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# Introduction

> "Anomaly" doesn't exist in language, rather, lurking behind it are anomalous presumptions and convictions that obtain in linguistic theory. (A. E. Kibrik 2003: 304)

## 1 Overview

Sometimes in the course of examining lesser studied languages an encoding strategy for a familiar empirical phenomenon seems surprising, even puzzling, given expectations developed on the basis of previous descriptive and theoretical research: it seems *anomalous.* When further examination confirms its striking oddity, this may encourage one to pause and consider certain foundational issues in theory design. Harris (2008), for example, identifies an unusual encoding strategy for pronominals (abbreviated here as PNMs) in Udi, a language from the Lezgian family. This phenomenon, referred to as endoclisis, concerns the variable positioning of grammatical markers, sometimes internal to complex (verbal) stems or roots. Consider the Udi verbal template in (1a) and its surface expression (1b), where the pronominal PNM appears intermorphemically:

(1)  a.  ROOT -PNM-light/auxiliary verb-TAM
     b.  xoyš-**ne**-b-sa
         request-3SG-do-PRES
         'He begs.'

In (1b), the (boldfaced) subject marking element, i.e., the PNM, appears internal to a complex, but morphophonologically cohesive single verbal word. More spectacularly, in (2), the PNM is intramorphemically interposed between the two segments that comprise the root *uɣ* 'to drink':

(2)  a.  ROOT₁ - PNM - ROOT₂ - TAM

   b.  u-**ne-ɣ-**sa
       drink-3SG-drink-PRES
       'He drinks.'

Finally, the PNM can appear as an enclitic under certain definable syntactic conditions. This is exemplified in (3) from Harris (2002: 236-237): in (3a) the PNM is suffixed to the verbal predicate, in (3b) the marker gravitates to the focused OBJ of the clause, while in (3c) it appears on the focused SUBJ:

(3)  a.  xunči-muɣ-on xorag-ax  häzir-**q'un**-b-esa
        sister-PL-ERG food-DAT prepare-**3PL**-do-PRES
        'The sisters are preparing the food.'

   b.  xunči-muɣ-on xorag-ax-**q'un** häzir-b-esa
        sister-PL-ERG food-DAT-**3PL** prepare-do-PRES
        'The sisters are preparing THE FOOD.'

   c.  xunči-muɣ-on-**q'un** häzir-b-esa        xorag-ax
        sister-PL-ERG-**3PL**  prepare-do-PRES food-DAT
        'THE SISTERS are preparing the food.'

The variable distribution of these PNMs is unusual: prior descriptive work on other languages concerning these particular distributions of agreement or pronominal markers did not document this phenomenon, while present theoretical proposals cannot claim to predict their existence.[1]

   Endoclisis in Udi, which Harris investigates, is singular and rare, with few similar constructions or distributions of elements observed in other languages. Construing her proposal with some license, Harris suggests that the same toolkits of linguistic theory which are useful in accounting for unusual grammatical structures may be employed to address more usual and common grammatical structures. The question is one of scalability: can assumptions adequate for addressing simple and common structures be scaled up to address more complex and uncommon structures? Or, can assumptions useful in addressing unusual and complex structure scale down smoothly to address comparatively ordinary structures?

   Harris hypothesizes a dynamic account in which diachronic trajectories guided by systemic interactions of independent grammar patterns can potentiate or motivate usual as well as unusual constructions. She develops a plausible hypothesis about the rarity of these phenomena

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[1]Further discussion of the phenomenon of endoclisis can be found in Yu (2007) and Bonami & Samvelian (2008), among others.

by arguing that the convergence of factors which give rise to them is highly improbable, hence, both their uncommonness and the particularity of their expression. Her goal with respect to Udi is to identify systemic pathways in that language which together probabilistically produce the observed outcomes. If such phenomena arise from complex diachronic factors, are learnable and exhibit persistence across long expanses of time, then perhaps the processes responsible for their existence are instructive about more commonly encountered examples of person/number marking. Evidence for the correct analysis of a singular phenomenon such as Udi endoclisis is, of course, likely to be more speculative than would be the evidence for an analysis of a more common phenomenon, because a more common and pervasive phenomenon can profit from comparative analyses between different instances of it in different languages: the existence of multiple instances in different languages can provide reliable clues about common sources and, hence, the cross-linguistic profile of the phenomenon.

This type of investigation reflects a strategy common in the developmental sciences which relies on the contingent interactions of multiple factors constitutive of complex systems to explain targeted objects such as traits or behaviors. Whether for language or e.g. comparative psychology (see Michel & Moore 1995), however, the basic strategy is largely the same: identify instances of the targeted phenomenon, catalogue its local variability and try to identify interacting factors that recur in similar combinations, in e.g. different languages, in order to motivate its existence. Sometimes similar pathways defined by interacting factors lead to the same results, sometimes they lead to similar results, and sometimes unexpected results. Sometimes differing pathways lead to the same results, and sometimes they lead to similar results, and sometimes to different ones. The potential for language variation is vast when interpreted in this way.

In this connection, linguistics appears to be undergoing an important reconceptualization concerning its methodologies, its objects of inquiry, and ideas about theory construction. The nature of these changes align it more with recent dynamic systems perspectives on analysis in the developmental sciences (Lehrman 1953, 1970; von Bertalanffy 1962; Oyama et al. 2001, among others), both (ecological) evolutionary developmental biology (Gilbert & Epel 2009; Laland et al. 2010; Kaufmann 2010; Pigliucci 2010; Arthur 2011, among others) and developmental psychology (Karmiloff-Smith 1994; Elman et al. 1997; Gottlieb 2007; Blumberg 2005; Stiles 2008; Hood et al. 2010; Johnston 2010). In the broadest terms the changes relate to the emphases on the (probabilistic) modeling of complex interactions of multi-level systems. This is

distinct from the crisper deductive bases of the physical sciences[2] that seem to have served as the guiding metaphorical standard within the Mainstream Generative Grammar(MGG)[3] analyses.

Evans & Levinson (2009, 2010) characterize this change across several linguistic subdisciplines. They observe:

> Linguistics, we have pointed out, occupies a crucial crossroads between the humanities, the social sciences and the biological sciences. Exploiting this position will be essential to the future of the discipline. (Evans & Levinson 2010: 2746)

Their perspective is shared in other works, e.g. Deacon (1997, 2010), Kirby (2003), Kirby et al. (2007), Locke (2009), Christiansen & Chater (2008), Margoliash & Nussbaum (2009), Chater & Christiansen (2010ab), Carstairs-McCarthy (2010), Laland & O'Brien (2011), and Comins & Gentner (2013). Proposals within Evolutionary Phonology (Blevins 2004; Wedel 2004, 2006, 2007, among others) can be construed as representing an explicit exploration within phonology of how the role of language development over historical time can be accommodated within a biologically oriented approach to natural phenomena. In this connection Blevins (2004: 344) writes:

> The evolutionary approach to phonology, morphology, and syntax, is not a theory of what synchronic grammars *must* encode, but rather what they *need not* encode as properties of universal grammar. Any cross-linguistic tendency which has a straightforward historical explanation should be excised from statements of universal grammar, unless it can be independently motivated.

This view concerning sound patterns can be interpreted more generally in connection to grammar conceived more broadly:

> Recurrent synchronic grammatical constructions (whether widely attested or somewhat restricted in distribution) have their origins in diachronic development as potentiated by systemically motivated recombinations of existing elements in several different dimensions of the language system.

Theoretical linguistics has also witnessed promising developments in the cross-linguistic study of morphosyntax over the past few years. There has been a more expansive recognition of the types of information that receive grammatical encoding as well as a more empirically grounded investigation into the principles concerning how such informa-

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[2]See Mayr (2004) for an enlightening overview of the differences between the biological and physical sciences.

[3]We follow Culicover & Jackendoff (2005) in referring to the tradition of Chomskyan grammar analysis as Mainstream Generative Grammar.

tion is expressed morphologically and syntactically. In particular, language models formulated in terms of inviolable, but parameterizable, principles and restricted to so-called 'core' phenomena are gradually being replaced by theories which examine broader expanses of grammar viewed from the perspective of constraint-based systems. These systems, in turn, are viewed as adjudicating relations among (stochastically interpreted) violable constraints sensitive to the gradient nature of grammatical phenomena, see Keller (2000), Aissen & Bresnan (2002), Boersma & Hayes (2001), Albright (2002, 2008), Albright & Hayes (2003), Bod et al. (2003), Baayen (2003), Sorace & Keller (2005) and Hay & Baayen (2005), among others.

Resulting theories are directly designed to address issues of scalability, i.e. to identify the inventories of ingredients and the principled ways in which they can be used to vertically relate hierarchically organized types of grammatical information to their subtypes, while also horizontally relating (families of) subtypes to one another, see Goldberg (1995), Sag (1997), Ackerman & Webelhuth (1998), Kay & Fillmore (1999), Malouf (2003), Culivover & Jackendoff (2005), and Boas & Sag (2012). Methodologically then, small and more highly constrained generalizations are accounted for with the same mechanisms as used for large and less locally conditioned ones. These new approaches, additionally, are designed to capitalize on richly articulated and independent morphological, lexical and syntactic representations in order to provide insights into networks of lexical and syntactic relatedness which display varying degrees of generality. The proposed representations endeavor to model the complete spectrum of grammatical phenomena from regular to partially regular to wholly idiosyncratic formations, all using the same toolkit.

The present work participates in this general enterprise. This concerns not only the relevance of cross-linguistic surface variation for theory construction, but the observation that new theories of language require a shift in perspective that considers language as an object amenable to the types of analyses that have been successful in the biological sciences for the study of other complex (biological) systems. While the actual analyses proposed in the present work cannot be claimed to accommodate the research results and methodologies across all the domains mentioned above, they are, we believe, compatible with them and they are guided by interdisciplinary perspectives. However, while the works of Evans & Levinson (2009, 2010) offer a programmatic alternative to many prevailing theoretical assumptions, we provide a detailed empirical case study of this type of alternative. Against the background of the large interacting trends our goal is, thus, rather

modest.

We combine in a single book the descriptive typological results from one rather neglected domain of morphosyntax with the development of a theoretical treatment for it. Specifically, we investigate the person/number marking in what appears to be an infrequently described and seldom analyzed type of non-finite relative clause. The relevant construction is typified in (4) from the Uralic language Western Ostyak.

(4) [xans-əm] neːpək-**eːm**
     write-MC  book-1SG
     'the book I wrote'

This is an externally headed prenominal relative clause where the 1st person singular PNM indicating the pronominal subject of the non-finite verbal form glossed here as MC (mixed category[4]) is attached to the relativized object, rather than to the verb itself. Informally, it seems as if the PNM is misplaced: there is a reasonable expectation, often codified in linguistic representations, that it should appear within the syntactic domain defined by the verbal element, since it functions as that element's subject. However, it appears outside of that domain as an affix on the relativized head. This construction, like Harris' examples, seems like an anomalous pattern.

As will become evident during the ensuing chapters, across languages the pattern exemplified in (4) resembles nominal possessive constructions, both syntactically and morphologically. We will therefore refer to it as the *Possessive Relative clause* or *Possessive Relative construction.* Most generally, the POSSESSIVE RELATIVE clause can be defined as follows:

> an externally headed relative clause in which the dependent subject and the relativized non-subject are encoded identically or near identically to the possessor and possessed, respectively, in the regular possessive construction of the given language.

While the oddities of the POSSESSIVE RELATIVE type represented in (4) will be further detailed in Chapter 3, stated succinctly, we suggest that the most felicitous description as well as the most insightful explanation (motivation) for this phenomenon mandates a *construction-theoretic, pattern-oriented* approach to grammar analysis. That is, we attribute the 'oddness' of POSSESSIVE RELATIVES to their consisting of a composite of properties shared with other morphological and syntactic constructions in particular grammar systems: the POSSESSIVE RELATIVE emerges as the potential product of particular grammar sys-

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[4]This term will be explained later.

tems. This approach is designed to address POSSESSIVE RELATIVES in a manner that permits a cross-linguistic characterization, while scaling straightforwardly to address language specific encodings.

It should be noted that, although we view language as a dynamic system of interaction between different types of constructions, in this book we restrict ourselves to the presentation of the system in its static synchronic state, because at this time we cannot offer a more dynamic analysis of the network of grammatical phenomena associated with POSSESSIVE RELATIVES. Though the construction-theoretic program, as we see it, is a crucial bridge to a more modern dynamic style of language analysis, at this stage we, along with Evans & Levinson (2009, 2010), can do no more than to point to fruitful directions that have been recognized as being naturally aligned with construction-theoretic assumptions for many years (Elman et al. 1997; Smith & Thelen 2003; Thelen & Smith 2006; Christiansen & Chater 2008; Beckner et al. 2009, among others). We assume as a working hypothesis that POSSESSIVE RELATIVES are not simply derivates of a more familiar, even universal, structure. However, given practical limitations, we forego attempting deep explanation in terms of dynamic development in grammar systems and, instead, adapt and develop a transparent and static formalism for grammatical categories and phrases to encode our analysis. We do this because the present work is primarily an exploration of a way of seeing grammar and of the consequences this way of seeing has for theory construction.

We believe that our analysis is instructive about the nature of grammar organization, and hence, the nature and goals of linguistic theory. Building on the insights and arguments of Fillmore, Kay & O'Connor (1988), Kay & Fillmore (1999), Croft (2001), Culicover & Jackendof (2005), Goldberg (2003, 2006, 2009), Tomasello (2003, 2010), Sag (2010ab), Booij (2010ab), Bonami & Webelhuth (2011), Boas & Sag (2012), among others, but with differences to be elucidated as we proceed, we suggest that grammar is essentially constructional. That is, constructions are not epiphenomenal despite claims within most MGG approaches. Nor are they peripheral to either grammar or the theoretical grammarian's task of analyzing language. Constructions represent a level of analysis in which objects are not simply reducible to their constitutive component parts, though there are, of course, various phenomena in various languages that could, and have, fostered the illusion that this is the central property of linguistic objects, i.e. that word structures and word combinations are merely straightforward sums of their parts. However, there is nothing more mysterious in this alleged irreducibility than what is accepted as common operating assumptions

for the analysis of complex systems within the biological sciences and gestalt traditions in psychology (see Köhler 1947; Wertheimer 1959; van Bertalanffy 1969; Rock & Palmer 1990; Gilbert & Sarkar 2000; Amundson 2007; Hood et al. 2010; Bateson & Gluckman 2011).

The construction-theoretic perspective turns apparently unruly rarity in grammar into instructive guidance about the nature of adequate linguistic architectures. We will explore the hypothesis that grammar is a complex adaptive system in which interactions between its many dimensions and their ingredients produce a canalizing or directing influence concerning what sorts of grammar properties and constructions may arise over time. This can be interpreted as a potentiating influence rather than a deterministic one since in many instances structures permitted by particular interactions simply do not occur, though they could have, given different contingent conditions. Accordingly, certain structures possess an exceedingly low probability of arising, since systemic interactions are unlikely to produce them. This should recall Harris' main line of inquiry and her argument that systemic properties of grammars license 'odd' constructions. In our case, however, we raise the ante: rather than looking at a single construction in a lone language, we analyze an 'odd' construction *type* that appears in numerous related and unrelated languages in Eurasia.

In some sense, by proposing a construction-theoretic approach to grammar analysis we are attempting to offer an alternative to the strategy advocated in Mathewson (2011: 57) and summarized as "A null hypothesis of universality enables us to avoid the opposite problem of over-exoticization." Our belief is that cross-linguistic characterizations/explanations of commonality and diversity among languages are more likely to derive from the systemic interactions among constructions at various levels of analysis than from familiar assumptions associated with known formulations of Universal Grammar. This does not imply that any conceivable version of Universal Grammar must be wrong, but that there are good empirical and theoretical reasons to adopt conceptually and methodologically different assumptions than those that have informed research on Universal Grammar, and to provide a critical appraisal of the value attributed to the nativist perspective on development that has arisen in this tradition (cf. Croft 2001; Pullum & Scholz 2002; Seuren 2004; Goldberg 2006; Scholz & Pullum 2006; Kinsella 2009; Bannard et al. 2009; Jackendoff & Pinker 2005; Clark & Lappin 2011; Boyd & Goldberg 2012). In particular, the detailed empirical research into rare linguistic phenomena and variation within such phenomena which we develop here suggests that commonly repeated claims about the innateness of so-called 'core' language

structures are undoubtedly premature. Relatedly, the actual analyses of many purportedly core phenomena are often problematic, owing to unpredicted cross-linguistic variability in their encoding. In any case, relative clauses are core linguistic construction according to any criteria: they are so pervasive in the languages of the world and they have been analyzed in every linguistic theory. As we will demonstrate, even this well-researched domain provides cross-linguistic encodings that challenge efforts to provide natural modifications to MGG assumptions.

In sum, this book aims at developing an analysis of Possessive Relatives that reflects two mutually reinforcing trends within modern grammatical theory: we will assume the importance of connections with (1) dynamically oriented proposals for language analysis and emergence, and (2) construction-theoretic proposals in syntax (informed by word-based and paradigm-based models of morphology). Both of these trends can be seen as participating more broadly in a developmentally oriented conceptualization of language analysis.

## 2   Our proposal

According to the views adopted here, theoretical research in morphosyntax becomes a beneficiary of insights from the functionalist typological traditions, as well as being a prospective source of systematic inquiry into large domains of empirical phenomena. One goal of this monograph is to provide a small, but detailed part of the bigger empirical picture concerning the morphosyntax of relative clauses and the surface expression of person/number marking for their subjects. There have been numerous substantive contributions to the typology of relative clauses over the past decades, as well as the development of an enormous literature on the interpretation of person/number marking as agreement or pronoun incorporation. The Possessive Relative constructions examined in this book, which appear to occur in a genetically and geographically restricted set of languages, contribute to the empirical scope of these descriptive studies.

The second goal is to engage in a comprehensive multi-component, i.e. morphological, lexical, syntactic and semantic investigation of Possessive Relatives, implementing descriptive intuitions in a transparent and precise formalism. In contrast to the common strategy applied in many formal grammatical analyses, we did not begin this investigation with a commitment to a specific theoretical approach, adapting a set of favorite assumptions to the intriguing data we encountered, or opportunistically selecting data that confirmed prior theoretical commitments. Some of the limitations of adopting this common strategy will

become clear when we critically evaluate previous proposals for Possessive Relatives in Chapter 8. We follow a different route here. In order to develop a proposal that reflects both surface difference and instructive commonality between constructions, we examine the relevant data from the perspective of detailed single language particularities, as well as its cross-linguistic scatter. In the process we try to identify the essential elements that any genuine theoretical proposal needs to address. Having done this, we select a construction-theoretic approach to grammar modeling as the framework of choice because it alone appears to permit the sort of detailed description of the phenomenon which makes it possible to entertain likely explanatory hypotheses concerning the nature of these constructions, while avoiding commitments to aprioristic universalist assumptions. This choice allows us to posit, in particular, the hypothesis that the recognition of constructions is essential for achieving the vaunted goal of explanatory adequacy.

Beyond providing an explicit fragment of a detailed set of interacting synchronic phenomena, such an approach also leads us to inquire about the relationship between language change, facilitated by the processes of reanalysis and extension (Harris & Campbell 1995), and the nature of synchronic theoretical explanation of grammar. Our third goal then is to study the natural development of Possessive Relatives and argue that their similarities arise from common properties in the systems where they emerge. The identification and examination of this challenging grammatical phenomenon necessarily leads to the reappraisal of some commonly accepted analytic assumptions among theoretical linguists. So, as will become evident, there is little that is simply 'off-the shelf' in this book: from the rich data sets to their analytic conceptualization and the toolkit used to formulate our theoretical analyses, we are engaged throughout in a comprehensively synthesizing endeavor.

The essence of our proposal is as follows. The pattern of morphosyntactic marking found in Possessive Relatives is not predicted by any synchronic universalist principles of present grammatical theories. In fact, we believe that it belongs to the class of cases in phonology, morphology and syntax, examined by Blevins (2004), which call into question the impulse among theoreticians to posit universalist principles in order to explain many synchronic grammatical patterns. We will argue that an account formulated in terms of these universalist principles purported to reflect human language design and which assimilates Possessive Relatives as variants of some universal structure is a less compelling alternative than the construction theoretic proposal developed here. Treating Possessive Relatives simply as the marked vari-

ant of a universal structure deprives the analyst of important insights into what can occur systematically, given certain systemic properties of grammars: it avoids dealing directly with language variation.

Instead we suggest that construction-theoretic assumptions provide insight into the form of what would otherwise appear to be the anomalous relativization pattern and, moreover, motivate why such a pattern is licensed. On our account, Possessive Relatives are *emergent constructions* arising from the systemic properties of specific grammars. Namely, they represent *an amalgam of four contributing constructions*: the morphological Inflectable Non-Finite construction, the morphological Possessed Noun construction, the syntactic Modifier-Head construction, and the syntactic Non-Finite Clause construction. That is, Possessive Relatives are *new constructions built largely of old parts and these parts are composites of semantic, syntactic, and morphological elements.*

Among other factors to be discussed, Possessive Relatives are straightforwardly motivated by three factors acting in tandem with respect to nominal possessive constructions. First of all, possessive constructions are enormously frequent and have many different uses in the languages which display Possessive Relatives. Second, the person/number paradigm used for nominal possessives is also used to express pronominal subject arguments for many types of non-finite verbal forms. Third, as we will demonstrate in detail at the appropriate time, the semantics of the Possessive Relative is construable as a subtype of the generally vague semantic relation associated with ordinary possessive constructions, but is lexically determined by the verbal form functioning as a modifier.

Consequently, for these and other reasons, Possessive Relatives can be seen as systemically motivated and systematically occurring in various languages without invoking standard notions of markedness. The observed patterns are logical options that occur or fail to occur in a manner reminiscent of how biological evolution operates in specifiable ecological niches, often defining the potential directions of development, but not deterministically mandating one direction among many alternatives. Therefore, one can motivate these (and other constructions), but cannot predict that they will necessarily occur in specific languages; given their systemic motivation, however, we can predict where they will not occur, based on our knowledge of potentiating grammatical environments. In this respect, the phenomenon of Possessive Relatives resembles the phenomenon of Differential Object Marking as analyzed in Dalrymple & Nikolaeva (2011). On their account, and contrary to semantically oriented proposals based on a universal definite-

ness/animacy hierarchies, the patterns of object case marking and object agreement "follow from individual historical processes, and need not conform to markedness principles" (Dalrymple & Nikolaeva 2011: 214).

In some sense then, our data set might be likened to an unusual biological type. As a simple example, consider the platypus. First reports to Europe about this creature suggested it was a fantasy of primitive peoples. After all, it did not fit into the classificatory schemas of early European animal taxonomies. When its reality became undeniable, there were efforts to assimilate it into categories consisting of familiar classifications of animals. Though it may be descriptively useful to liken its bill and webbed feet to that of a duck, its echolocation abilities to that of a bat, its egg-laying behavior to that of a bird, or the venomous toxin of the male to that of a rattle snake, it is deeply mistaken to conclude that the platypus is a kind of duck, bat, or rattle snake or that it is insightfully viewed as a synchronic transform of any of them. Robustness and viability within a specific ecological system is what is relevant for its genotypic and phenotypic profiles.[5] In a similar manner, the Possessive Relative construction is familiar in many ways, although it just does not fit neatly into the linguistic models developed previously. However, as odd as it may appear at first pass, it seems reasonable, even expectable, when we examine it in more detail. This, of course, is not to say that there can be no general principles guiding and constraining its form. Platypuses, however odd, conform after all to general principles of vertebrate body design.

## 3    The organization of the book

The book is divided into 9 Chapters and three parts. Part I introduces the relevant phenomena. Chapter 2 provides an overview of our construction-theoretic perspective on grammar analysis. In Chapter 3 we discuss the basic facts about Possessive Relatives and their relevance to linguistic theory by contextualizing them within both previous descriptive typological examinations of cross-linguistic relative clause formation and person/number agreement/pronominal incorporation. This discussion will make clear the place which Possessive Relative constructions occupy in the cross-linguistic taxonomy of rel-

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[5]On the other hand, monotremes such as platypuses and familiar mammals do have deep commonalities with one another and with most animals, namely, a set of conservative Hox genes that constrain anterior-posterior segmental organization in body design. As discussed in Chapter 2, this aspect of similarity among various sorts of animals has suggested to some linguists that languages are similarly homologous and structurally constrained.

ative clauses and subject marking. In addition, we address the general nature of 'locality' , since it is one of the theoretically challenging properties of Possessive Relatives.

As this book explores Possessive Relative constructions predominantly as represented within one language, Tundra Nenets (Uralic) , Part II only deals with this language. Chapter 4 provides an overview of various aspects of Tundra Nenets grammar. This is intended to assist the reader in evaluating the specific examples and analyses of Tundra Nenets that will be the focus of the analysis in Chapter 5. We will also examine the relevant relative clauses in Tundra Nenets in order to identify their distinctive and recurrent properties. This will help to establish the essential empirical phenomena which any theoretical analysis must target, and identify the desiderata for a theoretical analysis. We will see that a detailed morphological, lexical, syntactic, and semantic fragment of a single language is required by the very nature of Possessive Relatives. Moreover, we contend that it is crucial for a theoretical account of this phenomenon to provide an explicit fragment for each of these domains and how they interact. Thus, Chapter 4 presents the basic ingredients of the relevant construction and its relatedness to other construction types, whereas Chapter 5 takes up the empirical challenges articulated in Chapter 4 and develops our construction-theoretic proposal.

Part III is largely comparative. The theoretical challenge, we suggest, is to address surface diversity without reducing it to underlying structural uniformity. The crucial dimension of these relative constructions is content-theoretic, not form-theoretic: it is the meanings encoded by these constructions that facilitate insightful cross-linguistic theoretical analysis, not the contingent factors of how these meanings are encoded in each language. This discrepancy between meaning and form is, in fact, a common mismatch, and construction-based approaches are directly designed to recognize the absence of isomorphism between these two dimensions when it is required. They are, thus, well prepared to provide a unitary theoretical account of surface diversity. In line with this, in Chapter 6 we show how our representations can be minimally adjusted to account for other constructions associated with Possessive Relatives in Tundra Nenets and explore their consequences for assumptions about constructional relatedness. Chapter 7 demonstrates the results of our cross-linguistic inquiry into the distribution of Possessive Relatives. We present there, classified according to language affiliation, the languages we have found that contain these constructions. These data attest to the widespread areal distribution of this construction as well as to the language-specific variety of its exponence.

They reaffirm the need for an analysis to employ assumptions that transcend any particular language encoding: there is no reason to privilege any particular encoding theoretically and assume that other encodings represent (principled) deviations from the core pattern. Chapter 8 provides an assessment of how Possessive Relative constructions have been analyzed within the mgg framework. As will become clear, this framework possesses the representational apparatus to encode many important elements of the construction and accurately describe the facts as they are found. However, it tends to do so by hypothesizing novel modifications to basic structures and principles, raising the question whether this an explanatory strategy or a method of redescribing the data. Unlike our analysis, there is less emphasis in this approach on inquiring into why the relevant constructions look the way they do in terms of the analogical influences at play in pattern-based systems that may motivate both the attested cross-linguistic patterns of Possessive Relatives and the families of Possessive Relatives that obtain in particular languages.

Finally, Chapter 9 provides a concise summary of our results and identifies a paradoxical consequence of our proposal. Specifically, the Possessive Relative constructions, which seemed so anomalous at the outset, actually appear to be the surface realization of a widespread strategy of assimilating relative constructions to the templates of regular possessive and attributive modification constructions cross-linguistically. This may seem odd but, as Harris hypothesized, it is the probabilistic outcome of interacting properties of the relevant grammars. From this perspective there is nothing at all anomalous about these constructions. Rather, as Kibrik suggested, our previous analytic assumptions rendered them peculiar. The resulting view of grammar as a complex system, we will suggest, implicates the usefulness of current and common analytic assumptions from the developmental sciences to language analysis.