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Valency and transitivity over time: An introduction

1 Introduction

In this book, we present a collection of papers devoted to verbal valency that share a common orientation by addressing this issue in a diachronic perspective, either discussing changes in the behavior of verbs or discussing verbal valency at different historical stages of specific languages.[1]

Verbs and their semantic and syntactic behavior have long been at the center of linguistic research. This is not surprising: indeed, as remarked by Croft (2012: 2) "A central part of the grammar of every human language is the encoding of events and their participants in a clause." For this reason, Tesnière (1959) argued that the verb is the center of the "petit drame" staged in any given sentence.

Language specific and cross-linguistic studies approaching verbs and their constructions synchronically or diachronically abound, and it is impossible in this introductory chapter to account for decades of research developed within different theoretical frameworks. In what follows, we focus on two issues, since they are also the focus of the papers in this book, that is, valency patterns, especially as they have been investigated within the ValPaL project (see Malchukov and Comrie 2015 and below, Section 2), and valency alternation of the causative/anticausative type. The structure of the article is as follows. In Section 2 we briefly introduce the notion of verbal valency and different approaches to verbs and their constructional patterns, focusing especially on the methods and results achieved with the ValPaL project. Section 3 contains a discussion of transitivity and transitivity scales, as ensuing from cross-linguistic research partly based on the ValPaL

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1 This book collects some of the papers presented at the conference "The shaping of transitivity and argument structure: theoretical and empirical perspectives", which took place in Pavia in the fall of 2018 in the framework of the research project "Transitivity and Argument Structure in Flux" (https://sites.google.com/universitadipavia.it/tasf/stas2018-conference-the-shaping-of-transitivity-and-argument-structure/program?authuser=0), funded by the Italian Ministry for Education and Research (MIUR) in the framework of the 2015 PRIN call, grant no. 20159M7X5P (https://sites.google.com/universitadipavia.it/tasf/home?authuser=0).

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data. In Section 4, we address the issue of valency alternations, and introduce the notion of basic valency, as developed in Nichols, Peterson, and Barnes (2004). Section 5 surveys the content of the papers collected in this book.

2 Valency in cross-linguistic research

The tendency for specific meanings to be instantiated by verbs that can be grouped into a limited number of classes based on the type and number of nominal constituents they tend to occur with, along with the possibility for certain verbs to undergo changes in this respect (e.g. to have active and passive counterparts), has raised the interest of linguists working in various theoretical frameworks. Among possible ways to capture such peculiarities of verbs, the notion of valency introduced by Tesnière (1959) is perhaps the most widely employed.

The notion of verbal valency captures the inherently relational nature of verbs: as verbs denote events, they necessarily imply the event's participants, i.e. the verbal arguments. For this reason, valency can be viewed as referring to argument realization. This provides a direct link to research on the syntax-semantics interface (Levin and Rappaport Hovav 2005), which regards argument realization as crucially determined by the meaning associated with specific verb classes. Such an approach immediately raises the issue how to distinguish between arguments and adjuncts. In fact, in Tesnière's terms, valency is projected by the verb, and marks a sharp distinction between arguments (obligatory) and adjuncts (non-obligatory), which is often problematic (Aldai and Wichmann 2018: 255–256). Still, the notion of valency remains a useful tool for linguists, and has enjoyed steady popularity.

In cross-linguistic research, comparing valency patterns, valency alternations and valency changing operations has proven an extremely revealing practice, as comparison has provided evidence for the common intuition that certain verbal meanings tend to select similar patterns across languages. A major effort to make possible comparing verbs with the same meaning in different languages on a comparatively large scale is constituted by the Leipzig Valency Classes Project, or ValPaL (see Malchukov and Comrie 2015 and the online database available at http://valpal.info). Within the ValPaL project a cross-linguistic investigation has been carried out, dedicated to argument structure properties of verbs of different valency classes, i.e. groups of verbs that have similar syntactic patterns (coding patterns and alternations). The ValPaL verb selection was semantically based: a number of verb meanings were chosen and paired with the semantically most fitting *basic* (i.e. underived and sufficiently frequent) verb in the languages under scrutiny. Subsequently, all

attested coding frames were recorded for each basic verb. The database contains data for 80 verb meanings from 36 languages; additional verb meanings were added for specific languages, up to a total of 162 verb meanings currently included.

Problematic aspects of the original notion of valency are acknowledged by the ValPaL contributors. Concerning the distinction between arguments and adjuncts, for example, Haspelmath and Hartmann (2015: 50) write: "for quite a few cases we did not have a unique way of distinguishing between arguments and adjuncts, and the ValPaL database is therefore not consistent in this regard." In certain cases, the ValPaL contributors pragmatically adopted a less strict view of the role of the verb as projecting its valency. This is the case when Haspelmath and Hartmann (2015: 45) claim that:

The terms in [a-e] all have basically the same meaning . . .

a. complementation e.g. Quirk et al. (1985: 1069–71)
b. subcategorization Chomsky (1965)
c. argument structure e.g. Goldberg (1995)
d. government model Mel'čuk (1974) (Russian *model' upravlenija*)
e. clause blueprint Grebe (1959) (German *Satzbauplan*)

In fact, the terms mentioned above all have the same referent, i.e. the constituents that verbs tend to occur with, but to say that they have the same meaning is somewhat farfetched. Let us for example consider the notion of argument structure as understood in the framework of Construction Grammar. According to Goldberg (1995), argument structure constructions are stored as independent form-meaning pairs: in other words, they are not projected by verbs. Rather, they are in principle independent of verb semantics. However, as highlighted by Stefanowitsch and Herbst (2011), the two approaches, i.e. the verbal valency approach and the constructions approach, may be seen as complementing each other.

Notably, this has implicitly been acknowledged by Goldberg as well, when she discusses constructional homonymy. Indeed, Goldberg (2006: 38) acknowledges the possibility of homonymy and stresses the relevance of the verb's meaning, along with the meaning of co-occurring arguments. She writes:

> In fact, there do exist instances of constructional homonymy: a single surface form having unrelated meanings. In order to identify which argument structure construction is involved in cases of constructional ambiguity, attention must be paid to individual verb classes. In fact, in order to arrive at a full interpretation of any clause, the meaning of the main verb and the individual arguments must be taken into account.

In practice, this amounts to saying that homonymous constructions are disambiguated in conjunction to the verb's meaning and the meaning of the NPs that function as fillers. Hence, following Goldberg (1995: 16): "the meaning of an

expression is the result of integrating the meanings of the lexical items into the meanings of constructions."

In spite of these caveats, the ValPaL database provides a solid foundation for research on verb classes, as it allows cross-linguistic comparison and highlights common tendencies and discrepancies in the coding of verbal arguments based on the verb's meaning. The publication of the ValPaL data has had an impact on further research on verb classes, valency patterns and argument structure constructions, and also provided a foundation for studies on transitivity scales (e.g. Aldai and Wichmann 2018) discussed below.

3 Valency and transitivity

Since Hopper and Thompson (1980) the definition of transitivity embraces several parameters, and views it as a property of whole sentences/utterances and as a scalar notion, whose degree is determined by various factors related both to event structure (Tsunoda 1985, 2015) and to role- specific features that characterize participants (see especially Næss 2007). Malchukov (2005) argues that the transitivity hierarchy should better be split into two sub-hierarchies departing from the transitive prototype, i.e. decreasing patienthood (decreasing degrees of affectedness in Tsunoda's terms), instantiated by change-of-state verbs, contact verbs, pursuit verbs and motion verbs, and decreasing agenthood, instantiated by experiential verbs, as shown in Figure 1.
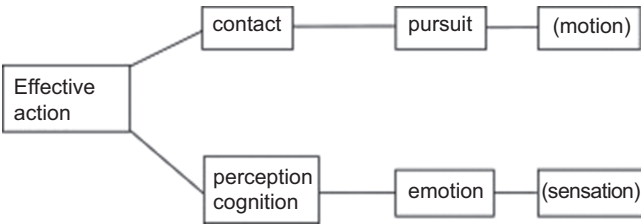
Figure 1: Two-dimensional verb type hierarchy.

The study conducted by Aldai and Wichmann (2018) on the ValPaL patterns and the morphosyntactic correlates of the transitivity scales in Figure 1 provides evidence for the relevance of valency patterns for the understanding of universal tendencies concerning argument realization and the coding of semantic roles (Haspelmath and Hartmann 2015).

Aldai and Wichmann (2018) found that coding is cross-linguistically relatively uniform in the sub-hierarchy of decreasing patienthood and that differences

along the scale consistently concerns the coding of the second argument. On the other hand, valency patterns of verbs instantiating the sub-hierarchy of decreasing agenthood show a much wider range of coding variation, concerning not only the coding of the first argument, as expected (e.g. Malchukov 2006), but also the coding of the second argument. Interestingly, the sub-hierarchy of decreased agency mostly includes experiential verbs. The great cross-linguistic diversity in the coding of experience has been pointed out by researchers (e.g. Bhaskararao and Subbarao 2004; Verhoeven 2007; Luraghi 2020) and indicates a much more versatile nature of experiential situations that leads to a complex construal, crucially connected with embodiment and with common beliefs about situations. Hence, cross-linguistic research on valency patterns sheds light on the construal of situations: meanings that are lexicalized by verbs consistently showing the same valency patterns cross-linguistically point toward a uniform conceptualization of certain situations by humans, while meanings that are lexicalized by verbs showing a wider range of variation as to their valency patterns indicate situations that humans construe less consistently.

4 Valency changing operations and basic valency

The ValPaL database provides a survey of both valency alternations and valency changing operations. The distinction between the two groups is based on coding: while the former contains alternations that are not coded by the verb ("uncoded case alternations"; Malchukov 2015: 33) the latter includes alternations that are overtly indicated by verbal morphology ("verb-coded diathetic alternations"; Malchukov 2015: 35). Semantically, the two groups overlap: the anticausative alternation, for example, is uncoded in English, as in the case of *open* in (1) and (2), but it is coded in numerous other languages.

(1) *The door opened silently*.

(2) *The wind opened the door*.

The preferred coding and the morphological realization of valency changing operations have been investigated since at least Nedjalkov and Sil'nitsky (1973; see further Haspelmath 1993) and have given rise to a strand of research on 'basic valency'. According to Nichols, Peterson, and Barnes (2004), with change-of-state verbs indicating events that can come about spontaneously or be caused by some external entity, such as *open* in (1) and (2), differences in coding point to

the existence of four basic groups of patterns. Two involve the addition/deletion of morphological material and are called oriented, either augmented as in (a) or reduced as in (b), while two do not involve the addition or deletion of any morphological material, and are called unoriented, either undetermined as in (c) or neutral as in (d). Augmented correspondences show a transitivizing orientation, while reduced ones conversely point to a detransitivizing orientation.

(a) Augmented correspondences: the basic form is intransitive; the transitive form is morphologically more complex; example: German *enden* 'finish, come to an end' / *be-enden* 'finish, bring to an end' (special case: the basic form is an adjective, e.g. Old Irish *is marb* 'be dead, die', *marbaid* 'kill')

(b) Reduced correspondences: the basic form is transitive; the intransitive form is morphologically more complex; example: Italian *sciogliere* 'melt, liquefy'/ *sciogliersi* 'melt, become liquefied'

(c) Undetermined correspondence:
   – Suppletion; example: English *eat/feed*
   – Ambivalent (labile); example: English *change* ('alter')/ *change* ('undergo alteration')
   – Conjugation class change; example: Italian *imbianchire* 'become white'/ *imbiancare* 'make white'

(d) Neutral correspondence:
   – Ablaut; example: English *lie/lay*
   – Double derivation (equipollent); example: Latin *fervesco* 'boil'/ *ferve-facio* 'make boil'
   – Auxiliary change; example: Italian *è aumentato* 'it has grown, it has become bigger', *ha aumentato* 'it has increased, it has made bigger'

The notion of basic valency and of valency orientation as defined in Nichols, Peterson, and Barnes (2004) has introduced a useful tool to compare verb classes and their valency patterns synchronically and diachronically. Being based on morphological and lexical comparison, this tool is fruitfully applied to investigate genetic relationship, and has recently also been approached in an areal perspective (see for example Grossman and Witzlack-Makarevich 2019).

5 Adding a diachronic dimension

As highlighted in Section 1, this volume approaches valency and transitivity patterns from a diachronic vantage point. In this section, we briefly provide a frame

for diachronic research in the field (Section 5.1) and then proceed to illustrate in greater detail the issues addressed in the chapters that compose the book.

5.1 Valency in diachrony

The data collected in the ValPaL database, in spite of having been used in cross-linguistic studies (see Aldai and Wichmann 2018), do not easily lend themselves to diachronic research, as the database only includes synchronic data from modern languages, and no historical stages of these languages have been investigated thus far based on the same verb pairs and the same methodology.

On the other hand, studies devoted to changes in verbal valency abound. To limit ourselves to valency alternation as described in Section 4, Nichols, Peterson, and Barnes' (2004) paper on valency orientation paved the way to a sway of language specific studies, including a number of diachronically oriented ones, such as van Gelderen (2011) on English and Plank and Lahiri (2015) on German. Various papers have discussed basic valency in ancient Indo-European languages, such as Hittite (Luraghi 2012), Gothic (Ottósson 2013), Homeric Greek (Sausa 2016) and in the reconstruction of Proto-Indo-European (Luraghi 2019). Other language families have also been investigated in diachronically oriented research: in particular, Grünthal and Nichols (2016) have shown how basic valency may change or remain stable based on data from Indo-European, Uralic, and Nakh-Daghestanian languages, while the issue of language contact has been addressed by Nau and Pakerys (2016) in a study of the influence of Finnic and Slavic languages on Baltic and by Grossman and Witzlack-Makarevich (2019), who assessed the integration of Greek-origin loan verbs into the valency and transitivity patterns of Coptic (Afro-Asiatic).

It appears then that the rich amount of data collected within the ValPaL project could be profitably exploited for diachronic research by supplementing it with data from historical stages of languages: this is one of the aims of the papers in this collection. Moreover, new research on the diachrony of valency alternations can deepen our understanding of mechanisms of language change and of the propensity of languages or language families to exploit different constructional patterns related to transitivity, especially when less investigated languages and language families are brought into the picture, as shown in some other chapters.

5.2 Content of the chapters

This volume grafts a diachronic dimension in the study of valency and transitivity patterns, either by addressing the evolution of valency patterns and valency

orientation in single languages (Totoli, Soninke) or groups (Uralic languages), including languages with a long documented tradition (Greek and Romance languages), or by providing a thorough description and discussion of basic valency orientation and transitivity-related phenomena in well-studied ancient and medieval Indo-European languages such as Latin, Gothic and Old Irish.

In addition, the first chapter, by Eitan Grossman, titled "Transitivity, diachrony and language contact", frames the diachronic dimension of transitivity with research on contact-induced change, by highlighting the role of language contact in the emergence of broad areal patterns in morphosyntactic encoding. It shows how low-level changes in transitivity due to contact may be crucial in the evolution of valency patterns, calling into question purely functional explanations and suggesting that frequently observed morphosyntactic patterns may not be the result of and therefore proof of general tendencies rooted in semantics.

Chiara Zanchi and Matteo Tarsi's chapter applies the methodology of the ValPaL project to Gothic, a corpus language. It groups valency patterns and alternations of 87 Gothic verbs, thereby focusing on the encoding of the causal : noncausal alternation and showing how the causal domain was quite clearly tied to suffixation with -*ja*, while the noncausal domain could be expressed by a variety of morphological means, including the passive. It thus confirms recent conclusions on a much debated issue (Ottósson 2008).

The third chapter, by Elisa Roma, addresses the relationship between argument marking with finite and non finite forms of verbs in Old Irish, again applying the ValPaL framework in gathering data on valency patterns and alternations from a medieval language. It argues that the likelihood for finite forms to occur with an accusative argument and the likelihood for the genitive argument of non-finite forms to correspond to the same argument can be measured through a transitivity index, which may supply a criterion that substitutes acceptability judgments. The scale ranking a sample of 26 Old Irish verbs according to the transitivity index is then compared with cross-linguistic hierarchies of transitivity which have been put forward in the literature (Tsunoda 1985, 2015; Malchukov 2005; Haspelmath 2015).

Both chapters show how the ValPaL framework and methodology can be fruitfully applied also to past varieties in order to investigate valency patterns, verb classes and their evolution. Together with Guglielmo Inglese's chapter on Latin, they also illustrate accurate procedures devised to choose meaning equivalents for verbs in corpus languages.

Valency changing operations and the morphological encoding of the basic opposition between causal and noncausal verb pairs (in the strand of Nichols, Peterson, and Barnes 2004) also form the core of the remaining chapters.

Guglielmo Inglese's chapter on Latin analyzes data from 24 Early and Classical Latin verbs, splitting plain (noncausal) members of each pair into continuous

and bound (e.g. *ferveo* 'be boiling' vs. *fervesco* 'come to boil'), following the updated guidelines in Nichols (2017). Latin widely displays suppletion, and a certain tendency for intransitivization via either verbal voice or the use of the reflexive pronoun *se* with so-called inanimate verbs. Verbal compounds with *-facio* 'make' and lability (P-lability) appear to be marginal strategies. Latin is clearly shown to occupy an intermediate position between Proto-Indo-European, reconstructed as a transitivizing language, and the Romance languages, which widely use intransitivizing strategies or lability. Through the data from Latin, the drift from transitivization to intransitivization that characterizes the Indo-European languages of Europe (Comrie 2006) can be framed chronologically and single steps can be focused.

Silvia Luraghi and Dionysios Mertyris' chapter on Greek offers a picture of the changes that occurred in the encoding of basic valency and valency alternation since the earliest stage, Homeric Greek, up to present-day Greek. Diachronic evidence comparing various stages shows an extension of voice alternation in Classical Greek, while lability, which emerged at the end of the Classical age and developed in Middle Greek, plays a relevant role for inanimate verbs in Modern Greek. The replacement of a detransitivizing strategy (voice opposition), which developed and was well established in the earliest documented phases of the language, by an undetermined one (lability) is clear-cut with inanimate verbs, while animate verbs show marginal adherence to either pattern and rather a tendency toward suppletion.

The sixth chapter, authored jointly by Riho Grünthal, Heini Arjava, Jyri Lehtinen and Johanna Nichols, gives a diachronic picture of the evolution of causativization strategies in the Uralic languages, taking into account a sub-sample of six verb sets (three animate verbs and three inanimate verbs) in 22 Uralic languages. The sub-sample, drawn from a larger database of 21 non-causal and causal verb pairs, allows to highlight diachronic developments within the family. Uralic languages clearly prefer valency changing affixal morphology. Other less consistent strategies result from verb-specific and language-specific historical developments that turn up to originate from former valency changing affixal morphology patterns as well.

The transitivization strategies of Totoli, a western Austronesian language of Indonesia, are the focus of the seventh chapter, by Sonja Riesberg, Kurt Malcher and Nikolaus Himmelmann. Totoli displays many transivization strategies, including causativization proper, transitive-intransitive alternation within the stative paradigm, alternation between the stative and the dynamic paradigms, and the use of applicative morphology. Among Western Austronesian languages, it is exceptional in that it employs the same set of formatives for different alternations (voice and applicative, depending on the argument structure of the verbal lexical base). After a description of Totoli's intricate system of valency changing operations, the authors suggest an hypothesis for the evolution of the puzzling polysemy in the voice-changing and valency-increasing paradigms: they argue

that Totoli occupies an intermediate position between Philippine-type languages, which have a rich symmetrical-voice system but lack applicatives, and typical non-Philippine-type languages, which have applicative markers that are cognate with voice formatives in Philippine-type languages. The development of applicatives as a system independent from voice alternations in Philippine-type languages may have arisen through an overlap stage exemplified by Totoli, with the emergence of transitivity and valency as distinctions relevant in the grammar of Western Austronesian languages of the non-Philippine-type.

Michela Cennamo's chapter compares anticausativization strategies in Latin and in the history of its offspring Italian and French, taking into account aspectual, argument-based and lexical factors that determined different encodings, along with their developments over time. More specifically, it investigates the distribution of the different strategies available to mark anticausativization in French and Italian, both on a synchronic and on a diachronic plane, in the light of the interplay of the aspectual template of verbs with the verb's inherent meaning and features of the subject such as animacy and control. Cennamo shows that in both languages the SE-reflexive strategy comes to be gradually associated with telic, change-of-state verbs. Its interaction with the voice domain started from the alternation between the reflexive and the active intransitive in Old Italian, while Old French featured lability to a high extent. Cennamo further argues that the aspectual specification of verbs also affects the synchronic distribution of the anticausative strategies, whereby the reflexive morpheme *se* consistently indicates the presence of a final state/result/ target state in the lexical meaning of a verb. It occurs with verbs lexically encoding a scalar change, either in all their uses, or in part of them.

The last chapter, by Denis Creissels, casts light on a curious feature of Soninke, a West-Mande language spoken in Mali, Mauritania, Senegal, and Gambia: all monosyllabic transitive verbs ending in a front vowel are labile (classical P-lability, as exemplified in Section 3), while transitive verbs that end with a non-front vowel are not labile. Creissels shows that this property is due to the evolution of a detransitivizing suffix-*i* that fused with the ending of non-monosyllabic verb stems, which eventually became homonymous with the transitive stems from which they derived. The Soninke case illustrates nicely how the emergence of a whole class of labile verbs may be due to phonetic development, being therefore not directly related to any semantic classification. It also strengthens the caveat in the first chapter of this volume against generalizations that are only based on synchronic verb classifications.

As these brief remarks show, the nine chapters collected in this book illustrate different facets of transitivity and of their reflexes in the valency patterns of verbs, such as to offer a wide perspective on the ways in which the encoding of transitivity-related features can vary over time, and can be either more stable or more prone to

change depending on various factors, which range from language contact, the interaction with language-specific preferential patterns to phonological changes.

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