account for the influence of unobserved variables at the level of countries as well as for period-specific effects.

The logistic regression is performed with penalized likelihood based on Jeffreys invariant prior (Jeffreys 1946). This ensures finite estimates in cases of perfect separation which occurs due to the rare events of the outcome (Heinze and Schemper 2002a; Kosmidis and Firth 2009).

9.4.4 Results

Table 9.9 on page 177 shows the regression results. The results confirm H1a as described in section 8.2. The measure of regional inequality is statistically significant and shows the expected sign (model 1). This indicates that those regions with deprived populations have a higher propensity to host bases of non-state conflict actors. The result is similar for deprivation in the economic (model 2) and the social field (model 3) lending further support to the argument.

A closer look on the composite indicators reveals that almost all indicators of economic inequality are significant (models 4 - 7). Only employment status seems to be unrelated to the outcome. The composite indicators of social inequality are negative and significant (models 9 - 10).

For the interpretation of the indicators of the strategic environment, we primarily focus on model 1 because it draws on the whole sample. The results are mixed, but generally support H1b. We expected inaccessible terrain (measured via types of land class) and rugged terrain (measured via elevation) to be positively related to our dependent variable. Of these two indicators of the geographic context, however, only the coefficients of the former are significant and point in the expected direction. This indicates that the type of land cover seems to be more important than ruggedness.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10
Regional Inequality	−1.09***									
	(0.23)									
Economic Inequality		−0.71***								
		(0.19)								
Social Inequality			−0.89***							
			(0.19)							
Radio				−0.70**						
				(0.23)						
Television					−1.18***					
					(0.34)					
Electricity						−0.97***				
						(0.26)				
Toilet							−1.38***			
							(0.31)			
Employment								−0.00		
								(0.21)		
Literacy									−0.51***	
									(0.13)	
Education										−1.10***
										(0.26)
Youth Bulge	0.98***	0.94***	0.98***	1.42***	1.54***	1.59***	1.59***	0.58***	0.95***	0.95***
	(0.12)	(0.12)	(0.12)	(0.21)	(0.23)	(0.23)	(0.25)	(0.11)	(0.12)	(0.11)
Inaccessible Terrain	2.58*	1.83	2.56*	4.13	3.73	3.68	6.14*	2.39	1.80	2.88*
	(1.19)	(1.20)	(1.20)	(2.50)	(2.49)	(2.20)	(2.49)	(1.37)	(1.20)	(1.16)
Terrain Ruggedness	−0.04	−0.08	−0.05	−1.04*	−1.13*	−0.95*	−1.28*	0.21	−0.07	−0.03
	(0.22)	(0.21)	(0.22)	(0.49)	(0.52)	(0.43)	(0.54)	(0.20)	(0.21)	(0.21)
Population (log)	0.85***	0.67**	0.85***	0.11	0.28	0.12	0.49	0.54*	0.68**	0.84***
	(0.22)	(0.21)	(0.22)	(0.35)	(0.35)	(0.33)	(0.40)	(0.22)	(0.22)	(0.22)
AIC	335.52	307.99	336.50	145.91	141.45	167.26	149.07	223.10	304.03	338.64
BIC	556.93	520.43	557.73	243.03	238.57	321.12	277.38	409.34	509.47	559.86
Log Likelihood	-131.76	-118.99	-132.25	-54.96	-52.72	-56.63	-51.54	-79.55	-118.01	-133.32
Deviance	263.52	237.99	264.50	109.91	105.45	113.26	103.07	159.10	236.03	266.64
Num. obs.	3464	3197	3447	1629	1629	2205	1956	2490	3110	3446

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 9.9: Results of analysis of NSCA formation

The first of the two indicators for the anthropological context, i.e. population size, is significantly and positively related to the existence of group headquarters. The second indicator, youth bulge, is statistically significant and shows the expected positive sign.

All in all, the results lend support to hypotheses 1a and 1b. More specifically, we can state the following: Based on the collected data, assuming the truth of the theoretical assumptions and the adequacy of the concepts, and assuming that we have not ommitted influential explanatory factors, we can conclude that it is highly unlikely that inequality and a strategic environment facilitating interaction, mobilization, and organization are unrelated to the formation of non-state conflict actors in a region.

The finding of significance as indicated by low p-values is only a first step. Given large sample sizes, even very small differences between groups can yield significant differences. Consequently, we take a closer look at the size of the effect of those variables that were identified to be significantly related with the formation of non-state actors.

In general, the formation of non-state actors is a rare event. Deprivation with regard to the regional mean leads to substantively higher risks of formation of non-state conflict actors. For instance, an increase in the relative difference of a group to the regional mean by 1 standard deviation decreases the probability of group formation by two thirds.

A comparison of the effect sizes of the three measures of the strategic environment reveals substantive differences among them. Inaccessible terrain seems to increase the probability of NSCA formation, although the effect is comparatively small and not robust across models. Terrain ruggedness does not seem to affect the probability of the formation of NSCA. Youth bulge, in contrast, has a very substantial effect. An increase in the share of youth by 1 percent increases the probability of group formation by a factor of 2.7. The size of the population also seems to be positively related to the propensity of group formation.

Taking into account statistical significance and effect sizes, we can thus conclude that inequality and youth bulges, in particular, but also inaccessible terrain and the population size increase the probability of NSCA formation.

9.5 Dynamics of Violence in Intrastate Political Conflicts

Having described the formation of NSCA, we now turn to our second explanandum: the dynamics of violence in intrastate conflict. As described in section 6.1, conflict intensity is defined as a property of a sum of conflict measures in a geographical and temporal space. The primary units of analysis in the DISCON Dataset are the calendar month and the 'region,' i.e. the first-level subnational administrative unit of a country.

The Heidelberg approach addresses existing lacunae in conflict research by bringing forward a multi-dimensional and multi-indicator approach to conflict intensity. The two main advantages of the intensity data provided by DISCON is its level of disaggregation in terms of time and space, on the one hand, and its multidimensionality, on the other. This allows for a disaggregated analysis of conflict intensities beyond one-dimensional approaches exclusively focusing on the number of battle-related deaths.

Moreover, the following investigates political conflicts from a new perspective. The most widely used conflict dataset from UCDP has been studied countless times and has been correlated with almost every imaginable variable (cf. Schrodt 2014). A new dataset is able to assess and refine existing theoretical arguments.

The DISCON data to date has only been tested in a single empirical analysis by Trinn (2015). Due to the innovative character of the dataset, the following in a first step presents intensity data more generally and then proceeds with an empirical test of the hypotheses derived in chapter 8. Overall, this leads to the following ternary structure:

Subsection 9.5.1 more closely examines patterns of conflict intensity in Asia and Oceania between 2000 and 2014. The section presents overall conflict patterns and identifies distinct profiles of violence based on a latent class analysis. This is the first study that identifies and compares such types based on a multi-dimensional view on conflict intensity.

Subsection 9.5.2 tests the relations between the natural and social space, on the one hand, and conflict intensity, on the other. Since there is no approach that measures conflict intensities on the regional level, no concept of conflict intensity that is at the same time as broad as the Heidelberg approach and since data on inequality, terrain, youth bulges, and population have not been available until recently, this is the first analysis of such kind.

Subsection 9.5.3 investigates the link between characteristics of NSCA and profiles of violence.

9.5.1 Overview and Latent Class Analysis

As a first step, we can take a look at the distribution of intensities for all intrastate political conflicts in Asia and Oceania between 2000 and 2014. This gives an idea of the distribution of conflict intensities.

Figure 9.19 on page 180 shows the geographical distribution of intrastate and subnational conflicts in Asia and Oceania. The map shows the highest intensity score between 2000 and 2014 for each subnational unit. Since the map does not show temporal variance or any aggregated score of conflict affectedness, however, it is only an approximation to the conflict affectedness of subnational units in Asia and Oceania. No temporal variance, but the temporally-aggregated conflict affectedness is shown in figure 9.20 on page 181.

To compute the aggregated conflict affectedness for each subnational unit, the underlying indicator scores were first summed and normalized to a scale from 0-11 for each regional-month intensity. This score was then again summed over the 180 months in the period of observation. This leads to a continuous score between 0 (no conflict in whole period of observation) to 1980 (full out war in every month between 2000 and 2014).

Figure 9.21 on page 182 shows the distribution of region-month intensities by conflict type. The figure reveals that the intensity distribution is heavily right-skewed with regard to all three types of constellations. Of all 6315 region-month in which violence occured, 93.5 percent were violent crises, 3.8 percent limited wars, and 2.7 percent wars. This result is certainly expected, since wars are obviously much rarer phenomenon than low-level violence. It underlines, however, the need to differentiate distinct level of intensities to more adequately measured political conflicts.

Plotting the similar distribution for the sum of the composite indicators in figure 9.21 allows to gain an even finer picture.

Until here, we have mainly focused on the magnitude of conflict. The second feature of the Heidelberg approach includes its multi-dimensional measurement of conflict intensity. It allows not only for assessing aggregative scores of intensity, but also to disentangle *how conflicts are fought*, i.e. profiles of violence.

Figure 9.22 on page 182 provides an example. It shows the scores of the five intensity indicators for the intrastate conflict between the Moro Islamic Liberation Front (MILF) and the Philippine government in 2009 for each month. Aside from a non-violent phase of the conflict between September and November, the figure reveals that June 2009 was specifically violent with a heavy use of weapons, high numbers of personnel involved in the fighting, and a large number of fatalities. There were however, no or only few refugees and no severe destruction in the region.

From an analytical perspective, the high number of data poses a challenge. Overall, $3^5 = 243$ different indicator combinations are theoretically possible in each single region-month. Only 50.21 percent of these are actually observed.

It would be rather futile to plot a truth table over these types. Consequently, the following analysis conducts a latent class analysis to cope with the complexity of the data. Latent class analysis is well suited for the given task, as it does not assume a specific distribution of the underlying data and allows for categorial variables. The idea of latent class analysis is to categorize different patterns of observed variables into groups based on an (assumed) underlying unobserved variable (Clogg 1995; Linzer and Lewis 2011). Each case that enters the analysis is assigned a probability of belonging to each of these groups.

As described, conflict intensity is operationalized via an aggregative index of the two indicators for conflict means and the three indicators for conflict consequences. The indicators and the aggregative logic follow the definition of conflict intensity as a property of a number of conflict measures in a temporal and geographical space indicating the severity of conflict in a given region-month. The validity of the concept of conflict intensity is thus dependent upon whether the five indicators adequately capture the idea of intensity.

The latent class analysis proceeds in an opposite direction. Instead of deriving indicators from a concept, it identifies empirical patterns from indicator values. Taking the indicators as a point of departure, it reveals patterns of empirical distributions. Thus, the intensity levels and the classes derived from latent class analysis are complementary.

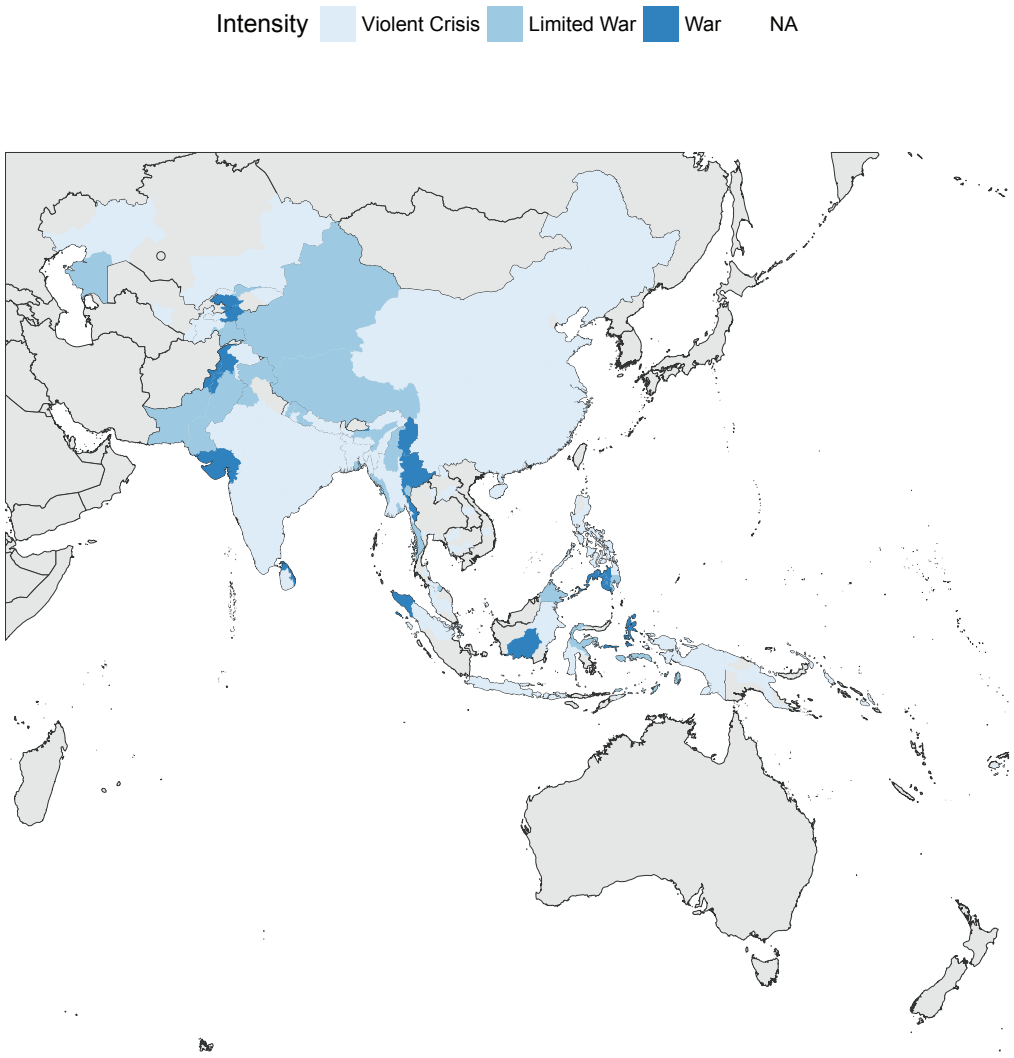

Figure 9.19: Maximum region-month intensities of intra- and substate conflicts in Asia and Oceania, 2000-2014

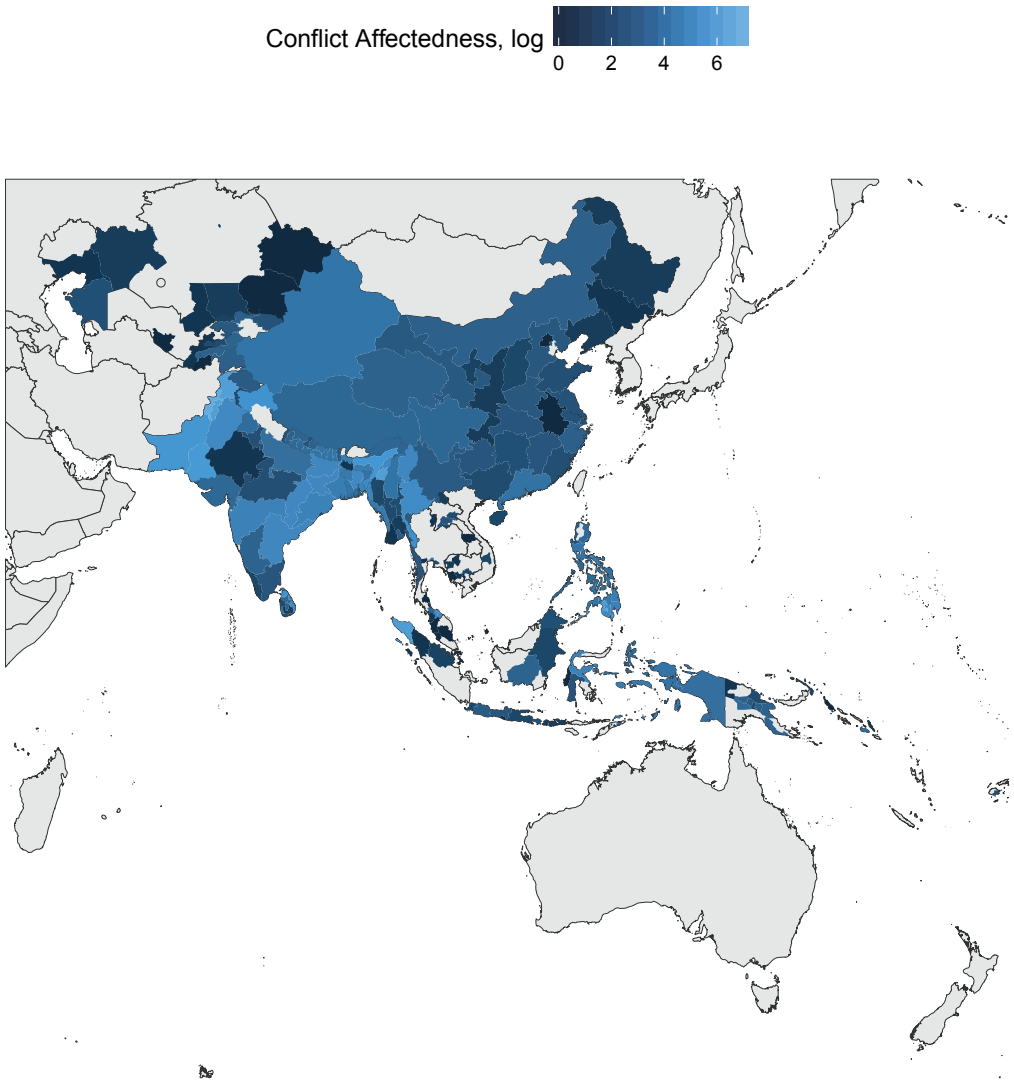

Figure 9.20: Affectedness of subnational units in Asia and Oceania by intra- and substate conflicts, 2000-2014

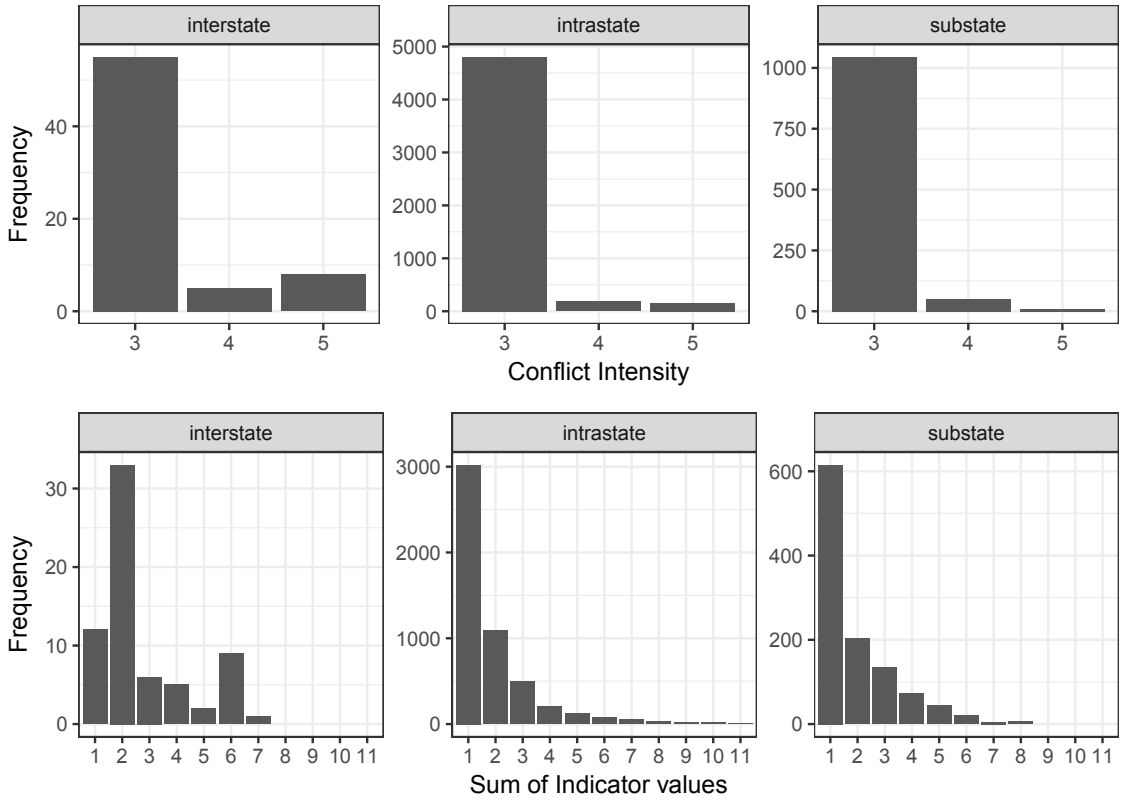

Figure 9.21: Distribution of intensity levels (top figure) and summed indicator values (bottom figure) by conflict type

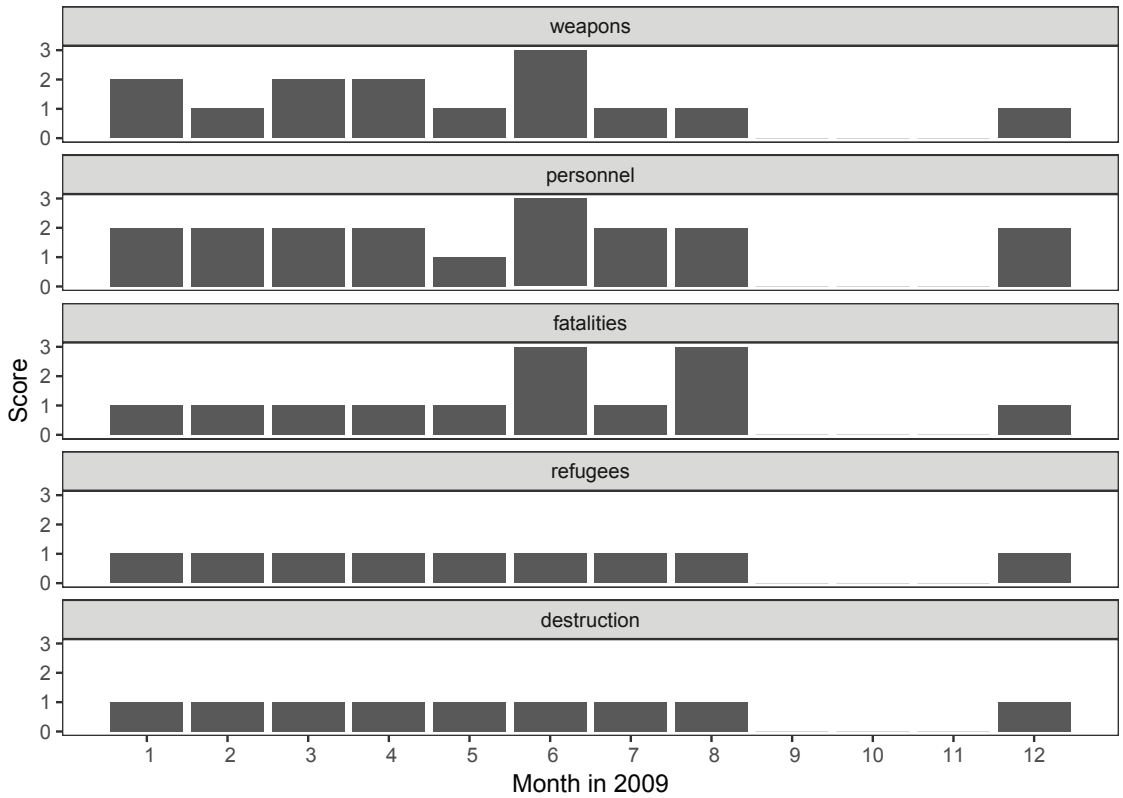

Figure 9.22: Score of intensity indicators for Philippines (MILF / Mindanao)

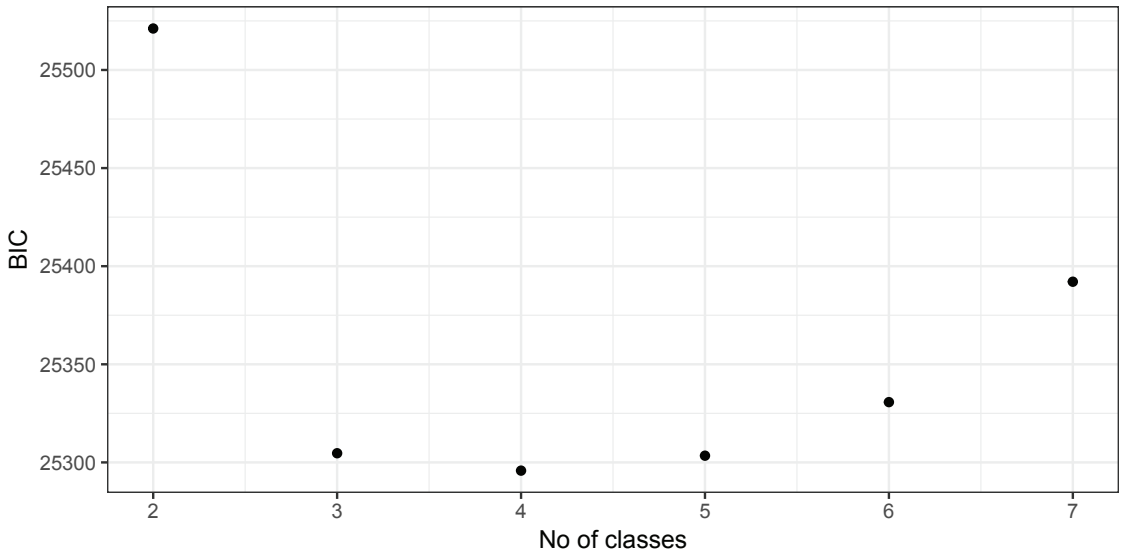

Figure 9.23: Bayesian Information Criterion for 2 - 7 classes

It does so by maximizing the log likelihood

$$\ln(L) = \sum_{i=1}^{N} \ln \sum_{r=1}^{R} p_r \prod_{j=1}^{J} \prod_{k=1}^{K_j} (\pi_{jrk})^{Y_{ik}}$$

, where $i = 1, ..., N$ denotes a region-month with the responses on manifest variables $j = 1, ..., J$. In the present example, we have $N = 6,247$ cases and $J = 5$ indicators. Each indicator has K_j different outcome values. In our case, we have three possible outcomes $(1, 2, 3)$ for each of our five indicators so that $K = 3$ for each j. $r = 1, ..., R$ denotes the number of latent classes (in our case four) and p_r the unconditional probabilities of group membership which is equal to the share of observations in group r. π_{jrk} is the conditional probability that a given region-month in class r has the outcome value k for variable j (Linzer 2011, p. 176).

In a first step, we need to determine the number of groups that adequately separate the data. Figure 9.23 shows the Bayesian Information Criterion (BIC) for different group sizes (Schwarz 1978). It has its minimum at four groups.[23]

Looking at the size of the different classes, we can see that about three thirds of the cases fall in class 3 and almost one fifth in class 2. Classes 1 and 4 are both comparatively small with each having about three percent of the cases attributed to these classes. Class 3 exclusively exists of violent crisis. More interesting are those classes that consist of cases with differing region-month intensity levels: classes 1, 2, and 4. Figure 9.24 shows the distribution of intensity levels over these three classes. We find that limited wars are found in significant numbers in classes 1 (42.1 %) and 4 (31.5 %) as well as, to a lesser degree, in class 2 (26.4 %). Wars are exclusively found, and relatively evenly distributed in, classes 4 (58.3 %) and 1 (41.7 %)

Apart from the largest class 3, the latent class analysis thus reveals three distinct profiles of violence beyond the cumulative measure of conflict intensity.

Violent region-months falling into class 2 most significantly differ from class 3 in that they are characterized by more personnel in the dimension of means and more fatalities in the dimension of consequences (see figures 9.25 and 9.26 on pages 185 and 185, respectively). Typical examples are the conflicts between Buddhists and Rohingyas in Rakhine State in Myanmar and the conflict for autonomy in Manipur. Both were predominantly fought as class 2 conflict.

Violent region-months falling into classes 1 are most different from class 2 conflicts with regard to employed weapons (means) and fatalities (consequences). Put differently, conflict of class 1 had

[23] Comparing groups based on Pearson's χ^2 goodness of fit and likelihood ratio chi-square statistic would favor models with more classes. However, these do not penalize rising number of parameters. In general, the BIC is the most appropriate measure to compare latent class models (Forster 2000; Ting Hsiang Lin 1997; cf. Linzer and Lewis 2011). Although from comparing the BIC values we can say that there are not two, or more than four, groups to be identified by latent class analysis, the BIC values for three and four groups do not differ by much. Comparing the mean BIC of 100 runs for three and four models, respectively, leads to the acceptance of four models as more appropriate.

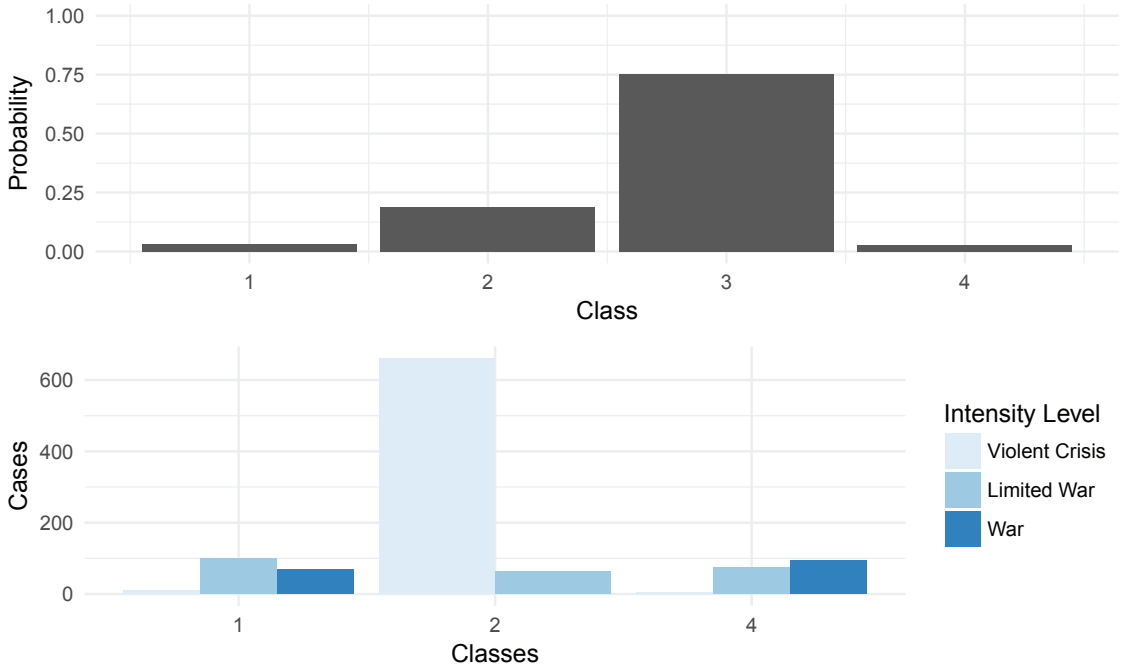

Figure 9.24: Distribution of classes (top figure) and probability of membership by intensity levels (bottom figure). Class 3 exclusively consists of violent crises and is thus ommitted in the figure below.

a much higher probability to see the employment of heavy weaponry and large fatality figures. There are no typical cases of class 1 conflicts standing out. Conflicts with the comparatively largest share of region-month intensities of class 1 include those between the government and Islamist groups in Pakistan, as well as those among these groups.

Region-months falling into class 4 differ from the likewise predominantly highly violent class 1 conflicts with regard to destruction and refugees (consequences) as well as the number of employed personnel (means). Whereas medium or high levels of destruction are highly unlikely in all other classes, they occur with a probability of 50% in class 4. Given the high threshold of the indicator and the resulting low number of region-months characterized by destruction in the whole sample, this is a large figure. Large numbers of refugees, i.e. more than 20,000 refugees and internally displaced persons in a given region-month, occur almost exclusively in class 4 conflicts. With regard to the number of involved persons in the most severe individual measure in a region-month, class 1 region-months are mostly characterized by intermediate numbers of involved personnel, not differing much from the mostly low-violent conflicts of class 2. Here, class 4 markedly differs, where the probability of high numbers of personnel is highly likely. The most typical conflict in class 4 is the secessionist conflict in Aceh.

Overall, there are no absolutely clear-cut patterns. With the exception of a large number of conflicts that were exclusively or almost exclusively fought on a low level of violence and thus belong to class 3, it is not possible to assign single conflicts to single classes. An example of a conflict that is quite evenly distributed among classes is the conflict between the Moro Islamic Liberation Front and the Philippine government. The conflict saw an overall of 79 violent region-month between 2000 and 2014. The latent class analysis assigned five of these region month to class 1, 20 to class 2, 46 to class 3, and eight to class 4.

9.5.2 Determinants of Conflict Intensity

We now move from descriptive to explanatory analysis. This chapter analyzes determinants of conflict intensity based on characteristics of the political and economic system of the respective nation-state as well as topographical, economic, demographic, and resource-related characteristics at the level of subnational units. The main unit of analysis is the region-year[24]. This is more adequate than the region-month, since the data of those variables that do vary over time (night-

[24] 'Region' here always denotes the first-level subnational unit of a country.

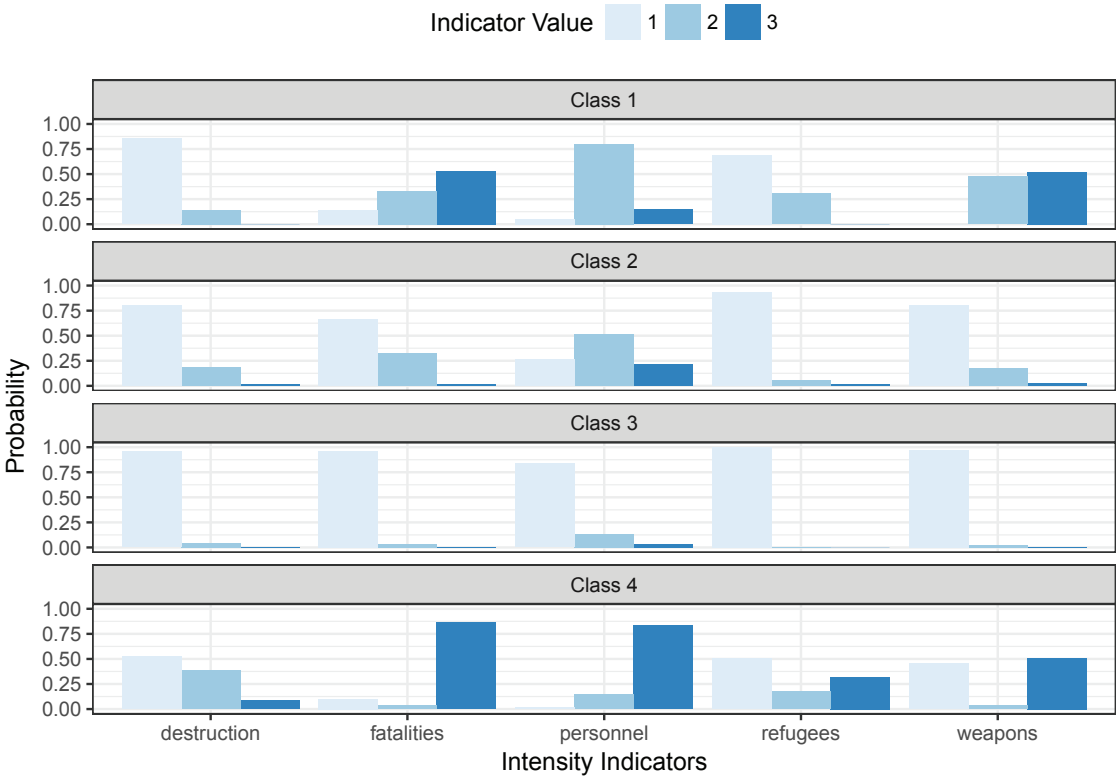

Figure 9.25: Conditional probabilities of intensity indicators by latent class

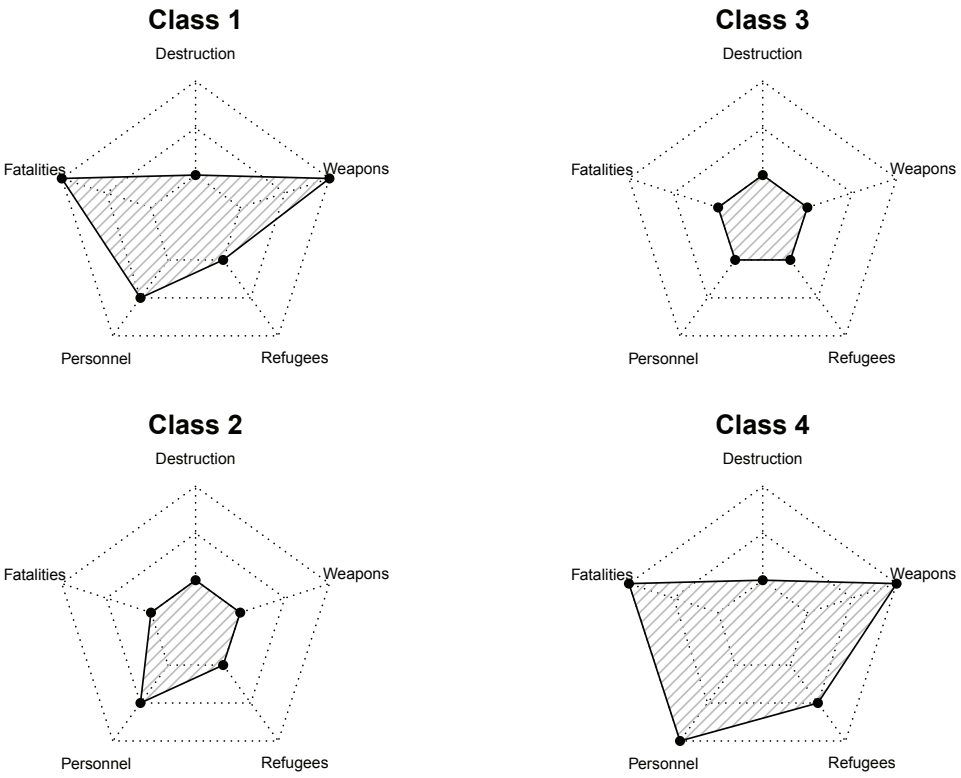

Figure 9.26: Indicator values with highest probability in each of the four identified classes of intensity profiles

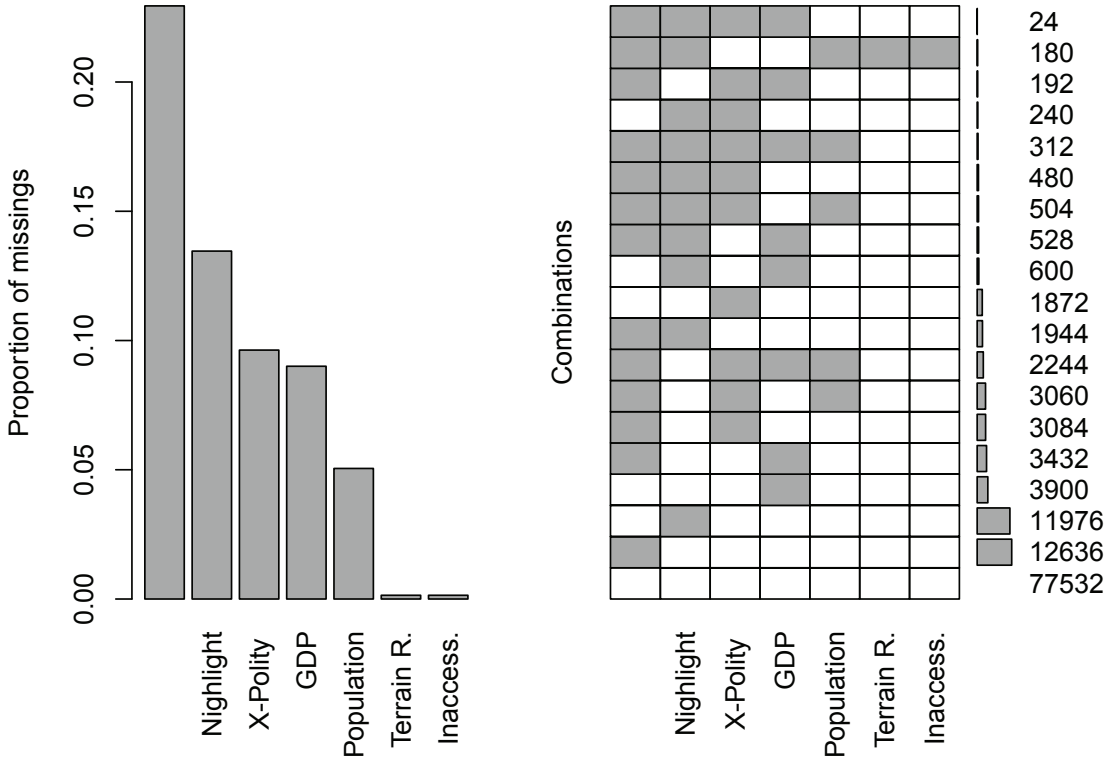

Figure 9.27: Proportion of missing data and total number of missing data combinations

light, population, xpolity (Vreeland 2008)) is available on a yearly basis. Moreover, choosing a longer time-frame mitigates the problem of non-independence among units of observation.

The dependent variable is derived from the DISCON data. It is dichotomous and indicates the occurrence of violence in at least one month in the respective region and the observed year. Due to the repeated measurement of subnational units nested in countries over 14 years, we have *hierarchical time-series cross-sectional data*.

Multilevel analysis is a method well suited for this task. The use of multilevel analysis has several advantages over other regression approaches such as, e.g., a completely pooled design or the specification of fixed effects. First, the non-independence of the different cases is less problematic than in pooled regressions. Pooled regression specifically underestimates standard errors of indicators of higher-level variables (such as polity or gdp in our analysis).

Second, multilevel models allow the use of data referring to different levels and give results referring to these levels. A multilevel analysis returns estimates for the average intercept across groups (e.g. the average conflict probability in all countries), varying intercepts for each level within the specified groups (average conflict probability in Thailand), coefficients for group-level predictors (the influence of the political system on the probability of conflict), and individual-level predictors (the influence of a regions's terrain on conflict probability).

This study employs a random intercept model in which the intercepts of the slopes vary between subnational units, countries, and years. In addition to an overall intercept, which is also provided by non-hierarchical regression models, random intercept models estimate group-specific intercepts from group-level variables. From a theoretical perspective, the influence of the independent variables on the probability of conflict is assumed to be equal across groups. Thus slopes are assumed to be constant among groups.

The present analysis faces four challenges: missing data, adequate centering of input variables, perfect separation, and multicollinearity. Each of the challenges and their respective solutions are presented in turn.

Patterns of data missingness vary between variables. Figure 9.27 shows the proportion of missing cases by variable (lefthand figure) and the distribution of missing cases by combinations of variables (righthand figure) for the most disaggregated dataset of region-month. The largest

share of missing values pertains to the youth bulge variable. Here, 13.5 percent of the data points are missing. No data is available for Australia, Micronesia, Fiji, Japan, Maledives, Nauru, New Zealand, Palau, and Taiwan. The variable with the second-largest share of missing data is nightlight with 13.5 percent missings. The inter-satellite calibration used to construct time-series data is not available after 2012 (cf. Elvidge et al. 2014). Polity is the variable with the third largest share of missing values (9.6 percent missing) This is because the Polity Project does not provide regime data for the small states in the sample: Brunei, Micronesia, Maledives, Nauru, Palau, Timor-Leste, and Vanuatu. Since most of the cases for missing regime data are already excluded due to a lack of data on other variables, the effect of missing regime data does not loom large. This is different for data on the gross domestic product, which is missing for North Korea, Myanmar, Maledives, Nauru, and Taiwan. The effect of non-overlapping patterns of missing data is largest for the indicators youth bulge and nightlight, which only overlap in 7.9 percent of the cases. Since we employ list-wise deletion, this reduces the sample size quite considerably. With regard to units above the first level of *repeated measurements* of subnational units, the sample is reduced to 25 countries, 12 years, and 499 unique subnational units.

The number of subnational units is certainly unproblematic. The number of countries is likewise high enough, given that it is above a threshold of 15-20 as proposed by Stegmueller (2013, p. 758) for random-intercept models with binary dependent variables. [25] A number of 12 years is more problematic. To deal with the low number of years, the following analysis includes a model that does not estimate random intercepts for years but instead includes a trend variable that captures the increasing probability of conflict over the years. Moreover, the problem of small sample sizes with regard to units above the first level only pertains to the estimation of group-level coefficients. Coefficients on the first level are reliable even where the number of groups is small (Maas and Hox 2004). Since the main interest of the following analysis is to investigate the effects of first-level predictors, missing data should not pose a severe problem.

A second challenge is to adequately center the input variables. Centering facilitates interpretation of intercepts since 0 is not always an interpretable measure of input variables (e.g. for GDP). The input variables of the following model are rescaled to have a mean of 0 and a standard deviation of 0.5. Binary variables are rescaled to have a mean of 0 and a difference of 1 between their categories (Gelman 2008). In essence, variables are centered at the grand mean. An alternative to grand-mean centering (CGM) would be centering within cluster (CWC). CWC was implemented in developing the regional inequality measure above. The national inequality indicator likewise introduced above represents a mixed type. Here, centering was neither implemented with reference to the cluster mean, i.e. the regional mean, nor with reference to the grand mean, i.e. the mean over all regions in the sample. Rather, the national mean was chosen as reference category. Both ways of centering are adequate in their respective contexts since the way of centering is primarily determined by theoretical arguments.ă In CGM, input variables can be interpreted as composites of within and between cluster variation (Enders and Tofighi 2007). In a hierarchical model with countries as grouping factor, for instance, level 1 input variables would capture variance between subnational units as well as between countries when CGM is applied. CWC would eliminate between-country differences and exclusively represent differences between subnational units within the respective country. As we are interested in absolute and not relative effects of the input variables, CGM makes more sense in the present context.[26] In the case of inequality, this is clearly different. Here, the focus is on low *relative* positions in the social space. Consequently, CGM is more appropriate.

A third challenge arising from the data structure is perfect separation. Perfect separation occurs when the response can be perfectly predicted by a single or a combination of input variables. In the present dataset, perfect separation arises due to the fact that some of the groups are entirely non-violent throughout the period of observation. In this case, maximum likelihood estimation in logistic regression leads to infinite estimates causing erroneous results (Day and Kerridge 1967). The majority of solutions proposed in the literature are not applicable in the present analysis. Omitting the variable that causes the results is not satisfactory from a theoretical perspective since this would mean excluding a variable with potentially great explanatory power. Introducing fake data (Clogg et al. 1991) leads to unwanted results (Heinze and Schemper 2002b), exact logistic regression is computationally intensive, and those penalized likelihood procedures that were proposed by Firth (1993) are not (yet) implemented for hierarchical models.

[25] To be precise, Stegmueller (2013) uses a probit link in his simulation.

[26] This runs counter to the suggestions of Enders and Tofighi (2007).

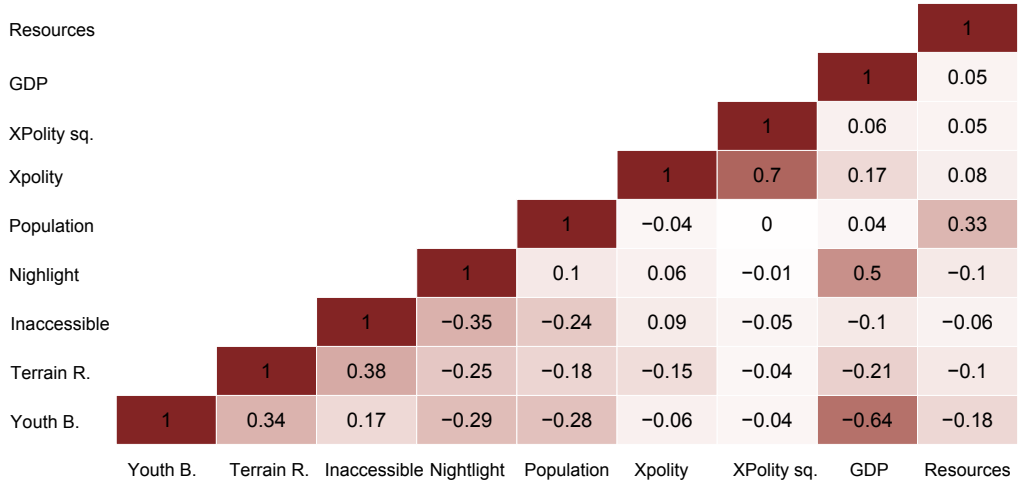

Figure 9.28: Test for multicollinerity

A method that is available for hierarchical models and does not have any of these drawbacks is to put weakly informative prior distributions on the coefficients (Gelman et al. 2008). The basic idea is to introduce minimal prior knowledge into the model by adding priors on the coefficients. The prior distributions express the belief about the range of the respective variable before it is evaluated. This procedure thus strikes a middle way between including highly specific subjective prior beliefs (informative priors) and being agnostic about the parameter distribution (flat priors). The weakly informative prior assigns low probabilities to those extreme values that arise in cases of perfect separation but leaves the other estimates in place. It is thus perfectly suited for the present analysis. To implement this estimation procedure, we broadly follow the specification as laid out by Gelman et al. (ibid.) and as recently implemented in the 'blmer' package for R (Dorie 2015). After grand-mean centering the variables, a prior distribution with a scale of 10 and a mean of 0 is introduced for the intercept and a prior distribution with a scale of 2.5 and a mean of 0 for the first level coefficients (the 'fixed effects'). CGM assures that the prior's standard deviation is large relative to the scale of the input variables.

Table 9.10 summarizes the data used in the regression analyses before rescaling. Figure 9.28 shows the patterns of multicollinearity between input variables. Due to high correlation coefficients, and a variance inflation factor of 2.34 for the full model, we estimate models that exclude x-polity and its squared term, on the one hand, and youth bulge and gdp, in a single regression equation as robustness checks.

Having inspected patterns of missing data, decided on the centering procedure, and detailed the estimation procedure, we can now turn to the estimation. All in all, we estimate one main model and nine sub models to assess the robustness of the results (see table 9.11 on 190).

The main model 1 includes all independent variables and varying intercepts for subnational units, years, and countries. Model 2 employs a different specification of priors, priors with normal distribution and a standard deviation of 3, to assess whether a different specification of priors alters the results. Model 3 excludes the variable youth bulge and excludes priors to assess the robustness of the results in case of standard maximum likelihood estimation. Model 4 is a logistic regression with countries as fixed effects. Adding countries as fixed effects and not as grouping factor in a multilevel model, is a specifically hard test to the results as it eliminates all cross-country variation from the estimation. Thus, the estimates exclusively represent within-country variation. Models 5 and 6 check for different specifications of the varying intercept (the 'random effects'). Model 5 excludes subnational regions as a grouping variable. Model 6 excludes years as a grouping variable. This addresses the issue of a low number of countries. To account for a positive trend in the number of subnational units affected by violent conflict over time (see figure 9.29), the number of years since 2000 is included as a trend variable that increases by 1 every year.

Models 7-10 each exclude one of the two pairs of correlated variables (see figure 9.28 on page 188) to assess whether this affects the results.

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
Crisis Dummy	5,975	0.153	0.360	0	0	0	1
Limited War Dummy	5,975	0.011	0.103	0	0	0	1
War Dummy	5,975	0.005	0.070	0	0	0	1
Conflict Affectedness	5,975	1.360	6.724	0	0	0	152
Population	5,975	0.262	0.160	0.001	0.153	0.329	0.757
Youth Bulge	5,975	0.263	0.059	0.140	0.211	0.311	0.384
Resource Dummy	5,975	0.628	0.483	0	0	1	1
Diamonds	5,975	0.078	0.507	0	0	0	6
Drug	5,975	0.498	0.877	0	0	1	6
Gold	5,975	0.777	2.120	0	0	0	18
Oil	5,975	0.895	1.912	0	0	1	15
Tantalum	5,975	0.004	0.063	0	0	0	1
Terrain Ruggedness Index	5,975	0.162	0.173	0.00002	0.037	0.215	0.858
Inaccessibility	5,975	0.510	0.278	0.003	0.260	0.751	0.982
Nighlight	5,975	0.108	0.125	0.026	0.050	0.099	0.906
Violence(lag)	5,975	0.146	0.353	0	0	0	1
GDP	5,975	0.094	0.061	0.023	0.052	0.129	0.362
X-Polity	5,975	0.398	0.224	0.000	0.150	0.600	0.650
Trend	5,975	0.239	0.164	0.000	0.090	0.360	0.490
HASC	5,975	0.651	0.345	0.100	0.400	1.000	1.200
Year	5,975	2,006.512	3.447	2,001	2,004	2,010	2,012

Table 9.10: Summary Statistics

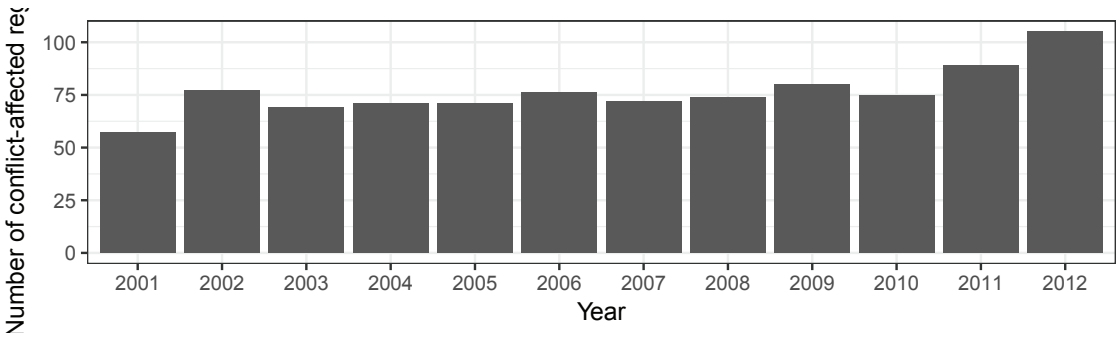

Figure 9.29: Number of subnational region affected by violent conflict for each year on the period of observation

	Dependent variable:									
	Main model		Rob. RE		Rob. FE					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Youth Bulge	3.438***	3.496***			2.062***	3.299***	3.435***	3.437***	3.081***	
	(0.601)	(0.609)			(0.281)	(0.604)	(0.601)	(0.600)	(0.559)	
Terrain R.	0.153	0.150	0.358	−0.030	−0.019	0.140	0.152	0.153	0.144	0.325
	(0.396)	(0.398)	(0.424)	(0.160)	(0.160)	(0.392)	(0.396)	(0.396)	(0.385)	(0.419)
Inaccessibility	1.026*	1.048*	1.120*	0.843***	0.758***	0.998*	1.038*	1.025*	1.050*	1.063*
	(0.428)	(0.431)	(0.455)	(0.190)	(0.189)	(0.423)	(0.428)	(0.428)	(0.416)	(0.445)
Nightlight	0.784**	0.790**	0.777**	0.515***	0.503***	0.760**	0.793**	0.784**	0.847**	0.753**
	(0.279)	(0.280)	(0.291)	(0.120)	(0.123)	(0.279)	(0.279)	(0.279)	(0.274)	(0.289)
Resources	0.107	0.099	0.332	0.139	0.070	0.117	0.104	0.107	0.137	0.332
	(0.372)	(0.373)	(0.391)	(0.162)	(0.162)	(0.370)	(0.372)	(0.372)	(0.365)	(0.387)
Violence (lag)	0.914***	0.912***	0.938***	2.447***	2.379***	0.914***	0.915***	0.914***	0.941***	0.932***
	(0.152)	(0.152)	(0.154)	(0.108)	(0.111)	(0.152)	(0.152)	(0.152)	(0.151)	(0.153)
Population	3.454***	3.501***	3.058***	1.405***	1.787***	3.409***	3.460***	3.454***	3.422***	2.942***
	(0.481)	(0.487)	(0.494)	(0.197)	(0.202)	(0.476)	(0.482)	(0.481)	(0.469)	(0.480)
GDP, national	1.364	1.411	0.699		0.471	0.832	1.353	1.360		0.639
	(0.753)	(0.763)	(1.122)		(0.531)	(0.779)	(0.755)	(0.749)		(1.016)
X-Polity	0.166	0.167	0.151		0.108	0.114		0.170	0.147	0.143
	(0.255)	(0.256)	(0.258)		(0.242)	(0.258)		(0.245)	(0.256)	(0.257)
Anocracy	0.018	0.021	−0.006		−0.086	0.032	0.070		−0.028	−0.016
	(0.288)	(0.289)	(0.291)		(0.244)	(0.288)	(0.276)		(0.284)	(0.288)
Year Trend						0.405				
						(0.309)				
Constant	−3.940***	−3.848***	−3.603***	−0.952**	−2.891***	−4.169***	−3.943***	−3.940***	−3.868***	−3.613***
	(0.537)	(0.524)	(0.563)	(0.328)	(0.337)	(0.537)	(0.539)	(0.537)	(0.477)	(0.575)
Observations	5,975	5,975	5,975	5,975	5,975	5,975	5,975	5,975	5,975	5,975
Log Likelihood	−1,263.899	−1,263.851	−1,282.807	−1,357.724	−1,377.127	−1,263.015	−1,264.123	−1,263.905	−1,266.074	−1,283.034
Akaike Inf. Crit.	2,555.798	2,555.702	2,591.615	2,777.447	2,780.254	2,556.030	2,554.247	2,553.809	2,558.148	2,592.069
Bayesian Inf. Crit.	2,649.533	2,649.436	2,678.654		2,867.294	2,656.460	2,641.286	2,640.849	2,645.188	2,679.108

Note: *p<0.05; **p<0.01; ***p<0.001

Table 9.11: Results of intensity analysis

We can now start to evaluate our findings (see section 8.3). In agreement with H2a (see p. 143), the anthropological context has a strong effect on the incidence of violent conflict in a region. Both predictors—population size and youth bulge—are significantly and positively related to the probability of conflict incidence. This lends further support to the youth bulge hypothesis (cf. Croissant, Wagschal, et al. 2009) by using new data and data on the level of subnational units. The fact that a larger population leads to a higher probability of conflict is not surprising (cf. ch. 2). We may regard it as a control variable in our model. The significant coefficient between youth bulge and conflict might also be a case of reversed causality. Violent crises might severely affect the demographic structure by inducing refugee flows, deaths, and negative impact on the economic systems. However, the demographic data is from the beginning of our observation period. This supports the robustness of our results. On the other hand, many conflicts began well before the year 2000. Reversed causality can thus not be fully excluded. As we aim to expand DISCON in the future, this might allow for further investigation.

We can now turn to H2b (see p. 143). The two indicators of the geographic context show a mixed picture. Whereas the ruggedness of the terrain seems not to be related to conflict, subnational units with a higher share of inaccessible terrain see violent conflict more often. These results further emphasize the importance of our newly developed measure of land class.

Our hypothesis H2c and H2d (see p. 143) related to the economic field. Two indicators allow the assessment of the link between economic development and conflict probability (H2c): nightlight and the gross domestic product of the country. Against our expectation, higher developed regions seem to have a higher probability of conflict incidence. We expected conflict to be less likely in developed regions. A possible explanation for the result is the influence of extreme values. However, when substituting the indicator of nightlight with a logged version, the coefficient only slightly changes (0.678 in model 1) and remains significant. A second possible explanation is that the result is exclusively driven by the correlation between an increasing number of conflicts and an increasing development over time. However, there are two arguments against this interpretation. First, the hierarchical model accounts for year as a grouping factor. Second, model 6 explicitly captures the linear trend by including a trend variable. In both cases, the effect of nightlight remains robust and substantially unchanged. A theoretical interpretation of the result is that absolute deprivation hinders conflict, as affected populations struggle to survive rather than revolt. Thus, we would expect the probability of conflict to be lower for poor and rich regions. When including a squared term of the centered input variable nightlight, however, both predictors lose significance. This might be due to their high correlation, but at least does not support the absolute deprivation hypothesis.

Surprisingly, the indicator of economic development at the national level, GDP per capita, is not significant in any of the models. This might be due to the fact that subnational variation is more important than between-country variation with regard to the explanation of subnational patterns of conflict.

H2d (see p. 143) stipulated that conflict is more likely in subnational where natural resources are present. However, none of the models support this hypothesis. This might be due to the fact that the predictor 'resources' is highly aggregated and does not discriminate which type of resource is present in a given subnational region. Disaggregating the predictor by resource type, however, does not change the results. Neither the presence of precious minerals such as diamonds, the cultivation of drugs, the presence of metals such as gold or tantalum, nor the presence of oil seems to affect the prevalence of conflict. This is even more surprising as the indicators of the different resource types are not highly correlated.

The impact of the configuration of the political field was assessed via the type of the political regime. As described on page 143, we refrained from formulating a hypothesis but expected to see no relationship. By including the regime type and its squared term, we tested for the degree of democracy (X-Polity) as well as for anocratic regimes. Both terms are insignificant in the main model 1, as well as when they are included one by one in models 7 and 8. When interpreting this result, we have to keep in mind that only 25 countries are included in the sample although the included countries cover the whole range of political systems.[27] With this caveat, the results cast further doubt on the results that anocratic regimes are specifically conflict prone (Fearon and Laitin 2003; Hegre, Ellingsen, et al. 2001) and support the skeptical position by Vreeland

[27] The central Asian countries of Uzbekistan and Turkmenistan are located at the lower end of the X-Polity scale whereas India and Mongolia are most democratic. Also see table 9.10

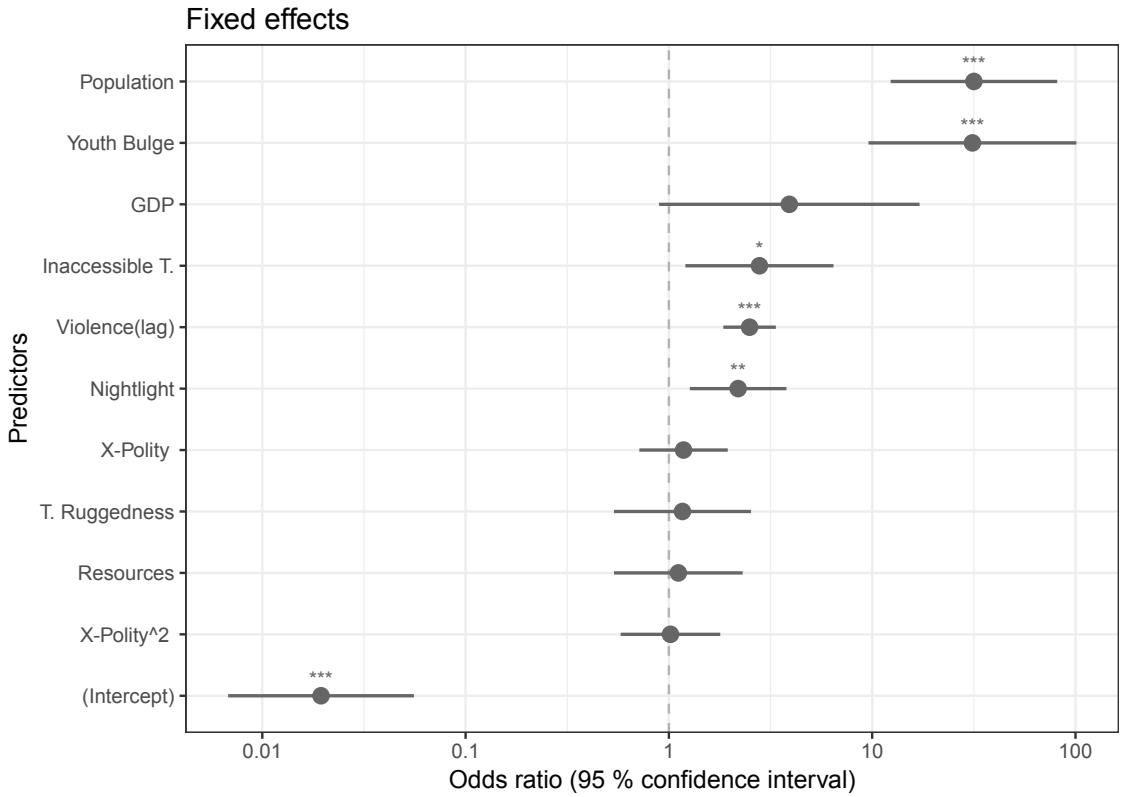

Figure 9.30: Odds ratio and level of significance of first-level predictors

(2008). Future analyses should pursue different approaches to investigate the relation between the political field and conflict.

Having assessed the direction of effects, we can now assess the effect size. Since the input variables were centered at the global mean, effect sizes can be compared based on the coefficients. Figure 9.30 on 192 shows the estimated odds ratios (i.e. the exponentiated coefficients of model 1 as presented in table 9.11 on p. 190). of the individual level coefficients together with 95 percent confidence intervals. The predictors related to the demographic context, i.e. population size and youth bulge, are likewise those variables that have the strongest effects on conflict occurrence. The share of inaccessible terrain and the economic development at the subnational level as measured by nightlight have substantially lower effect sizes.

9.5.3 NSCA and Dynamics of Violence

In a final analytical step, this subsection brings together data on non-state conflict actors and political conflicts. To the best of our knowledge, this is the first empirical analysis investigating the link between characteristics of non-state conflict actors and dynamics of violence from a comparative perspective with more than just a few countries and dynamic data on NSCA.

Based on the arguments in section 8.3, this section empirically investigates how actor characteristics and the strategic environment of actors influences the emergence of patterns of violence.

H3 (see p. 145) proposed that the more balanced the distribution of power between conflict actors, the more likely higher conflict intensities are. We can test the hypothesis on grounds of data from DISCA. A drawback is that we have no instrument to measure the strength of states. Still, this does not post an insurmountable problem for three reasons. *Theoretically*, it is widely shared in conflict research (Fearon and Laitin 2003; Kalyvas 2006) that states are stronger than non-state actors. *Empirically*, a look at the data confirms this view. There are no obvious cases in DISCON in which we would assume the NSCA to be significantly stronger than the respective states. *Methodologically*, introducing a measure of strength for state actors leads to problems of comparability. It is not straightforward to put indicators for non-state actor strength in relation to indicators for state strength.

Therefore, we can assume that the strength of NSCA is a valid instrument for the balance of power between state and non-state actors in intrastate conflict. The stronger non-state actors are, the smaller the difference is to the strength of the state. We use four instruments to measure the strength of NSCA: their size, available weaponry, territorial control, and the presence of resources in areas that are at least partially controlled by the non-state actors.

Figure 9.31 on page 194 shows the distribution of intensity levels for each of the indicators used to measure the strength of NSCA. Each point represents a unique combination of non-state actor, conflict, year, and month. The distribution allows to discern several patterns in the data. Concentrating on the top figure in figure 9.31, we can see that size is positively correlated with conflict intensity. Almost all conflict months that where fought on a highly violent level included actors with at least 100 (categories 2 - 4) group members. Portrayed from another angle, actors with a size of 101 - 1,000 (category 2) members were involved in highly violent conflict with a chance of 1.6 %. Actors with a size of 1,000 - 10,000 members (category 3) with a chance of 6.6 %. Although the pattern does not hold for actors with a size of > 10,000 members, a positive correlation between actor size and conflict intensity is clearly visible.

The availability of weapons (second figure from top) seems to be negatively correlated with conflict intensity. Whereas only 2.9 % of those actors who had only light weapons at their disposal where involved in a highly violent conflict, 15.7 % of those with heavy weapons were. The availability of heavy weapons, is however, a rare phenomenon. By coloring the points by NSCA, we can see that there were only two actors that had heavy weapons at their disposal and where involved in an intrastate conflict between 2000 and 2014: the United Wa State Army and the Sri Lankan LTTE. Whereas the former agreed to a ceasefire with the government in 1989, the latter was involved in a highly-violent war until it was defeated by the Sri Lankan army in 2009.

With regard to the distribution of intensity levels by the degree of territorial control, one result stands out: 79% of all highly violent conflict intensities happened in cases where NSCA had at least partial control over a territory. A similar pattern can be identified with regard to the presence of resources in the areas under control by NSCA.

The fact that the results are similar stems from a high correlation between both variables, which is unsurprising given the fact that the latter was only coded '1' in cases where resources were present *and* the respective territory was at least partly under NSCA control (see figure 9.32 on 195).

To confirm our results, we run three regression analyses (see table 9.14): a generalized linear model with an ordinal dependent variable, which takes the three values 'non-violent rmi', 'low-violent rmi', and 'highly-violent rmi' (model 1) and two logistic regressions with a dummy for violent (model 2) and highly violent (model 3) conflict as dependent variable. All three models include a lagged dependent variable to control for autocorrelation.[28] Apart from the explanatory variables—excluding territorial control due to its high correlation with resource control—, we include three control variables: 'Endogenous' is coded as '1' if NSCA extract monetary means or natural resources, possibly mediating the effect of resource presence; 'Exogenous' is coded as '1' if NSCA are supported by third parties, possibly influencing conflict dynamics (Kirchner 2016); and 'structure' is included since we would expect the structure of NCSA to be linked to conflict intensity (cf. ch. 8.3).[29]

The analysis largely confirms our preliminary results derived from an inspection of figure 9.31. Size is positively and significantly related to conflict intensity and violent conflict (model 1 and 2), but not to highly violent conflict. Weaponry shows a negative coefficient due to the aforementioned pattern in the data. The effect of resources control seems to be nonlinear: We find no relation in the ordinal model (model 1); a negative but very small effect on the incidence of violence; and a quite large effect on the occurrence of highly violent conflict.[30]

These results go well with our expectations formulated in section 8.3. Actors that are small in size seem to employ tactics of avoidance, behavior that explains the almost complete absence of highly violent conflict for actors with less than 100 members. In contrast, open confrontation with the government is specifically likely for actors with 1,000 to 10,000 members. Guerrilla tactics are particularly prevalent for actors between 100 and 10,000 members.

[28]The coefficients for these variables are excluded from the tables for better readibility.

[29]When including territorial control instead of resource control in the regression, the former turns out insignificant in all three models. The other results remain largely unchanged.

[30]Since we did not formulate specific hypotheses for the effect of the control variables, we leave the results for future investigations.

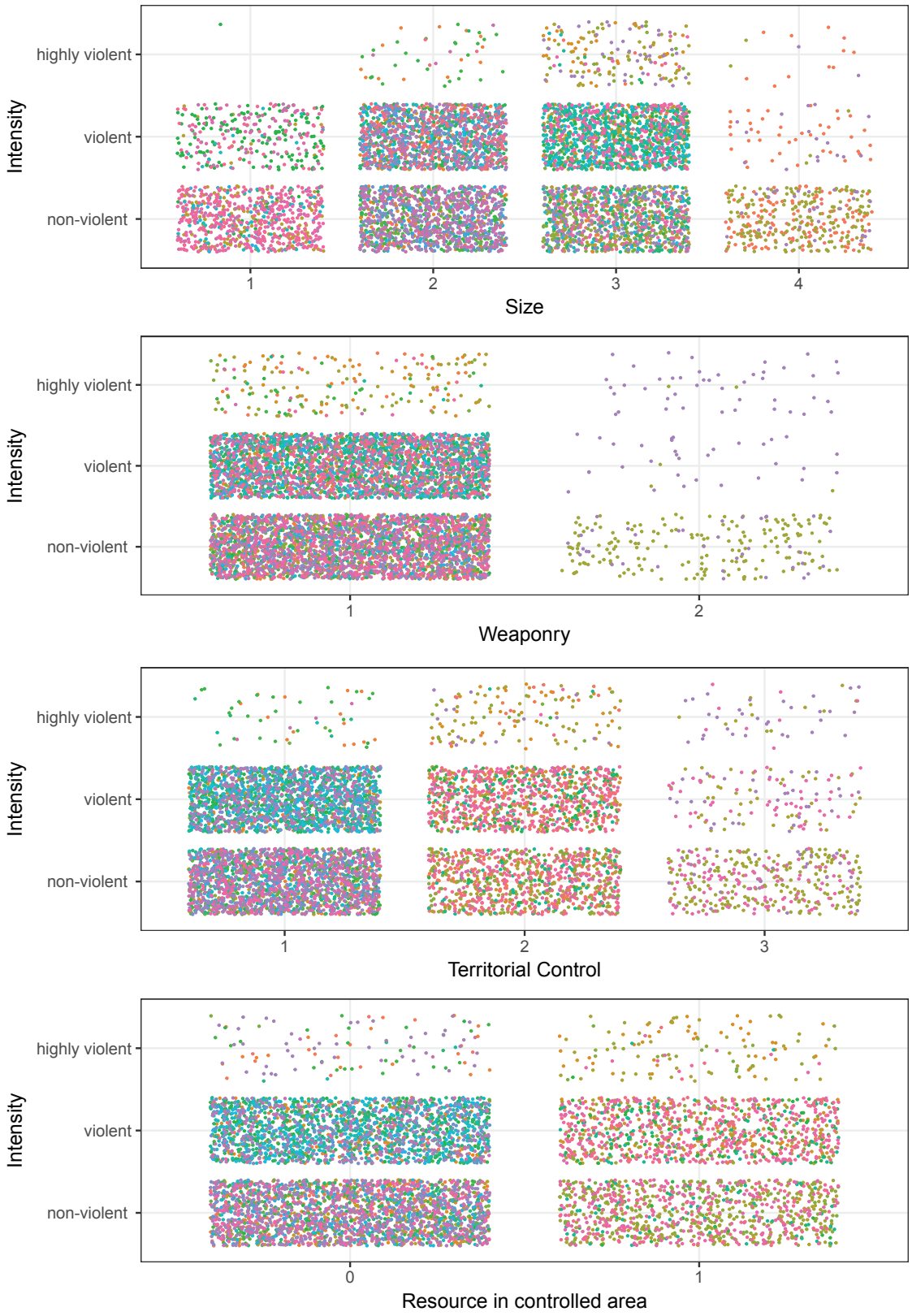

Figure 9.31: Distribution of intensity level by level of strength indicators

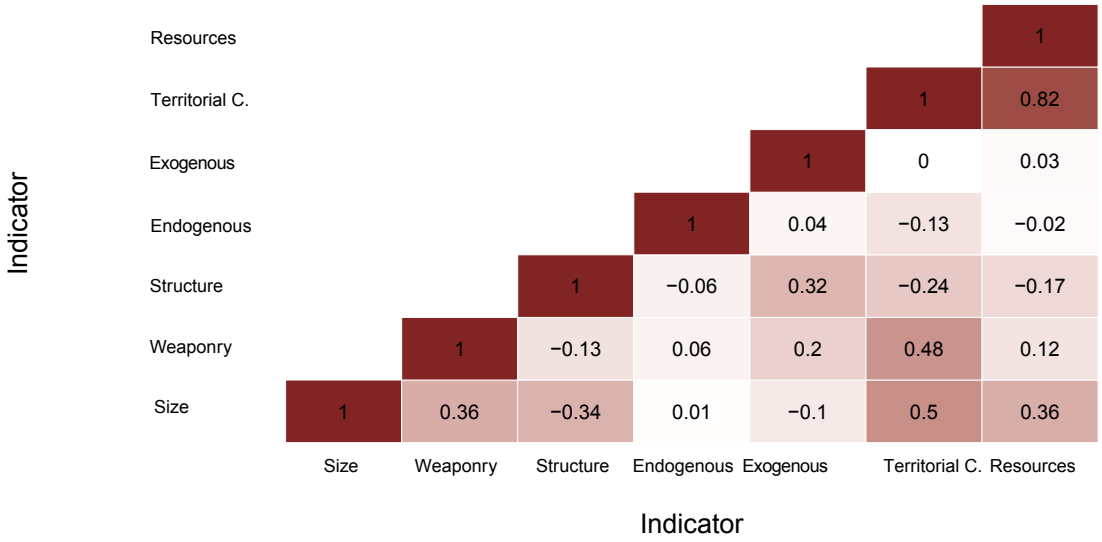

Figure 9.32: Test for multicollinerity

	(1)	(2)	(3)
Size	0.613***	0.740***	−0.003
	(0.051)	(0.055)	(0.235)
Weaponry	−4.077***	−3.987***	−2.271*
	(0.545)	(0.481)	(0.994)
Structure	0.666***	0.803***	0.678
	(0.138)	(0.156)	(0.562)
Endogenous	0.364**	0.338*	0.718
	(0.141)	(0.140)	(0.376)
Exogenous	0.687***	0.863***	0.349
	(0.090)	(0.100)	(0.572)
Resources	−0.070	−0.166*	1.026***
	(0.073)	(0.080)	(0.280)
Constant		−3.410***	−18.868
		(0.616)	(567.170)
Observations	6,972	6,972	6,972
Log Likelihood		−3,077.002	−592.467
Akaike Inf. Crit.		6,188.004	1,218.935

*p<0.05; **p<0.01; ***p<0.001

Table 9.12: Attributes of NSCA and disaggregated intensity indicators.

The presence of resources in areas under at least partial NSCA control greatly increases the incidence of highly violent conflicts. The fact that resources are stationary makes it much more difficult for NSCA to unilaterally impose certain tactics. Resource-rich areas are a likely target for government attacks. Where NSCA aim to defend these areas, they simply must stand up to confrontation. Resource control thus comes with a burden in terms of tactical flexibility. A disaggregation of the resource variable by resource type as shown in table 9.13 indicates that the effect seems to be driven by the presence of oil.[31] We leave these results for future investigations.

	(1)	(2)	(3)
Gold	−0.023	−0.039	0.157
	(0.064)	(0.065)	(0.158)
Diamonds	−0.326**	−0.334**	−0.022
	(0.108)	(0.105)	(0.167)
Drugs	0.035	0.048	0.106
	(0.028)	(0.031)	(0.075)
Oil	0.078*	0.027	0.449***
	(0.038)	(0.044)	(0.119)
Constant		−3.091***	−19.466
		(0.635)	(567.636)
Observations	6,972	6,972	6,972
Log Likelihood		−3,072.599	−586.785
Akaike Inf. Crit.		6,185.198	1,213.569

*p<0.05; **p<0.01; ***p<0.001

Table 9.13: Resources and conflict intensity

In summary, the empirical results generally confirm H3 and likewise identify routes for further improvement. Specifically the validity of the 'David assumption' (see sec. 8.3) seems to be dependent on the strategic environment of NSCA. We leave it open for future investigation to more closely investigate in how far the relation of NSCA to their environment influences their tactical flexibility.

We now turn to our last analytical step. Making use of the highly disaggregated data of DISCON and DISCA, we investigate the empirical link between the territorial control by an NSCA and profiles of violence.

Table 9.14 presents the results of five generalized linear models with an ordinal dependent variable corresponding to the five intensity indicators of the Heidelberg approach (cf. sec. 6).[32]

We find only partial support for hypothesis H4a (see page 146). Territorial control seems to make the employment of larger units of personnel less likely. Although the effect is rather small, this result runs counter to our expectations and needs further investigation in the future. The effect of territorial control on the employment of heavy weaponry, however, confirms our expectation. For a one-unit increase in territorial control (from 'no control' to 'partial control' of a territory or from 'partial control' to 'full control') the odds of the employment of heavy weapons are 1.49 times greater, given all other variables are held constant.[33] The same holds true for refugees, which confirms H4b (see page 146) Here, the effect is even greater with an estimated odds ratio

[31] Apart from the disaggregation of the resource variable by type, the models are identical to the models of table 9.14. For better readability, only results for resource types are displayed.

[32] As above, a lagged dependent variable is included in each model but omitted in the output.

[33] Odds ratios can be obtained by exponentiating the reported coefficients.

of 2.28. This means that the impact of conflicts on the civilian population is highest, where NSCA control territory.[34]

The analysis moreover allows to further specify the mechanisms discussed in the last section. The increase in intensity due to stronger NSCA seems to be driven by higher fatality scores (model 2) and higher numbers of employed personnel (model 3). The latter result is less surprising since the employment of large forces requires the group to have enough men or women and is likewise found with regard to weapons of their employment (model 5). Apart from this feasibility mechanism, however, the increase in fatality figures further supports our theoretical expectations.

	destruction	fatalities	personnel	refugees	weapons
	(1)	(2)	(3)	(4)	(5)
Size	0.016	0.571***	0.480***	0.336	0.054
	(0.116)	(0.101)	(0.079)	(0.234)	(0.119)
Weaponry	−0.086	0.904**	0.146	2.245***	2.614***
	(0.553)	(0.289)	(0.279)	(0.567)	(0.318)
Structure	0.203	0.113	−0.187	−0.207	−0.032
	(0.160)	(0.129)	(0.116)	(0.329)	(0.170)
Endogenous	0.445	−0.357	−0.479*	0.494	0.114
	(0.396)	(0.292)	(0.218)	(0.529)	(0.322)
Exogenous	−1.080***	0.270*	−0.215*	−1.702***	−1.234***
	(0.145)	(0.113)	(0.092)	(0.314)	(0.153)
Level of Control	−0.268	0.201	−0.234*	0.827**	0.400**
	(0.157)	(0.111)	(0.102)	(0.290)	(0.152)
Observations	3,446	3,446	3,446	3,446	3,446

*p<0.05; **p<0.01; ***p<0.001

Table 9.14: Attributes of NSCA and intensity indicators.

9.6 Summary

The results of the empirical analysis largely confirm the theoretical expectations formulated in chapter 8. As we will summarize our empirical findings in the subsequent conclusion, we can here briefly discuss limitations of the present analysis as well as point out possible future directions.

Several limitations apply. First, we were not able to test all proposed mechanisms. The empirical analysis mainly picked three concepts, i.e. a specific configuration of the social space, a specific configuration of the natural space, and the existence of non-state conflict actors, and evaluated how they are empirically related. The empirical analysis of the mechanisms could be improved by adding data such as value surveys measuring individual grievances directly. This would allow to empirically test some of those statements that now take the form of assumptions.

Second, the analysis is geographically limited to countries in Asia and Oceania. This restriction has been partly due to data availability and partly to pragmatic considerations. A further step would be to extend the analysis for all those countries for which data is available. The statistical procedure to derive the measure of inequality is now largely automated. Under the condition of

[34] Likewise, heavy weaponry increases the number of refugees. Due to reasons discussed above, however, we refrain from interpreting these results.

enough available computing power, it allows to apply the presented approach to all samples that are available through IPUMS.

Third, the analysis is limited with regard to the included variables. Due to the fact that we used the most disaggregated data available, the availability of data is necessarily limited. As more data becomes available, the number of explanatory variables can be extended.

All data on horizontal inequality, the natural space, conflict intensity, and non-state conflict actors is stored in a single PostGIS enabled PostgreSQL database that can be accessed online and can thus be used in future collaborative projects.

Chapter 10

Conclusion

Let us now summarize our findings. The main thesis of the present analysis posits that a close investigation of philosophy of science and social ontology contributes to conflict research by providing better concepts, theories, and empirical analyses.

In contrast, conflict research today almost exclusively focuses on empirical questions. The current discussion is thereby dominated by practical questions of how data should be collected and analyzed. The general way forward has been to incrementally add data on empirical phenomena. Whenever new data becomes available, new research questions are generated and quickly addressed, adding yet another little piece to the greater puzzle at hand. While the discipline has seen remarkable progress—specifically in the last years—a consensus of opinion among researchers is not yet in sight with regard to explaining the dynamics of intrastate conflict. We reached this conclusion based on a research synthesis, which likewise identified the four following characteristic shortcomings of current conflict research: a one-dimensional explanatory focus on conflict onset, narrow operationalizations of intensity via death figures, a unilateral focus on macro-level variables, and a neglect of social variables.

In order to contribute to the discussion, this thesis has added yet more data in the form of two datasets on political conflict and non-state conflict actors. But it has done so based on a fundamentally different approach: Taking a large step back, we have delved unusually deep into questions of philosophy of science and social ontology. Before we were able to gain explanatory leverage from this basic research, however, we had to address a shortcoming bearing far-reaching consequences, namely: the one-sided focus on a diachronic perspective, which privileges causal processes and activity at the expense of a synchronic perspective, which focuses on constitutive synchronic relations. Taking both perspectives into account allowed us to gain a complete picture of the social reality revolving around concepts of intentionality and agency.

With these fundamental categories of social reality at hand, we were able to proceed to our point of departure, which relied in two 'simple' questions: What are political conflicts, and what are non-state conflict actors? What might appear to many as an unnecessary detour potentially complicating a rather practical issue has borne fruit. In answering these questions on the grounds of an account, which is deeply entrenched in critical realism, the thesis fulfilled all four aims set out in the introduction. It put forward real definitions of political conflict and non-state actors (aim 1), a critical reflection of three explanatory approaches that dominate conflict research (aim 2), and explanatory models to explain the formation of non-state conflict actors (aim 3) as well as profiles of violence in intrastate conflict (aim 4). All of the conceptual and theoretical work was put to use in an empirical analysis, in order to illustrate the immediate added value to our understanding of conflict dynamics. The following summarizes our main findings and elaborates on their relevance with regard to current conflict research.

We argue that conflict should ultimately be defined as an incompatibility of intentions existing where at least two actors possess incompatible ideas of how they would like the world to be. This entails a departure from the view that conflicts are aggregates of conflictive actions, finding its expression in the latest—albeit not particularly new—trend of event-based research. In contrast, we argue that although agency creates and recreates conflict (in the diachronic perspective), a one-dimensional focus on processes leaves out important structural characteristics (the synchronic perspective). Nearly every aspect of this thesis was directly related to this concept of political

conflict. First and foremost, it guided the data collection efforts of the new DISCON dataset and allowed a deduction of conflict actors and conflict intensity as two central explananda.

Advances were also made with regard to our understanding of non-state conflict actors. Our main result is that non-state conflict actors exist over and above individuals and thereby must be legitimately regarded as real. This goes against a view, which is widely held both within and outside scientific research, namely, that our discourse regarding groups in conflicts is merely a pragmatic approach to the overwhelming empirical complexity of conflicts. According to this view, once enough data becomes available, we can strive toward the pinnacle of research, which focuses on individuals and not on the unsubstantiated position of 'groupism' (Brubaker 2004). Transferring philosophical arguments of emergence, supervenience, and multiple realizability as well as of collective intentionality to conflict research enabled us to reject a pragmatic 'as-if' perspective, as well to substantially justify the existence of collective subjects. The discourse surrounding a genuine meso-level is thus neither naïve (Popper 1959), nor pragmatic (Cederman, Gleditsch, and Buhaug 2013), but probably true.

As far as explanatory approaches are concerned, this means that it is adequate to include in explanations a genuine analytical meso-level. In response to the existing disagreement regarding an adequate definition of NSCA, we were able to draw from arguments on collective intentionality to carve out the core characteristics of NSCA. In essence, non-state conflict actors are specific kinds of groups that are able to act as single units, are involved in a political conflict, and are neither affiliated nor in cooperation with any given government. Non-state conflict actors can act as one if they establish procedures to form consistent and adequate beliefs and volitions as well procedures to determine individuals to act on behalf of the group.

In line with our critical realist stance, we were able to derive some fundamental insights regarding how non-state conflict actors operate. What binds the individuals of non-state conflict actors together is the mutually-shared and reciprocal belief that they themselves constitute that group. This allows to relatively clearly define the boundaries of non-state conflict actors, and can further contribute to our understanding of whether or not certain individuals belong to non-state conflict actors. These questions are of greatest importance, for instance, when it comes to court proceedings on the accusation of membership to a terrorist group, as in recent cases related to the so-called 'Islamic State'. Drawing on research on intentionality, we found that although individuals are always responsible for their behavior, they might at times act upon reasons that are neither their own, nor those of other individuals, but rather genuinely attributable to collective subjects. And since reasons and behavior are both necessary attributes of action, the liability of an action can be likewise attributed to a collective and the respective individual(s) who act on the collective volition. We were thus able to draw specific as well as politically and morally relevant conclusions from our approach.

The analytical value of the newly-developed concepts of political conflict and non-state actors reaches far beyond the present analysis. The critical realist perspective presented in this work enabled the placement of conflict research in Heidelberg on a new footing (Schwank, Trinn, and Wencker 2013; Trinn, Wencker, and Schwank 2016). That our 'step back' is more than a philosophical game is evidenced in the fact that the concept is currently successfully applied.[1] This illustrates that the threefold understanding of conflict—via actors, issues, and measures—allows researchers to address a wide range of issues encountered in practical research.

Concerning theory, the central claim puts forth that empiricism and instrumentalism should have no place in the social sciences. Specifically the DN-model (Hempel and Oppenheim 1948) turned out be an inadequate account of explanation. The ability of prediction is not the hallmark of a good theory. Rather, explanation means inquiring into the 'inner working' of entities in order to elucidate what makes them work the way they do. Methods that aim to identify regularities might provide us with evidence for the function of mechanisms. And we made use of methods such as these in the empirical analysis. A purely regularity-based approach, however, is misleading. Due to this, we founded our empirical analysis on an extensive discussion of concepts and theoretical mechanisms.

With this in mind, we identified a moderate collectivist explanatory approach to be most adequate with regard to the explanation of conflict dynamics. It complements the individualist explanatory approach—typical for the economic perspective in conflict research—by accounting for

[1] The Heidelberg Institute of International Conflict Research uses the approach in its annually published Conflict Barometer (Heidelberg Institute for International Conflict Research 2016). Moreover, it is included in the Index for Risk Management (IASC 2016) of the Inter-Agency Standing Committee (IASC) and the European Commission.

Nr.	Hypothesis	Result
1a	Horizontal inequalities make the formation of non-state conflict actors more likely.	Confirmed
1b	A strategic environment that facilitates interaction, mobilization, and organization makes the formation of Non-State Conflict Actors more likely.	Confirmed
2a	Youth bulges make the occurrence of violent intrastate conflict more likely.	Confirmed
2b	Rugged and inaccessible terrain make the occurrence of violent intrastate conflict more likely.	Partly confirmed
2c	Violent intrastate conflict is less likely in economically developed regions.	Rejected
2d	The presence of resources makes the occurrence of violent intrastate conflict more likely.	Rejected
3	The more balanced the distribution of power between conflict actors, the more likely higher conflict intensities are.	Largely confirmed
4a	Non-state conflict actors that are centrally organized and control territory are more able to act in larger units and to operate heavy weapons than those that are decentralized and lack territorial control.	Partly confirmed
4b	The higher the degree of control over a certain territory by a non-state conflict actor, the higher the number of refugees or internally displaced persons.	Confirmed

Table 10.1: Summary of findings.

long-term formative effects of structures on individuals. In contrast to the collectivist perspective, it includes a theory of action.

Based on these considerations, we developed a moderate collectivist theory aiming to explain both the formation of non-state actors and profiles of violence in intrastate political conflict. To grasp the dual role of structure, typical for moderate collectivist explanatory approaches, we drew on Bourdieu's notion of habitus. We found that an explanation has to account for the fact that structures always exist as immediate strategic environments and as incorporated structures. Based on self-categorization theory and the grievance perspective we formulated a grievance and an opportunity mechanism from which we derived our main hypotheses on actor formation. We hypothesized that horizontal inequalities and a strategic environment, which facilitates interaction, mobilization, and organization, make the formation of non-state conflict actors more likely. Arguing that downward causation plays only a minor role when it comes to tactical decisions, our explanation of profiles of violence focused on the balance of power and characteristics of rebel groups.

To test these arguments, we have gone great lengths with regard to data collection. Most importantly in this endeavor, the analysis introduced two new datasets. First, the DISCON dataset applies the Heidelberg approach and comprises disaggregated data on political conflicts in Asia and Oceania, as well as their intensities from 2000 to 2014. Its counterpart with regard to non-state conflict actors, DISCA, holds time-variant information on organizational features, the radius of action, volitions, and cooperation between actors. Moreover, the analysis introduced a new measure of horizontal inequality that includes the most recent and disaggregated, individual-level data in order to assess horizontal inequality more precisely than ever before. Where applicable, we further included spatially- and temporally-disaggregated data on geographical, demographic, economic, and political characteristics of the region of Asia and Oceania.

Together with the highly disaggregated nature of the data, the deductive approach to derive indicators from constitutive attributes allowed us to make the theoretical and the empirical foci overlap. The chasm between these two foci has constituted a characterizing and, from a critical realist perspective, highly problematic feature of quantitative conflict research.

The empirical results of our analysis, summarized in table 10.1, largely confirm our hypotheses and support, as well as significantly extended, existing work on the effect of inequality on conflict dynamics (cf. Østby 2013).

In accordance with H1a, the formation of non-state actors turned out to be more likely where groups are deprived along ethnic lines. The results are robust with regard to the regional mean and the national mean, as well as for inequality in the economic and the social space. Agreeing with H1b, the strategic environment is significantly related to the probability of group formation.

Specifically the existence of youth bulges seems to have a high explanatory value with regard to non-state conflict actor formation.

We then turned to profiles of violence in intrastate political conflict. A latent class analysis of the new DISCON data revealed that four distinct profiles of violence characterize intrastate political conflict in Asia and Oceania between 2000 and 2014. This hints toward underlying patterns with regard to conflict dynamics and warrants further investigation.

Aiming to explain patterns of violence, we first looked at structural characteristics of subnational units and states. As expected, we found that youth bulges (H2a) and inaccessible terrain, but not rugged terrain (H2b), seem to be positively related to conflict occurrence. Youth bulge together with the control variable of population size has the most substantial effect on the probability of conflict occurrence. Our newly constructed indicator of inaccessibility via land cover seems to uncover important features of subnational units that have not been previously identified. Counter to our expectation, conflict occurrence is more likely in economically developed regions (H2c), whereas the level of development of the state and the presence of resources in a region (H2d) do not seem to influence conflict probability. Moreover, we found no indication that anocratic regimes are more likely to be affected by political conflict, thereby supporting the skeptical position by Vreeland (2008).

In the second step of our analysis of conflict dynamics, we again turned to a further analysis along the lines of the proposed macro-micro-macro model by specifically focusing on the relation of non-state conflict actors both to the state and to their environment. The results show that weak actors are indeed able to evade highly-violent conflict and are also comparatively involved in violent conflict less often (H3). Confrontational tactics are specifically likely among non-state conflict actors that have more than 1,000 members. Moreover, combining data on different kinds of natural resources and territorial control by non-state conflict actors allowed us to find the specific mechanism by which resource presence affects violence in intrastate political conflict: Although resource presence *per se* does not seem to affect conflict propensity, territorial control of resource-rich areas greatly increases the probability of highly-violent conflict. The stationary character of resources—specifically the presence of oil—seems to foster a confrontational logic. Control over resources comes with a burden with regard to tactical flexibility.

In the third and final step, we further disaggregated properties of non-state conflict actors and intensified our investigation into which organizational features of NSCA lead to the specific profiles of violence in intrastate political conflict. Our expectations were partly confirmed. Non-state conflict actors controlling territory seem to be more able to operate heavy weapons although, counter to our expectations, they seemed to fight in smaller units. The link between territorial control and highly violent conflict identified above (H3) seems to be driven by the fact that we see the employment of heavy weapons in these cases. We find only partial support for H4a. At least, territorial control seems to make the employment of heavy weapons more likely. Of greatest social relevance is our last finding: The impact of conflict on the civilian population is highest where NSCA control territory (H4b).

In summary, our critical realist view on social reality, as manifested in our comprehensive moderate collectivist model of social explanation, allowed us to systematize the state of research with regard to explanatory variables and theoretical arguments. Furthermore, it enabled us to formulate new hypotheses on the formation and tactics of NSCA. Bringing together the most recent data with our original data allowed us to evaluate existing explanatory approaches, as well as to test our arguments. We found the link between structures, groups, collective subjects, and conflict intensity to be far more nuanced than often proposed in the literature. And even if one were to disagree with the empirical results presented here, we hope to have demonstrated that conflict research can greatly benefit from taking a step back to put our research practices on a sounder footing. What emerges is a practice of science that puts more emphasis on real definitions as well as on theory. At the same time this does not leave us locked up in the ivory tower, but rather clarifies our empirical understanding of political conflicts.

Appendix A

DISCA Codebook

This codebook lists all variables comprised in the Disaggregated Conflict Actor Database, DISCA. It gives a short description of each variable, specifies the data type and, if applicable, the type of scale and the number of categories. The database is implemented in PostgreSQL.
The dataset is subdivided into four sub-datasets.

NSCA Basis Data (table A.1) provides basic information on non-state conflict actors such as name and date of formation.

NSCA Split Data (table A.2) provides information on the merging and splitting of actors.

NSCA Time Series - Organization (table A.3) holds information on central intrinsic characteristics of NSCA's internal organization which vary over time such as their size and collective identity.

NSCA Time Series - Resources (table A.4) comprises data on, first, NSCA's own activity to gain resources and, second, external support. Table A.5 differentiates and describes the categories of the variables used in the dataset in further detail.

The *cun_id2ucdp2nsca* dataset (table A.6 links the most important datasets on non-state actors, i.e. the Non-State Actor Database by David E. Cunningham, Kristian Skrede Gleditsch and Idean Salehyan and the UCDP Actor Dataset by the Uppsala Conflict Data Program.

Table A.1: NSCA Basis Data

variable	description	data type, scale, categories
pkey	ID for unique identification of row	int
nsca_id	ID for unique identification of NSCA	int
name_abbrev	abbreviation of Name	varchar
name_for	name in the language of home country	varchar
name_english	name in English	varchar
foundation	date of foundation	date
foundation_early	early estimate of date of foundation	date
foundation_late	early estimate of date of foundation	date
disbandment	date of disbandment (if applicable)	date
confidence	level of coding reliability	int, ordinal, 3
info	description of the included data	varchar
sources	list of sources	varchar
comment	comments on the data	varchar
modified	date and time of last update	date

Table A.2: NSCA Split Data

variable	description	data type, scale, categories
pkey	ID for unique identification of row	int
origin_nsca_id	NSCA_id of parent	int
faction_nsca_id	NSCA_id of breakaway faction	int
split_date	date of split	date
confidence	level of coding reliability	int, ordinal, 3
info	description of the included data	varchar
comment	comments on the Data	varchar
modified	date and time of last update	date

Table A.3: Time Series Data - Organization

variable	description	data type, scale, categories
pkey	ID for unique identification of row	int
nsca_id	ID for unique identification of NSCA	int
period_start	beginning of analytical period	date
period_end	end of analytical period	date
weapons	type of weapons at disposal of actor	int, ordinal, 2
size	number of members	int, metric
size_category	number of members, categorial	int, ordinal, 4
structure	type of internal organization	int, ordinal, 2
identity	type of collective identity	int, nominal, 5
orientation	type of orientation	int, nominal, 5
confidence	level of coding reliability	int, ordinal, 3
info	description of the included data	varchar
sources	list of sources	varchar
comment	comments on the data	varchar
modified	date and time of last update	date

Table A.4: Time-Series Data - Resources

variable	description	data type, scale, categories
pkey	ID for unique identification of row	int
nsca_id	ID for unique identification of NSCA	int
period_start	beginning of analytical period	date
period_end	end of analytical period	date
endo-\exogenous	resources self-acclaimed or externally provided	bit, nominal, 2
domestic\foreign	location\origin of resources	bit, nominal, 2
type	type of resource	int, ordinal, 5
supporter	name of supporting actor	varchar
confidence	level of coding reliability	int, ordinal, 3
info	description of the included data	varchar
sources	list of sources	varchar
comment	comments on the data	varchar
modified	date and time of last update	date

Table A.5: List of Variable Categories

variable	categories	code	description
disbandment_type	split	1	split of group
	annihilation	2	annihilation by other actor
	voluntary dissolution	3	voluntary dissolution
structure	centralized	1	centralized organizational s.
	decentralized	2	network-like organizational s.
size category	$\leqslant$100	1	100 group members or less
	101 - 1 000	2	between 101 and 1 000 group members
	1 001 - 10 000	3	between 1 000 and 10 000 groupmembers
	$>$10 000	4	more than 10 000 group members
weapons	light	1	light w. at actors disposal
	heavy	2	heavy w. at actors disposal
identity	religious	1	collective i. based on religious affiliation
	economic	2	collective i. based on economic ideology
	ethnolinguistic	3	collective i. based on shared ethnicity
	political	4	collective i. based on political ideology
	environmental	5	collective i. based on environmental ideology
orientation	religious	1	o. towards changing the religious field
	economic	2	o. towards changing the economic field
	ethnolinguistic	3	o. towards changing the ethnolinguistic field
	political	4	o. towards changing the political field
	environmental	5	o. towards changing the environmental field
type	training	1	entities for the training for NSA members
	weapons	2	supply or production of weapons
	monetary means	3	supply or extraction of money or equivalents
	natural resources	4	supply of extraction of natural resources
confidence	low	1	coding based on own expertise
	medium	2	coding based on single source
	high	3	coding based on multiple reliable sources

Table A.6: Description of variables in cun_id2ucdp2nsca

variable	description	data type
pkey	ID for unique identification of row	int
cun_id	obsid in Non-State Actor Dataset	varchar
ucdp_id	actorid in UCDP Actor Dataset	int
nsca_id	ID for unique identification of Non-State Conflict Actor	int
conis_id	ID in CONIS Database	int
comment	Comments on the Data	varchar
modified	Date and time of last update	date

Appendix B

List of NSCA in DISCA

name_abb	name_eng
KNU	Karen National Union
MIM	Muslim (later: Mindanao) Independence Movement
NDFB	National Democratic Front of Bodoland (until 1994: Bodo Security Force)
NLFT	National Liberation Front of Tripura
HPC-D	Hmar People's Convention- Democracy
BRA	Baloch Republican Army
NSCN-K	National Socialist Council of Nagaland - Khalplang
New PULO	New Pattani United Liberation Organization
Mahagujarat	Mahagujarat Movement
BRN-C	Barisan Revolusi Nasional-Koordinasi
PLA	People's Liberation Army
PULO	Pattani United Liberation Organization
UWSA	United Wa State Army
OPM	Free Papua Movement
HPC	Hmar People's Convention
GAM	Aceh Freedom Movement
GLO	Gorkha Liberation Organisation
NSCN-IM	National Socialist Council of Nagaland - Thuingaleng Muivah
BNCT	Borok National Council of Tripura
TVF / TNV	Tripuri National Volunteer Force
GJM	Gorkha Janmukti Morcha
BLT / BLTF	Bodo Liberation Tigers or Bodo Liberation Tiger Force
NLFT - BD	National Liberation Front of Tripura - Biswamohan Debbarma faction
DHD	Dima Halim Daogah
UPDF	United People's Democratic Front
ATTF	All Tripura Tiger Force
BRA	Bougainville Revolutionary Army
TTTT	Te Taata Tahiti Tiama
FLNKS	Kanak and Socialist National Liberation Front
ASG	Abu Sayyaf Group (PHI)
EROS	Eelam Revolutionary Organization of Students
HNLC	Hynniewtrep National Liberation Council
ETLO	East Turkistan Liberation Organization
ULFA	United Liberation Front of Assam
HM	Hizb-ul-Mujahideen
MNF	Mizo National Front
MNLF	Moro National Liberation Front
ULFA-ATF (aka ULFA-I)	United Liberation Front of Assam-Anti Talks Faction
MILF	Moro Islamic Liberation Front
KNPP	Karenni National Progressive Party
RNS	Republic of the North Solomons
CNF	Chin National Front
NSCN	National Socialist Council of Nagaland
BLA	Balochistan Liberation Army
SSIA	Shan State Independence Army
PFAR	Popular Front for Armed Resistance
LTTE	Liberation Tigers of Tamil Eelam
BLF	Baluch Liberation Front

SUA	Shan United Army
KIO	Kachin Independence Organization
MTA	Mong Tai Army
PCJSS	Parbatya Chattagram Jana Sanghati Samity
Parari	Parari
SSA - N	Shan State Army - North
ETIM	East Turkistan Islamic Movement
BLUF	Balochistan Liberation United Front
NNC	Naga National Council
RSF	Royal Security Forces of the Sultanate of Sulu and North Borneo
SSA-S	Shan State Army-South
GNLF	Gorkha National Liberation Front
BRN	National Revolution Front
SNUF	Shan National United Front
KRF	Kokang Revolutionary Force
BNPP / BIPP	Patani National Liberation Front
PNLO	Pa-O National Liberation Organization
SSA	Shan State Army
PULF	People's United Liberation Front
BPLF	Baluch People's Liberation Front
UNLF	United National Liberation Front
NLFT - NJ	National Liberation Front of Tripura - Nayanbasi Jamatiya faction
JeM	Jaish-e-Mohammed
KMM	Kumpulan Mujahidin Malaysia
SURA	Shan United Revolutionary Army

Table B.1: Non-State Actors in DISCA

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