This is an extract of the introductory chapter of my book *Transitivity, valency, and voice* published in 2024 by Oxford University Press.

Transitivity, valency, and voice: an overview

The morphosyntactic mechanisms involving the notions commonly discussed in terms of transitivity, valency, and voice are at the very heart of the most basic aspects of the organization of verbal predication in any language, but the details of their organization vary greatly from language to language. The ambition of the present book is to set up a consistent framework, novel in many respects, for analyzing transitivity, valency, and voice phenomena in the morphosyntax of the languages of the world. Throughout the book, the emphasis is on accounting for the cross-linguistic variation in the domain of transitivity, valency, and voice and capturing regularities in this variation.[1]

1.1 Overview of the topics addressed in this book

In this section, I give a brief and informal overview of the topics addressed in this book, in which I try to use only terms and notions familiar from traditional grammar and/or introductory courses in morphosyntax. The conceptual framework and terminology to which the remainder of this book will refer will be introduced in §1.2.[2]

1.1.1 Transitivity

TRANSITIVITY refers to a type of organization of verbal clauses typically found in clauses projected by verbs denoting two-participant actions exerted by one of the participants (the agent) and resulting in a change in the state of the other participant (the patient), as in *The child broke the glass* or *John fixed the bicycle*. Hopper and Thompson (1980: 251) define the traditional interpretation of transitivity as follows:

[1] The data used in this book are taken from a variety of languages, and the only criteria in the selection of the languages were my awareness of their relevance to the various issues under discussion, the reliability of the information available to me, and the possibility of illustrating the issues under discussion without having to enter into lengthy explanations about aspects of morphosyntax irrelevant to the point. The reason why I didn't use a cross-linguistic sample of the type often used in typological studies is simply that the sampling method is suitable for an investigation of the cross-linguistic distribution of parameters whose definition follows from a pre-established framework, not for the discussion of a framework for the cross-linguistic investigation of a given domain.

[2] Given the topic of this book, we will be only marginally concerned by non-verbal predication, which consequently need not be discussed in detail here. Suffice it to say that, as regards the distinction between verbal and non-verbal predication, I basically agree with Hengeveld's (1992) approach. To put it in a nutshell, I adhere to the conception of non-verbal predicative constructions as constructions giving rise to non-elliptical clauses analyzable as consisting of an argument phrase and a predicate phrase in which the property- or relation-denoting element that acts as the semantic nucleus of the predicate phrase is not a verb. Crucially, I do not equate the notions of verbal/non-verbal predication to verbful/verbless clause. For example, English *John is a teacher* is a verbful clause, whereas Hungarian *János tanár* 'J. is a teacher' is a verbless clause, but both clauses express the particular variety of non-verbal predication in which the property the argument *John*/*János* is said to have is the lexical meaning of a noun.

> "an activity is 'carried over' or 'transferred' from an agent to a patient. Transitivity in the traditional view thus necessarily involves at least two participants. . . and an action which is typically EFFECTIVE in some way."

Traditionally, transitive clauses are characterized as having a subject and a direct object. Crucially, the morphosyntactic organization of clauses denoting actions involving an agent and a patient can also be found in clauses denoting other semantic types of two-participant events (as, for example, *John saw the accident*). However, there are also clauses denoting two-participant events whose construction does not follow the transitive pattern, as, for example, *John agreed with me*.

The problem is that, in traditional grammars, the direct object of the verb is commonly defined as the thing being acted upon, which suggests a purely semantic conception of transitivity. It is true that 'being acted upon' can be understood in a more or less strict sense, but even if 'being acted upon' is taken in a very broad sense, there are verbs, such as English *see*, that refer to events that cannot be described as denoting an action exerted by a participant on another participant, and are nevertheless unanimously classified as transitive by traditional grammarians. The verb *see* denotes a situation involving a perceiver and a stimulus, in which it would not make sense to describe the perceiver as 'acting upon' the stimulus, and consequently, the identification of *see* as a transitive verb whose direct object refers to the stimulus in a perception event must, in some way or another, involve the formal characteristics assigned by *see* to the noun phrase representing the stimulus.

Quite obviously, the relationship between a semantic definition of transitivity and syntactic transitivity as characterizing verbs taking a particular formal type of complement traditionally designated as their direct object is much less straightforward than suggested by traditional grammars, as evidenced by the fact that verbs taking direct objects in a given language do not necessarily correspond to verbs taking direct objects in another language (as, for example, English *climb the tree*/French *grimper à l'arbre*, lit. *climb **to** the tree*).

However, such observations must not necessarily lead to the conclusion that the division of verbs into transitive and intransitive ones on the basis of their compatibility with a particular formal type of complement traditionally designated as their direct object would be nothing else than a language-specific and semantically arbitrary distinction. In fact, it is possible to reconcile a semantic definition of transitivity and a language-specific delimitation of the set of transitive verbs on the basis of formal criteria. This can be done by considering that, for example, the identification of the English verb *hear* in *The dog heard a noise* as a transitive verb with *a noise* in the role of direct object is justified by the fact that this clause is constructed in the same way as clauses denoting transitive events in which an agent acts upon a patient ('agent,' 'act upon,' and 'patient' being taken in their strictest sense), such as *The dog caught a rabbit*, and this will be the idea developed in this book.

In other words, transitivity as a morphosyntactic property of verbs/clauses must be distinguished from transitivity as a semantic property of the events denoted by verbs/clauses, but at the same time, syntactic transitivity cannot be defined independently of the semantic notion of transitive event, which is logically anterior to the notion of transitive verb/clause. This approach to transitivity was advocated in a particularly clear and explicit way in Gilbert Lazard's works, which were a major source of inspiration to me (see in particular Lazard 1994, translated into English as Lazard 1998).

The most important questions that must be addressed in a typological approach to transitivity are as follows:

• The articulation between semantic transitivity and syntactic transitivity

There are obvious differences in the way languages articulate semantic transitivity as a semantic characterization of the events denoted by clauses and syntactic transitivity as a formal property of clauses. In particular, languages differ in the extension of the coding that characterizes agents and patients of typical action verbs to the coding of participants in other semantic types of states of affairs. They also differ in the availability of various possible types of constructions commonly viewed as intransitive alternatives to the transitive construction, such as passive constructions (*The glass was broken by the child*, *The bicycle was fixed by John*).

• The cross-linguistic variation in the formal characteristics of the transitive construction

Languages differ in the formal characteristics of the transitive construction. For example, in the transitive clauses of English, if both nominal terms are nouns, they show no morphological marking of their role in the construction, and consequently do not vary if they exchange their roles (*The hunter killed the lion*/*The lion killed the hunter*). In some other languages, for example Latin, or Hungarian, the direct object takes a special form called the accusative case. In yet others, for example Avar (Nakh-Daghestanian), it is the subject of transitive clauses that takes a special form, called the ergative case. The questions that must be addressed in typological perspective are the limits of this variation, the cross-linguistic distribution of the attested patterns, and possible correlations between coding patterns of transitive clauses and other typological characteristics of languages.

• The language-internal variation in the formal characteristics of clauses projected by transitive verbs

There are several possible types of language-internal variation in the construction of transitive verbs. The transitive–passive alternation (or 'active–passive' alternation, in a more traditional terminology), already evoked above, is one of the possible types. It is commonly analyzed in terms of detransitivization. Spanish illustrates another possible type, known as 'differential object marking,' characterized by the possible use of a preposition to introduce the direct object, depending on some of its characteristics (animacy and specificity), as in *El tren atropelló un tractor* 'The train ran over a tractor' vs. *El coche atropelló a un peatón* lit. 'The car ran over TO a pedestrian.' Contrary to the transitive–passive alternation, this alternation is usually not analyzed as affecting the transitivity of the clause, and this will also be the position adopted in this book. An important issue in a typological approach to transitivity is the elaboration of a comprehensive typology of the possible language-internal variation in the construction of transitive verbs.

• The transitive–intransitive alignment

In English, with verbs denoting one-participant events (such as *run*, *cry*, or *die*) the noun phrase representing the sole essential participant shows coding characteristics identical to those assigned by typical transitive verbs to their agent (i.e., the coding characteristics that define the grammatical relation subject as traditionally conceived in English grammar). In other languages, for example, Avar (Nakh-Daghestanian), the coding of the sole essential participant in the events denoted by verbs such as *run*, *cry*, or *die* coincides with that of the PATIENT of typical transitive verbs. As illustrated in (1), in Avar, the noun phrase representing the sole essential participant of 'come' shows no mark of its role in the construction of the clause, and the verb agrees with it in gender and number. The same coding characteristics are also those of the noun phrase representing the patient of 'plough,' whereas the noun phrase representing the agent of 'plough' is in a marked case form (the ergative case) and does not govern verb agreement.[3]

(1) Avar (Avar-Andic-Tsezic, Nakh-Daghestanian)
   a *Pat'imat j-ač'-ana.*
   PRN(F) $I_{S/P}$:SG.F-come-CPL
   'Patimat came.'
   b *Aɦmad w-ač'-ana.*
   PRN(M) $I_{S/P}$:SG.M-come-CPL
   'Ahmad came.'
   c *Aɦmad-i-ca χur b-eƛ'-ana.*
   PRN(M)-OF-ERG field(N) $I_{S/P}$:SG.N-plough-CPL
   'Ahmad ploughed the field.'

Some other languages attest more complex situations that cannot be analyzed in terms of a binary choice between the English type and the Avar type of alignment pattern. The typology of the possible patterns of alignment between the construction of verbs denoting one-participant states of affairs and that of typical transitive verbs, and the investigation of possible correlations with other typological characteristics of languages, are important aspects of the typology of transitivity.

• The transitive–ditransitive alignment

The construction of verbs denoting three-participant events, such as 'send' or 'provide,' shows variation, both cross-linguistically and language-internally, and this variation can be described in terms of alignment with the construction of typical transitive verbs denoting two-participant events. For example, in the English sentence *We provided the candidate with all the necessary documents*, the participant that can be characterized as the recipient (the candidate) is encoded as the direct object, whereas in the French equivalent of this sentence

[3] In this book, the examples for which no source is given are either based on my personal knowledge of the language (in the case of French and a few other languages I am particularly familiar with), or on my personal documentation. By personal documentation, I mean data I collected directly from native speakers, or data extracted from various types of sources other than language descriptions or scientific articles (newspapers, Internet, pedagogical grammars, etc.) and checked with the help of native speakers. On glossing conventions, see §1.5. As regards the identification of the languages, unless otherwise specified, language names must be understood as referring, either to the standard variety of the languages in question, or to the only variety for which some documentation is available.

(*Nous avons fourni tous les documents nécessaires au candidat*), the same participant is encoded as the indirect object. A systematic investigation of the possible constructions for verbs denoting three-participant events and their cross-linguistic distribution is another important aspect of the typological approach to transitivity.

1.1.2 Valency

VALENCY refers to the ability of verbs to combine with noun phrases or adpositional phrases referring to the participants in the events they denote or to their circumstances, and to determine the coding characteristics of those among the nominal terms of the clause that refer to the semantically essential participants (commonly referred to as ARGUMENTS, as opposed to ADJUNCTS, a notion encompassing non-essential participants and circumstances of the event). According to the number of nominal terms in the construction of the verb representing essential participants in the denoted event, a verb can be characterized as avalent (*rain*), monovalent (*cry*), bivalent (*see*), or trivalent (*send*).

In other words, the notion of valency encompasses a formal characterization of the nominal terms of the clauses projected by a given verb, and a semantic characterization of their referents according to their respective roles in the event, with a particular attention to the essential participants, whose coding is a lexical property of individual verbs. For example, *see* refers to events involving two essential participants, a perceiver and a stimulus. Morphosyntactically, in a clause such as *The child saw a snake*, the perceiver phrase fulfils the grammatical role traditionally labeled 'subject' in English grammar, whereas the stimulus phrase fulfills the grammatical role traditionally labeled 'direct object.'

'Valency' is not a traditional grammatical term. Its use in linguistics derives from its use in chemistry. According to Przepiórkowski (2018), the first attestation of the valency metaphor in linguistics can be found in Charles Sanders Pierce's essay *The logic of relatives* in 1897. What is, however, sure, is that Lucien Tesnière can be credited with having popularized the valency concept in linguistics in the late 1940s and 1950s. Tesnière (1969) is the main reference on his theory of valency.

According to Tesnière, the traditional analysis of clauses as consisting of a subject phrase and a predicate phrase leads to overlooking some important aspects of clause structure that are best accounted for by abandoning the idea that the subject has a particularly privileged status, and classifying the noun phrases or adpositional phrases having a direct relationship to the verb as either 'actants' or 'circonstants.' The actants are further subdivided into 'prime actant,' 'second actant,' and 'tiers actant' corresponding to the traditional notions of subject, direct object, and indirect object. Although offering valuable insights on a number of aspects of clause structure, Tesnière's approach to valency was basically flawed by the lack of a distinction between semantic and syntactic valency. Allerton (1982) can be credited with having insisted on the importance of this distinction in his study of the valency of the English verbs.

In recent literature, the term ARGUMENT STRUCTURE is commonly used with reference to the semantic aspects of valency, that is, the set of SEMANTIC ROLES characterizing the participants in the event denoted by the verb. In this book, in order to avoid any confusion between syntactic and semantic aspects of valency, I will preferably use unambiguous terms such as ESSENTIAL PARTICIPANTS at semantic level and CORE (SYNTACTIC) TERMS at syntactic level, rather than 'arguments.' The term CODING FRAME will be used with reference to the

constraints imposed by each individual verb on the coding characteristics of the phrases representing essential participants in the events it denotes. The coding frames selected by verbs are basically a lexical property of individual verbs, but the analysis of possible regularities in the selection of coding frames is an essential aspect of valency studies. The term PARTICIPANT FRAME (rather than argument structure) will be occasionally used to refer unambiguously to the set of participant roles implied by the lexical meaning of a given verb.[4]

In the last decades, the division of verbs into VALENCY CLASSES has been the subject of a large number of studies (Malchukov and Comrie 2015), to which I contributed with a chapter on valency classes in Mandinka (Creissels 2015b), deserves special mention for addressing the question of cross-linguistic variation and regularities in the systems of valency classes on the basis of a systematic comparison of thirty genetically and areally diverse languages.

In this book, the focus is not on the cross-linguistic variation in the division of verbs into valency classes, but rather on the typology of VALENCY ALTERNATIONS.

The term VALENCY ALTERNATION, as used in this book, refers to the possibility that two different constructions of the same verb, or of two formally related verbs, denote identical events, or events that differ at most on one of the following points:

– the assignment of participant roles to individual participants,
– the possible involvement of non-essential participants,
– the possible reshaping of one of the participant roles,
– the greater or lesser complexity of the causality chain.[5]

Note that the different constructions a polysemous verb may have in its different meanings are not considered instances of valency alternations. For example, the transitive use of *break* in a sentence such as *The child broke the glass* and the intransitive use of the same verb in *The glass broke* meet the definition of a valency alternation, but this is not the case for the transitive and intransitive uses of *stand* illustrated by *I cannot stand rudeness* and *I am delighted to stand before you today*.

The definition formulated above also excludes from the notion of valency alternation V > V derivations introducing a semantic role that cannot be viewed as a participant role in the event denoted by the base verb. This concerns, for example, the role of believer implied by derived verb forms projecting clauses glossable as 'X believes that $\bar{V}$' (where $\bar{V}$ represents a clause projected by the base verb), cf. §8.1.6, or the role of viewpoint holder implied by derived verb forms projecting clauses glossable as 'X estimates that $\bar{V}$,' cf. §12.6.6.

Example (2) illustrates a valency alternation where the two constructions have the same denotative meaning, and differ only in the mapping of participants (the builder and the thing being built) onto morphosyntactic slots: in (2a), the builder is encoded as the subject (in Russian grammar, the noun phrase in the nominative case that governs verb agreement), and the thing being built as the direct object (marked by the accusative case), whereas in (2b), the subject represents the thing being built, and the builder is encoded as an instrumental oblique.

[4] Note that, throughout this book, whenever the term 'participant' is used without further specification, it must be understood as an abbreviation for 'participant in the event denoted by the verb.' Participants in the speech act will be explicitly designated as 'speech act participants' (abbreviated as SAPs).

[5] Croft (1991, 1994, 2012) is the main proponent of the causal approach to event structure, crucial for a proper understanding of valency operations such as causativization and decausativization, as will be developed in the relevant chapters.

(2) Russian (Slavic, Indo-European)
a *My stro-im školu.*
1PL build-PRS.$I_{S/A}$:1PL school.ACC
'We are building a school.'
b *Škola stro-it-**sja** nami.*
school build-PRS.$I_{S/A}$:3SG-PASS 1PL.INS
'The school is being built by us.'

In English, *My father built this house in 1990*/*This house was built by my father in 1990* illustrates the same functional type of valency alternation, with the only difference being that the alternation is not marked by a verbal affix, but by the formation of a complex predicate in which the verb *be* acting as a valency operator combines with a non-finite form of the verb *build*.

Example (3) shows that the same functional type of valency alternation may be found without any specific morphological marking.

(3) Bambara (Central Mande, Mande)
a *Sékù bɛ́nà bàtàkí !sébɛ́n.*
PRN FUT letter.D write
'Sékou will write the letter.'
b *Bàtàkí !bɛ́nà sébɛ́n Sékù fɛ̀.*
letter.D FUT write PRN by
'The letter will be written by Sékou.'

Example (4) illustrates a different type of valency alternation, in which the two constructions denote events implying the same participant roles of kisser and kissee,[6] but differing in that, in (4a), the two participant roles are assigned to one participant each, whereas (4b) denotes a reciprocal situation in which the same roles are shared by the two participants. In (4b), the alternation is morphologically marked by the addition of the verbal suffix *-s'*, phonologically conditioned variant of the suffix occurring as *-sja* in (2b) above.

(4) Russian (Slavic, Indo-European)
a *Paren' celova-l-Ø devušku.*
boy kiss-PST-$I_{S/A}$:SG.M girl.ACC
'The boy kissed the girl.'
b *Paren' i devuška celova-l-i-**s'**.*
boy and girl kiss-PST-$I_{S/A}$:PL-RECP
'The boy and the girl were kissing.'

In example (5), the same verbal suffix marks another type of valency alternation where the two constructions denote events differing only in the assignment of participant roles to individual participants. In (5a), the roles of cutter and cuttee are assigned to two distinct

[6] In the literature on semantic roles, it has become common practice to generalize the use of the suffix *-ee* to designate the most patient-like argument of semantically bivalent verbs whose meaning implies a contrast in the agentivity of the protagonists. Such labels are occasionally used in this book too.

participants, encoded as the subject and the direct object, respectively, whereas (5b) encodes a reflexive situation, in which a single participant cumulates both roles.

(5) Russian (Slavic, Indo-European)
a *Ja poreza-l-Ø tort.*
1SG PFV.cut-PST-$I_{S/A}$:SG.M cake.ACC
'I cut the cake.'
b *Ja poreza-l-Ø-**sja**.*
1SG PFV.cut-PST-$I_{S/A}$:SG.M-REFL
'I cut myself.'

Example (6) illustrates another type of valency alternation marked by the same verbal suffix. In (6), the two constructions denote events that are not identical, and do not involve the same set of participant roles, but can be analyzed as differing only in the greater or lesser complexity of the causality chain. In (6a), the breaking process affecting the referent of the direct object is presented as triggered by an agent, encoded as a nominative noun phrase governing verb agreement, whereas in (6b), nothing is implied about the causality chain resulting in the breaking process, and the nominative noun phrase governing verb agreement represents the thing undergoing the process.

(6) Russian (Slavic, Indo-European)
a *Rebënok razbi-l-Ø čašu.*
child break.PFV-PST-$I_{S/A}$:SG.M cup.ACC
'The child broke the cup'
b *Čaša razbi-l-a-s'.*
cup break.PFV-PST-$I_{S/A}$:SG.F-DECAUS
'The cup broke.'

The child broke the glass/The glass broke illustrates the same functional type of valency alternation, but in English, no morphological marking is involved in the alternation.

The typology of valency alternations is one of the major topics addressed in this book.

1.1.3 Coded and uncoded valency alternation, flexivalency, and voice

As illustrated in §1.1.2, depending on language-specific rules, functionally similar valency alternations may involve specific morphological coding on verbs or not.

In comparison with other languages, English has a particularly rich system of UNCODED valency alternations. In addition to those already illustrated in §1.1.2, they include, among many others, the alternations illustrated by sentence pairs such as *John opened the door with a chisel/The chisel opened the door*; *John sprayed paint on the wall/John spread the wall with paint*; *John gave the book to Peter/John gave Peter the book*, etc.

A major reference on this topic is Levin and Rappaport Hovav's (2005) systematic investigation of the relationship between the lexical semantics of English verbs and the uncoded alternations to which they lend themselves. This is an extremely interesting question that would be worth being developed in a typological perspective. Unfortunately, detailed data on uncoded valency alternations are available for relatively few languages, and

consequently, it is not feasible to address the question or the relationship between uncoded valency alternations and the lexical semantics of verbs in a broad cross-linguistic perspective.

In the typology of uncoded valency alternations that will be put forward in this book, the term FLEXIVALENCY, proposed by Martin Haspelmath (pers. comm.), is used as a general term referring to the ability of verbs to lend themselves to uncoded valency alternations, without any additional condition on the precise nature of the valency alternations to which a flexivalent verb may lend itself without necessitating morphological marking. AMBITRANSITIVITY is used with reference to uncoded valency alternations involving a change in transitivity, as in *The child broke the glass* (transitive)/*The glass broke* (intransitive). The term 'lability' is widely used in the literature, but is avoided here as potentially confusing, since its etymology suggests a definition encompassing all possible types of flexivalency (and some authors have used it with this broad meaning), but most authors use it with the meaning unambiguously expressed by 'ambitransitivity,' or even restrict it to the particular type of ambitransitivity that will be referred to in this book as P-ambitransitivity.

In this book, the term VOICE is used as a general term for morphological operations on verbs regulating the relationship between the syntactic role of noun phrases and the way their referents participate in the event denoted by the verb. In other words, 'voice' refers to the coding of valency alternations on verbs without any additional condition on the precise nature of the valency alternations considered as instances of voice.[7] The typology of voice marking is consequently an important aspect of the typology of valency alternations.

In grammatical descriptions of the languages of Europe, 'voice' is used mainly (if not exclusively) with reference to the particular type of coded valency alternation illustrated in English by clause pairs such as *My father built this house in 1990* (active voice)/*This house was built by my father in 1990* (passive voice). Three other types of valency alternations that may involve specific coding on verbs have already been illustrated in §1.1.2: reciprocalization in example (4), reflexivization in example (5), and decausativization in example (6). Applicativization, illustrated in example (7), is still another cross-linguistically widespread type of verb-coded valency alternation. In (7b), the voice marker *-ɛ́l-* conditions the use of *-kwálá* 'write' in a double-object construction in which the first object represents the recipient to which the letter will be sent or a beneficiary. In (7c), the repetition of the voice marker conditions the possibility of mentioning both a recipient and a beneficiary in a triple-object construction in which none of the noun phrases in post-verbal position is morphologically marked, but the roles of the participants they denote are unambiguously encoded by the rigid linear order of constituents *beneficiary–recipient–theme*.

(7) Tswana (Bantu, Benue-Congo, Niger-Congo)

a *Kítsɔ́ ǃɔ́-tɬáà-kwál-á lɔ̀-kwâːlɔ̀.*
PRN(cl1) $I_{S/A}$:cl1-FUT-write-FV SG-letter(cl11)
'Kitso will write a letter.'

b *Kítsɔ́ ǃɔ́-tɬáà-kwál-ɛ́l-á Mpʰɔ́ lɔ̀-kwâːlɔ̀.*
PRN(cl1) $I_{S/A}$:cl1-FUT-write-APPL-FV PRN(cl1) SG-letter(cl11)
'Kitso will write a letter to/for Mpho.'

[7] The question whether the notion of verbal coding should be understood in a very strict sense, or rather as including auxiliaries and clitics, is a thorny issue that will be addressed in §§8.1.4–8.1.5, but whose discussion in this introductory chapter would be premature.

c *Kítsɔ́* *ǃɔ́-tɬáà-kwál-él-él-à* *Lɔ̀rátɔ́* *Ǹpʰɔ́* *lɔ̀-kwâːlɔ̀.*
PRN(cl1) $I_{S/A}$:cl1-FUT-write-APPL-APPL-FV PRN(cl1) PRN(cl1) SG-letter(cl11)
'Kitso will write a letter to Mpho on behalf of Lorato.'

The study of morphological operations on verbs regulating the relationship between the syntactic status of noun phrases and the way their referents participate in the event denoted by the verb has a very old tradition in descriptive linguistics.

Since the works of Pāṇini (c. sixth–fourth centuries BCE), Sanskrit grammars describe the inflection of Sanskrit verbs as involving a contrast between *parasmai pada* (lit. 'word for other,' translated in English as 'active voice'), whose basic meaning is that the action of the verb is directed at a person other than the subject, and *ātmane pada* (lit. 'word for self,' translated in English as 'middle voice'), whose basic meaning is that the action is directed at the subject itself. Greek grammars, following a tradition whose origin is attributed to Dionysius Thrax (second century BCE), use the term *diáthesis* 'arrangement' or 'condition' with reference to a contrast in verb inflection between three possible sets of inflectional endings characterized as *enérgeia* 'activity,' *páthos* 'suffering,' and *mesótēs* 'intermediate' (rendered in English as 'active voice,' 'passive voice,' and 'middle voice,' respectively).[8]

Latin grammarians used the terms *genus verbi* (lit. 'verb gender') or *vox* 'voice' for the contrast between two possible sets of inflectional endings of verbs designated as *vox activa* 'active voice' and *vox passiva* 'passive voice.'

'Voice' was subsequently used by grammarians as a descriptive label for morphosyntactic mechanisms that are delimited for each language on a language-internal basis, but show some functional affinities with Sanskrit *pada*, Greek *diáthesis*, or Latin *vox*. However, until very recently, the justification for identifying language-particular categories as manifestations of a cross-linguistic notion of voice was not discussed by linguists.

As discussed in detail by Zuñiga and Kittilä (2019: 7–10), different meanings have been given to the term 'voice' by different authors. When putting forward a definition of voice as a cross-linguistic notion, one may hesitate between a narrower or broader conception of voice. For example, since this term was originally used for an inflectional category, one might decide to limit the use of the term voice to languages that have an inflectional category functionally similar to Sanskrit, Greek, or Latin voice. A major shortcoming of such a decision would be that, in the vast majority of the languages that have been described as having a voice system, the expression of voice does not involve verb inflection, but rather V > V derivation, or the formation of complex predicates in which a non-finite form of the verb acting as the predicative nucleus of the clause combines with another verb acting as a voice operator. One might also consider restricting voice to valency alternations involving a change in the semantic role of the subject. On the other hand, the term voice has been used by some authors, for example Givón (1984, 1994), as encompassing uncoded valency alternations, and even phenomena that cannot be analyzed in terms of valency alternations.

As mentioned at the beginning of this section, the definition of voice adopted in this book encompasses all possible types of valency alternations involving verbal coding (including types, such as applicatives, that are not considered as voices by authors using a more restrictive notion of voice), but excludes uncoded valency alternations. This delimitation of the domain of voice was initially proposed by Mel'čuk and Xolodovič (1970) and has been

[8] For detailed analyses of voice and diathesis in the Graeco-Roman tradition, see Benedetti (2014, 2016, 2017) and references therein.

illustrated, among others, by Mel'čuk (1993) and Kulikov (2011b). It has gained acceptance in recent investigations of valency alternations, and is, in particular, the definition adopted in Zúñiga and Kittilä's (2019) survey of grammatical voice.

Cross-linguistically, multifunctional voice markers are very common. For example, in Russian, the verbal suffix *-sja ~ -s'* may mark that the same participant cumulates the two participant roles expressed by the subject and the object in the transitive construction of the same verb (reflexivization), as in (8a), but also reciprocalization, as in (8b), passivization, as in (8c), or antipassivization (a valency operation converting a transitive clause into an intransitive clause whose subject expresses the same semantic role), as in (8d).

(8) Russian (Slavic, Indo-European)
   a *Ivan* *mo-et-**sja**.*
   PRN(M) wash.IPFV-PRS.$I_{S/A}$:3SG-REFL
   'Ivan is washing (himself).'
   b *Paren'* *i* *devuška* *celuj-ut-**sja**.*
   boy(M) and girl(F) kiss.IPFV-PRS.$I_{S/A}$:3PL-RECP
   'The boy and the girl are kissing (each other).'
   c *Lekcija* *čita-et-**sja*** *professor-om.*
   course(F) deliver.IPFV-PRS.$I_{S/A}$:3SG-PASS professor(M)-SG.INS
   'The course is delivered by the professor.'
   d *Sobaka* *kusa-et-**sja**.*
   dog(F) bite.IPFV-PRS.$I_{S/A}$:3SG-ANTIP
   'The dog bites (people).'

In this book, particular attention is devoted to the cross-linguistic investigation of the multifunctionality patterns in which voice markers may be involved.

1.2 Theoretical and terminological issues

Section 1.3 will be devoted to the presentation of the framework within which transitivity, valency, and voice will be discussed in this book. In this section, I briefly discuss the position I take about some concepts generally considered basic for the analysis of clause structure and its semantic correlates, and the terms used to refer to them.

1.2.1 Semantic roles

The nominal terms of verbal clauses (i.e., the noun phrases or adpositional phrases that complete or modify the meaning of the verb acting as the predicative nucleus of the clause) typically refer to participants in the event encoded by the verb, but this is not their only possible function. In addition to PARTICIPANT roles (such as agent, patient, experiencer, instrument, beneficiary, etc.), noun phrases or adpositional phrases may also fulfill CIRCUMSTANTIAL roles, broadly defined as referring not only to circumstances of the event *stricto sensu* (place, time, cause, purpose) but also to notions such as manner or comparison,

ENUNCIATIVE roles (i.e., speech-act-related roles such as source of knowledge or viewpoint), and PREDICATIVE roles (in which they express secondary predications about participants).[9]

For example, the Hungarian clause in (9) includes five noun phrases (three of them case-marked and one of them flagged by a postposition), but *a férje* 'her husband' is the only one expressing a participant role, namely the role of sole essential participant in the event denoted by 'work' (worker). *Öt évig* 'five years' and *egy gyárban* 'in a factory' refer to circumstances of the event, *mérnökként* 'as an engineer' expresses the predicative role of functive,[10] assigned to the worker, and *tudomásom szerint* lit. 'according to my knowledge' expresses the enunciative role of source of knowledge.

(9) Hungarian (Ugric, Uralic)
Tudomás-om *szerint,* *a* *férj-e* *öt* *év-ig*
knowledge-I_{ADP}:1SG according.to D husband-I_{ADP}:3SG five year-TERM
mérnök-ként *dolgozott* *egy* *gyár-ban.*
engineer-ESS work.PST.$I_{S/A}$:3SG one factory-INESS
'As far as I know, her husband worked five years as an engineer in a factory.'

Example (10) illustrates the fact that the distinction between these three broad types of roles is not necessarily apparent in the coding characteristics of noun phrases. In (10a), the postposition *tí* flags a noun phrase in the predicative role of transformative, whereas in (10b), the same postposition flags a noun phrase in the circumstantial role of standard of comparison.

(10) Mandinka (Central Mande, Mande)
a *Jíyóo* *yèlèmá-tá* *dòlôo* *tí.*
water.D change-CPL.ITR wine.D POSTP
'The water changed into wine.'
b *Sánòo* *lè* *kúlíyàa-tá* *kódòo* *tí.*
gold.D FOC be.heavy-CPL.ITR silver.D POSTP
'Gold is heavier than silver.'

Similarly, in (11a), the instrumental case flags a noun phrase in the participant role of instrument, whereas in (11b), the same morphological case flags a noun phrase in the predicative role of functive.

(11) Russian (Slavic, Indo-European)
a *On* *bre-et-sja* *èlektričesk-oj* *britv-oj.*
3SG.M shave-PRS.$I_{S/A}$:3SG-REFL electric-SG.F.INS razor(F)-SG.INS
'He shaves with an electric razor.'
b *On* *rabota-et* *inžener-om.*
3SG.M work-PRS.$I_{S/A}$:3SG engineer(M)-SG.INS
'He works as an engineer.'

[9] Nouns may also combine with verbs into complex predicates of the type commonly termed light-verb constructions, in which they contribute to the elaboration of a type of event (see §5.8.3 and §7.3.2).
[10] On the semantic role of functive, and the typology and diachrony of functive marking, see Creissels (2016).

Since Charles Fillmore's (1968) seminal work, semantic roles have been defined and discussed in a number of ways depending on the authors' theoretical orientation and the questions in the analysis of which they have used them. For a review of the voluminous literature on semantic roles, readers are referred to Kittilä and Zúñiga (2016).

An important point is that, as will be commented on in more detail in §2.1, participant roles can be defined at different degrees of granularity. For example, two verb-specific participant roles (or 'micro-roles') such as 'hearer' and 'seer' can be viewed as two varieties of a more abstract role of 'perceiver,' and the role of perceiver can, in its turn, be considered as a particular variety of a more abstract role of 'experiencer' encompassing also the roles expressed by the subject of verbs such as *think* or *fear*. None of the lists of semantic roles that may have been proposed in the literature is intrinsically better than the others, and the choice of considering variously delimited and more or less abstract semantic roles must only be guided by their relevance to the specific questions at issue, and the possibility they offer of capturing generalizations in the morphosyntactic treatment of participants. For a discussion of the possible cross-linguistic tendencies in micro-role clustering, see Hartmann et al. (2016) and Bickel et al. (2016).

In the perspective of a typological investigation of transitivity and voice, the crucial choice regarding semantic roles is between two types of approaches differing in the semantic roles taken as basic in the formulation of the key definitions.

The approach to transitivity and valency to which I adhere crucially relies on the notion of basic construction of prototypical transitive verbs, and consequently on the roles of PROTOTYPICAL AGENT (defined as a human participant consciously and willingly controlling an activity aiming at changing the state or position of another participant) and PROTOTYPICAL PATIENT (defined as a participant undergoing a change of state or position triggered by the activity of an agent), since prototypical transitive verbs are identified as such by their ability to denote events involving a prototypical agent and a prototypical patient.

In the other possible type of approach, most clearly advocated by Bickel (2010) and Witzlack-Makarevich (2011), the roles of prototypical agent and prototypical patient are not taken as basic, and key definitions rely on maximally abstract GENERALIZED SEMANTIC ROLES, such as "sole argument of a semantically monovalent verb," "relatively agent-like argument of a semantically bivalent verb" (abbreviated here as G-agent, where G stands for generalized), "relatively patient-like argument of a semantically bivalent verb" (or G-patient), etc. This type of approach crucially relies on the postulate that a single pair of generalized semantic roles accounts for the participant frame of all bivalent verbs.

For example, in the generalized semantic role approach as developed by Bickel (2010) and Witzlack-Makarevich (2011), perceivers and prototypical agents are viewed as particular instances of the same generalized semantic role of G-agent, whereas stimuli and prototypical patients are viewed as particular instances of the same generalized semantic role of G-patient.

As discussed in detail by Haspelmath (2011: 552–8), such generalized semantic roles are problematic in many respects. Their identification is based on a list of 'entailments' largely taken from Dowty's (1991) analysis of the valency properties of English verbs, whose relevance for capturing cross-linguistic regularities is consequently not guaranteed. Moreover, the way entailments are formulated is not always devoid of ambiguity. For example, one may wonder why stimuli are categorized without any nuance as G-patients rather than G-agents, since their involvement in the causality chain may justify characterizing them as 'causing an event.'

In fact, small changes in the formulation of the definition of generalized semantic roles (or in their understanding), or the addition of other possible criteria that might be suggested by the division of verbs into valency classes in languages other than English, could have important consequences for the identification of generalized semantic roles. Moreover, as observed by Haspelmath (2011: 554), on the basis of the definitions put forward by Bickel (2010) and Witzlack-Makarevich (2011), it is not difficult to find bivalent verbs referring to events whose participants cannot be unambiguously characterized as more agent-like or more patient-like (whereas in other frameworks, there would not be the slightest difficulty in classifying the verbs in question as transitive or intransitive and in characterizing the status of their arguments). For example, it is unclear how generalized semantic roles could be used to characterize as G-agents or G-patients the referents of the two nominal terms of clauses such as *The year 1988 witnessed two events which greatly affected European history* or *Two significant events marked the year 1988*.

I also find particularly problematic the inclusion of 'possessing another participant' among the criteria for identifying G-agents, and the characterization of the subject and object of English *have* as a G-agent and a G-patient, respectively (Witzlack-Makarevich 2019: 8). This characterization of *have* may seem justified if one has in mind uses of *have* such as *John has a dog*, but what about *John has two uncles* or *The room has three windows*? This point could be clarified by replacing 'possessing another participant' by 'controlling another participant,' but then it becomes impossible to characterize the two arguments of *have* in *John has two uncles* or *The room has three windows* in terms of generalized semantic roles, and in *John has a new supervisor*, it is the object rather than the subject that should be identified as relatively agent-like. My position on this point is that, given the specificity of the roles of possessor and possessee, attempts to analyze them as particular varieties of more abstract semantic roles are doomed to fail.

To summarize, in the analysis of questions related to valency and transitivity, the use of generalized semantic roles creates problems rather than helping to solve them, and this is why I decided to adopt an approach to transitivity and valency based on prototypical agent/patienthood, rather than an approach based on generalized semantic roles.

1.2.2 Arguments and adjuncts

The nominal terms of verbal clauses are commonly divided into two broad types designated in most recent works as *arguments* and *adjuncts*. Usually, noun phrases in predicative or enunciative roles are not taken into account in discussions of the argument vs. adjunct distinction, and noun phrases expressing circumstantial roles are viewed as typical adjuncts. In other words, the issue of distinguishing arguments from adjuncts arises primarily for noun phrases expressing participant roles.

There is a common understanding that the distinctive property of arguments is their relatively tight semantic relationship to the verb, as opposed to the looser type of semantic relationship to the verb that characterizes adjuncts. In other words, argumenthood refers to the degree to which participants are involved in the event, and two types of participants can be viewed as showing a particularly high degree of involvement: those without which the event simply cannot be conceived (for example, the lexical meaning of 'eat' cannot be defined without mentioning an eater and an eatee), and those whose participation conditions that of other participants.

The notion of argumenthood has been discussed, and argumenthood tests have been proposed, in classical works such as Jackendoff (1977), Marantz (1984), Pollard and Sag (1987), and Grimshaw (1990). Schütze (1995) provides both a detailed survey and an interesting discussion in which he argues in favor of a scalar conception of argumenthood. However, the detailed discussions of argumenthood one can find in the literature almost always deal exclusively with English (or other well-described languages such as French or German), and it is not difficult to find languages to which the argumenthood tests put forward in the literature (in particular, the famous *do so* test) can hardly be transposed. Conversely, it may happen that a systematic account of valency classes in languages that are rarely mentioned in general discussions of argumenthood is greatly facilitated by using language-specific tests that are not considered in the general literature on argumenthood, and quite obviously cannot be transposed to other languages, as, for example, the minimal headless relative clause test put forward by Bisang (2006) for Mandarin Chinese and used by Lu et al. (2015) in their analysis of valency classes in Mandarin.

Argumenthood as a semantic characterization of the relationship between verbs and the noun phrases that refer to the participants in the events denoted by verbs is certainly an important notion in the analysis of the relationship between the nominal terms of verbal clauses and the verb projecting the clause, but the idea of a straightforward correspondence with some aspects of the syntactic behavior of noun phrases cannot be maintained.

As argued among others by Forker (2014), the fact that the various argumenthood tests that have been discussed in the literature often give contradictory results supports a scalar view of the argument–adjunct distinction. For example, phrases representing beneficiaries or instruments, although commonly classified as adjuncts, are clearly less adjunct-like than for example phrases referring to the location of the event, since instruments facilitate the actions performed by agents, and events implying beneficiaries are typically motivated by the actor's desire to act in favor of the beneficiary. And among agents, a semantic distinction can be made between those (for example, eaters) without which the process undergone by the patient is simply impossible to conceive, and those (for example, breakers) controlling processes that are also conceivable as occurring more or less spontaneously.

An important point is that there is no straightforward correspondence between essential participants in a given type of event and obligatory noun phrases in the clauses projected by the verb encoding the type of event in question.

A particularly clear case is that of the verbs of eating.[11] The act of eating cannot be defined without mentioning two essential participants, but quite a few languages have two 'eat' verbs, one of them transitive and the other intransitive, that cannot be analyzed as related to each other via some morphological operation, as illustrated in (12) by Akhvakh *q̄'am-* 'eat (transitive)' vs. *ũk-* 'eat (intransitive).' Crucially, in this example, sentence (d) cannot be used with the same meaning as (b) and is acceptable only if the unexpressed participant can be identified to a specific referent retrievable from the context or the situation.

[11] For a general discussion of the relationship between the syntactic properties of 'eat' and 'drink' and their semantic characterization as verbs denoting events involving an affected agent, readers are referred to Næss (2007: Chapter 4).

(12) Northern Akhvakh (Avar-Andic-Tsezic, Nakh-Daghestanian)
a *Riƛ̄'i q̄'am-a!*
meat(N) eat-IMP
'Eat (tr.) some/the meat!'
b *Ĩč'i ũk-a!*
first eat-IMP
'Eat (intr.) first!'
c **Riƛ̄'i ũk-a!*
meat(N) eat-IMP
d *Ĩč'i q̄'am-a!*
first eat-IMP
'Eat it/that first!'

In the case of 'eat,' it is absolutely uncontroversial that an eating event is a two-participant event, whatever the syntactic properties of the verbs used to encode it in individual languages. Things are not always so simple, and many verbs cannot be unambiguously characterized as semantically mono- or bivalents, or as bi- or trivalents. In this respect, an important advantage of the framework developed in this book, in comparison with others, is precisely that the analytical decisions it implies are not conditioned by decisions about the number of participants in the event denoted by a given verb that can/must be recognized as arguments. For example, as attractive as it may be in some respects, the theoretical framework outlined in Bickel (2010) and further developed in Witzlack-Makarevich (2011) is incompatible with a scalar conception of argumenthood, which in my view constitutes a major shortcoming, in addition to those already mentioned above.

To summarize, the notion of argument as commonly manipulated by linguists is problematic in many respects. However, this does not create difficulties for the framework developed in this book, since the crucial distinction in this framework is not the ARGUMENT vs. ADJUNCT distinction briefly commented in this section, but rather the distinction between CORE NOMINAL TERMS OF VERBAL CLAUSES (abbreviated as CORE TERMS) and OBLIQUES that will be introduced in §1.3.3.5.

1.2.3 Grammatical relations

The term GRAMMATICAL RELATIONS refers to contrasts in the morphosyntactic properties of the nominal terms of clauses.[12] Andrews (1985, 2007) and Farrell (2005: 44–111) can be viewed as basic references on this topic, since they provide typologically oriented overviews of the relevant issues in the identification of grammatical relations. Farrell (2005: 112–98) also discusses the way they are addressed in different theoretical frameworks.

Traditionally, subject and (direct) object are viewed as the two major types of grammatical relations. A third major grammatical relation, labeled 'indirect object,' is often considered, but there is more cross-theoretical variation about it.

The traditional identification of subjects and objects relies on morphological criteria (case-marking, agreement) and/or constituent order, but traditional grammars also suggest that

[12] The term 'grammatical relations' was popularized by Relational Grammar, see, for example, Perlmutter (1980). Other equivalent terms are 'syntactic functions' (Dik 1997), 'grammatical functions' (Bresnan 2001), or 'syntactic roles' (Croft 2001).

subjects typically represent either the sole argument of monovalent verbs (regardless of its precise semantic role) or the more agent-like argument of

+ bi- or trivalent verbs, whereas direct objects typically represent the more patient-like argument of bi- or trivalent verbs.

The categories subject and object are often regarded, explicitly or implicitly, as universal. In particular, the universality of the grammatical relations subject, direct object, and indirect object is the basic tenet of Relational Grammar, which was quite influential some decades ago and has inspired much typological work.[13] For example, Keenan and Comrie (1977) analyzed the cross-linguistic variation in the accessibility of noun phrases to relativization with reference to a universal hierarchy of grammatical relations.

However, in the 1960s and 1970s, when more and more descriptions of languages with so-called ergative alignment became available, it became clear that there is a problem with the practice of extending the subject and object concepts indiscriminately to all languages, since, in many languages, the coding characteristics of the nominal terms of clauses do not justify the recognition of grammatical relations lending themselves to the same semantic characterization as European subjects and objects.

At the same time, probably due to the influence of formal theories of syntax focusing on the description of syntactic mechanisms in which subjects and direct objects behave differently, the behavior of the nominal terms of clauses in syntactic operations came to be considered as providing tests for the identification of grammatical relations, see among others the contributions in Li (1976) and Plank (1979). The mechanisms in question include passivization, reflexivization, raising, control, equi-NP deletion, conjunction reduction, relativization, etc. However, defining grammatical relations on the basis of clusters of criteria referring to the behavioral properties of noun phrases raises other problems, since two noun phrases showing the same behavior in a particular mechanism may behave differently in another mechanism, and consequently, tests for the identification of grammatical relations based on the behavior of noun phrases in syntactic mechanisms may provide conflicting evidence.

In descriptive grammars, a widespread response to this problem is to arbitrarily pick out a subset of the possible criteria as providing the 'correct' diagnostic. In such cases, as pointed out by Witzlack-Makarevich (2019: 3), one may suspect that the desire to identify grammatical relations as similar as possible to European subjects and objects is the main motivation for selecting some of the possible criteria and neglecting the others. Croft (2001: 30) criticized the "methodological opportunism" consisting in picking "language-specific criteria when the general criteria do not exist in the language, or when the general criteria give the 'wrong' result according to one's theory." In fact, there may be good reasons for taking such decisions within the frame of descriptions of individual languages, but the reuse of labels for grammatical relations from one language to another on the basis of family resemblances creates serious problems for cross-linguistic comparison.

Lazard (1994: 100–28) argued that the cross-linguistic variation in the distribution of the syntactic properties that have been proposed as tests for identifying the grammatical relation subject is hard to reconcile with the hypothesis of a universal notion of subject. Observations leading to the conclusion that grammatical relations as usually conceived are not universal have also been discussed among others by Blake (1976), Schachter (1976), Foley and Van

[13] For a general presentation of Relational Grammar, readers are referred to Blake (1990).

Valin (1977), Van Valin (1977, 1981), Durie (1987), Mithun (1991), Foley (1993), Dryer (1997), Kibrik (1997), and Croft (2001). As (Dryer 1997: 140) puts it, "the search for an understanding of the similarities and differences among grammatical relations in different languages will be impeded if we make the mistake of thinking of grammatical relations as cross-linguistic categories, and will be more successful if we bear in mind that grammatical relations are unique to every language."

Some recent typological investigations of valency alternations and voice nevertheless maintain an optimistic stance about the possibility of developing a consistent typological approach on the basis of grammatical relations defined in terms of clustering of coding and behavioral properties. This is, for example, the position adopted by Zúñiga and Kittilä (2019: 6) in their survey of grammatical voice. My own position, which coincides with that already defended by Lazard and the other authors mentioned above, is that the extension of the traditional notions subject and object to the whole set of the world's languages implies using heterogeneous criteria that vary from one language to another, with the consequence that such notions cannot provide a good foundation for a general typological approach to the relationship between verbs and the nominal terms of the clauses they project. Consequently, the notions used in this book to characterize the contrasts between nominal terms of verbal clauses in typological perspective are not grammatical relations conceived as encompassing various aspects of the behavior of the nominal terms of clauses, but rather the TRANSITIVITY-RELATED ROLES discussed in §1.3.3, whose definition entirely relies on contrasts in the coding characteristics of the nominal terms of verbal clauses on the one hand, and semantic prototypes on the other hand.

1.3 A framework for the study of questions related to transitivity and valency

1.3.1 Introductory remarks

The typological approach to transitivity and valency developed in this book does not presuppose a particular model of formal syntax, and its possible implications for a discussion of the treatments of transitivity and valency that may have been proposed in various formalist frameworks will not be discussed either. In its theoretical aspects, this study focuses on elaborating a logically consistent system of concepts allowing to capture regularities, not only in the cross-linguistic variation in the organization of the morphosyntatic phenomena commonly analyzed in terms of transitivity and valency, but also in the diachronic changes that may affect them.

Ideally, the definitions of the concepts used in this kind of investigation should not only meet the minimal requirement of logical consistency, but also be applicable to language data unambiguously (i.e., without necessitating arbitrary analytical decisions that make them problematic for the purpose of cross-linguistic comparison). I cannot pretend that I was always successful, but while elaborating the framework proposed in this book, avoiding the use of notions that do not fulfill this requirement was one of my major concerns. The choices I had to make between alternative approaches to the questions discussed in this book have been guided to a large extent by such considerations.

Most of the terms used in the framework proposed in this book are either terms inherited from traditional grammar, or terms that have already been used in other frameworks, but readers are invited to keep in mind that, as rightly observed by Haspelmath (2011: 563) in an article dealing specifically with notions that play a key role in the analyses put forward in this book, "linguistic terms have a tendency to undergo significant semantic change when they migrate from one scholar to another, or from one way of thinking to another." Consequently, I have tried to formulate maximally precise and unambiguous definitions, at least for the notions that play a crucial role in the framework I am proposing, and readers are invited to keep in mind that the meaning given in this book to terms already familiar to them is not necessarily the meaning they are accustomed to.

1.3.2 Semantic transitivity and syntactic transitivity

The way semantic transitivity and syntactic transitivity are articulated is essential in the theoretical framework elaborated in this book. My approach to this question is basically that already advocated by Lazard (1994). It also coincides in most respects with that defended by Næss (2007), although her definition of a prototypical transitive clause as a clause "where the two participants are maximally semantically distinct in terms of their roles in the event described by the clause" is formulated differently.

1.3.2.1 Prototypical transitive verbs and syntactically transitive verbs

Once semantic transitivity has been defined as a scalar and multiparametric notion in the spirit of Hopper and Thompson (1980), PROTOTYPICAL TRANSITIVE VERBS ("primary transitive verbs" in Andrews' (1985) terminology) can be defined as verbs that have the ability to project clauses encoding events characterized by a maximum degree of semantic transitivity and including two nominal terms representing the two protagonists of such events, i.e., a prototypical agent and a prototypical patient. SYNTACTICALLY TRANSITIVE VERBS are then defined as verbs that have the ability to combine with two nominal terms coded like the agent and the patient of prototypical transitive verbs, whatever their semantic roles. For example, the English verb *break* and its equivalents in other languages are prototypical transitive verbs. The English verb *see* is a syntactically transitive verb, since in its possible constructions, the perceiver phrase and the stimulus phrase consistently behave like the agent phrase and the patient phrase in the possible constructions of *break*, but this is not necessarily the case for its equivalent in other languages. Conversely, some verbs that are not syntactically transitive in English have syntactically transitive equivalents in other languages (as, for example, *look (at)*, whose French equivalent *regarder* is syntactically transitive).

1.3.2.2 The basic construction of transitive verbs

The key notion in the approach to transitivity adopted in this book is the BASIC CONSTRUCTION OF TRANSITIVE VERBS (or simply TRANSITIVE CONSTRUCTION) discussed by Lazard under the name of "major biactantial construction." This notion will be elaborated in more detail in Chapter 3. To put it in a nutshell, the basic construction of transitive verbs is a construction that can be used to form clauses in which a prototypical transitive verb combines with two nominal terms representing the agent and the patient in the event denoted by the verb. In case

prototypical transitive verbs have two or more possible constructions meeting this condition, two types of criteria can be used to identify one of them as the basic construction of transitive verbs: in comparison with the other possible constructions of prototypical transitive verbs, the basic construction of transitive verbs must not imply a decrease in semantic transitivity, and it must not show evidence of syntactic demotion of one of the two nominal terms representing the essential protagonists of a transitive event.

The notions of A and P used in this book to characterize the nominal terms of the transitive construction will be discussed in §1.3.3.

1.3.2.3 Transitive vs. intransitive clauses

Once the notion of basic construction of transitive verbs has been established, TRANSITIVE CLAUSES can be defined as clauses in which a verb combines with two nominal terms in the same way as a prototypical transitive verb with the nominal terms representing its agent and patient in the basic transitive construction, whatever the semantic nature of the verb and the degree of semantic transitivity of the event denoted by the clause.

INTRANSITIVE CLAUSES can be defined simply as clauses that do not qualify as transitive clauses according to this definition. However, in §3.4, the possibility of a distinction between QUASITRANSITIVE clauses and intransitive clauses *stricto sensu* will be discussed. This distinction concerns languages having a type of clause projected by semantically bivalent verbs that cannot be analyzed as transitive according to the definition of syntactic transitivity adopted in this book, but in which the essential participant that is not coded as S shows a specific type of coding, distinct from the coding of adjuncts in clauses projected by monovalent verbs.

In fact, in descriptions of individual languages, it may be tempting to group quasitransitive clauses with transitive clauses, rather than considering them as a variety of intransitive clauses. The reason why I decided not to explore this approach to quasitransitive clauses is that it would be difficult to pursue it consistently in a discussion of transitivity not limited to particular groups of languages having this type of construction.

1.3.3 Transitivity-related roles

1.3.3.1 Introductory remarks

In order to avoid the possibility of confusion with grammatical relations whose definition (or lack thereof) leaves open the possibility of using variable sets of syntactic tests, I use the term TRANSITIVITY-RELATED ROLE (abbreviated as TR-role) for the notions used in this book to capture the most basic contrasts between the nominal terms of verbal clauses in a comparative perspective. The terms A, P, and S used in this book for the core TR-roles have been widely used by typologists since the early 1970s (some authors using O instead of P), and have also been used as descriptive concepts by some authors of grammars.

Haspelmath (2011) shows that there are significant differences in the way A, P/O, and S are understood in different traditions, and distinguishes three main types of approaches. In the ‘Dixonian’ approach, the notions labeled A, P/O, and S are conceived as universal grammatical relations, and are consequently subject to the same criticism as the universal

grammatical relations subject and object postulated in some other theories.[14] The 'Comrian' approach is based on prototypical transitivity, and the 'Bickelian' approach is based on generalized semantic roles. There are also authors, such as Kibrik (1997), whose approach to A, P, and S cannot be unambiguously related to one of these three main types, since it is based both on prototypical transitivity (like the Comrian approach) and on generalized semantic roles (like the Bickelian approach).[15]

Before discussing the definitions of A, P, and S adopted in this book, I would like to draw the attention to the fact that many authors define and/or manipulate these terms in such a way that it is unclear whether they conceive them as referring primarily to LEXICAL properties of VERBS or to CONSTRUCTIONAL properties of CLAUSES. It should be clear from the definitions that will be formulated below that, in my understanding of A, P, and S, these notions do not refer to the semantic role of participants in the event denoted by the verb, but to the syntactic properties of the noun phrases that express them in a given construction. Consequently, the characterization of the noun phrase referring to a given participant in a given event as A, P, or S may vary across the various constructions in which the verb denoting the event in question can be found. For example, the English verb *see* inherently implies reference to a perceiver and a stimulus. In *The man saw the snake*, the perceiver phrase *the man* fulfills the role of A and the stimulus phrase *the snake* fulfills the role of P, since the clause is transitive, and *the man* and *the snake* are coded in the same way as the agent phrase and the patient phrase in a transitive clause projected by a prototypical transitive verb (as, for example, *The man killed the snake*). By contrast, in *The snake was seen by the man*, there is neither an A phrase nor a P phrase, for the simple reason that the clause is not transitive, and A and P refer to the coding of participants in transitive clauses. In *The snake was seen by the man*, *the man* and *the snake* fulfill the roles of X (oblique) and S respectively.

1.3.3.2 A and P

The way I use A, P, and S falls into the tradition initiated by Comrie (1981: 105), also represented in the works of Andrews (1985, 2007) and Lazard (1994). Although he uses different symbols (X, Y, and Z instead of A, P, and S), Lazard (1994) gives a particularly explicit justification of the basic tenet of the Comrian approach, according to which A and P should be defined with respect to a prototypical action. For a detailed analysis (and criticism) of the Dixonian and Bickelian approaches to A, P, and S, readers are referred to (Haspelmath 2011).

In this respect, I would like to emphasize the ambiguity of formulations commonly found in the literature and suggesting a false consensus, as, for example, when authors define A and P as "the more agentive and the less agentive participant of prototypical transitive clauses" without clarifying their understanding of "prototypical transitive clause." In fact, such

[14] As noted by Lazard (1997) and further discussed by Haspelmath (2011), Dixon is not very clear about the status of his A, O, and P and the criteria used to identify them, but the way he manipulates them in his works suggests that his approach is not really different from that of the authors that postulate the existence of universal notions of subject and object, apart from the fact that he splits the notion of subject into intransitive subject (S) and transitive subject (A).

[15] Mithun and Chafe's (1999) discussion of A, P/O, and S is also often quoted in the literature about A, P/O, and S, but in fact, this article does not really address the issue of A, P/O, and S as concepts for a general typology of the relationships between verbs and the nominal terms clauses, and rather focuses on the question of the (mis)use of A, P/O, and S in language description.

formulations blur the distinction between the approach based on the roles of prototypical agent and prototypical patient and the approach based on generalized semantic roles, resulting in confusion between the semantic notions of prototypical agent/patient and the syntactic notions of A and P.

According to the definitions of A, P, and S adopted in this book, A and P are identified with reference to the semantic notions of prototypical agent/patient but must be carefully distinguished from them: A is the nominal term of a transitive clause which encodes the semantic role of agent if the verb projecting the clause is a prototypical transitive verb, whereas P is the nominal term of a transitive clause which encodes the semantic role of patient if the verb projecting the clause is a prototypical transitive verb. This definition leaves open the possibility that, in clauses projected by non-prototypical transitive verbs, depending on the participant frame of the verb, A and P express participant roles other than (prototypical) agent and (prototypical) patient. In other words, "A and P are syntactic terms whose prototypes are defined in semantic terms" (Comrie 1981: 105).

Note that this definition explicitly excludes the possibility of analyzing clauses as having the A role only, or the P role only. In other words, a nominal term showing agent-like coding can only be identified as A if the construction also includes (at least potentially) a term showing patient-like coding, and vice versa.

For example, according to this definition, an English clause such as *The man forgot my name* does not denote a prototypical transitive situation/event, but its two nominal terms nevertheless qualify as A and P, since their coding coincides with the coding of the agent and the patient in transitive clauses denoting prototypical transitive situations such as *The man repaired the bicycle.* By contrast, the Mandinka clause corresponding to *The man forgot my name* (13b) is not isomorphous with the equivalent of *The man repaired the bicycle* (13a), since in (13a), *fòolèesúwòo* 'a/the bicycle' shows no flagging and obligatorily precedes the verb, whereas in (13b), *ń̀ tòo* 'my name' is encoded as a noun phrase following the verb and flagged by a postposition.[16] Consequently, in contrast to its English equivalent, (13b) cannot be analyzed as having the TR-roles A and P, but rather S and X (oblique).

(13) Mandinka (Central Mande, Mande)

a *Kèê yè fòolèesúwòo dádâa.*
man.D CPL.TR bicycle.D repair
'The man repaired the bicycle.'

b *Kěe ñìná-tá ń̀ tòo lá.*
man.D forget-CPL.ITR 1SG name.D POSTP
'The man forgot my name.'

1.3.3.3 A/P-prominent vs. pivot-prominent transitive constructions

In most languages, transitive constructions can be characterized as A/P-PROMINENT in the sense that the contrast between the A phrase and the P phrase is immediately apparent in their coding characteristics (constituent order, flagging and/or indexation).[17] In such situations, as

[16] As commented in more detail in §2.4, FLAGGING refers to the use of case inflection or adpositions to encode the semantic or syntactic roles fulfilled by noun phrases in the constructions in which they participate.

[17] As commented in more detail in §2.3, INDEX refers to all types of forms whose relationship with a noun phrase actually or potentially present in the same construction (the CONOMINAL) shows the following two

discussed in §1.3.4.3, A and P may variously contrast in their accessibility to syntactic operations, and consequently variously align with S in their behavioral properties. There are, however, languages in which transitive coding is organized differently. In the languages in question:

(a) the coding characteristics of one of the nominal terms of the transitive construction reflect its selection as the SYNTACTICALLY PRIVILEGED TERM (i.e., as the term having unique access to operations such as relativization, questioning, etc.),
(b) the selection of the syntactically privileged term is independent of its possible characterization as A or P (i.e., as behaving like the agent phrase or the patient phrase in transitive clauses projected by prototypically transitive verbs).

Such situations are typically found in Western Austronesian languages. In the literature dealing with this kind of system, there is no consensus about the designation of the syntactically privileged term. Among the various terms used by different authors (subject, topic, focus, etc.), I have selected the term of PIVOT, used among others in Chen and McDonnell's (2019) survey of Western Austronesian voice systems, as the only one that is not potentially confusing because of its other uses in language description.

In some of the languages that have this kind of system, it may happen that the coding characteristics of the nominal terms of the transitive construction give no direct clue at all as to which one is the A phrase, and which one the P phrase, which means that the distinction between A and P can then only be established on the basis of other mechanisms.

For example, in Balinese, in clauses projected by a prototypical transitive verb such as 'take,' the agent phrase and the patient phrase can equally precede or follow the verb, none of them is distinguished by a marked case form or the presence of an adposition, and no indexation mechanism distinguishes them either. As discussed in detail by Arka (2003), the noun phrase in preverbal position has a number of syntactic properties that distinguish it from the other nominal terms of transitive clauses, and can conveniently be designated as the syntactically privileged term (or pivot), but the preverbal position is not reserved to either the agent or the patient. Crucially, in clauses projected by prototypical transitive verbs, in contrast to what occurs in transitive–passive alternations involving a change in constituent order, in Balinese, the fact that the pivot in preverbal position represents the agent or the patient has no incidence on the coding of the noun phrase in postverbal position. In Balinese clauses projected by a prototypical transitive verb such as 'take,' the contrast between the semantic roles of agent and patient of prototypical transitive verbs is not reflected in the coding characteristics of the corresponding phrases, but in verb morphology, with a contrast between an AGENT VOICE form (*nyemak*) implying that, if the verb is prototypically transitive, the pivot phrase in preverbal position represents the agent, and a PATIENT VOICE form (*jemak*) implying that the pivot phrase in preverbal position represents the patient.

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characteristics: (i) the index encodes some grammatical features of the conominal, or some semantic features of its referent; and (ii) the index occupies a fixed position in the construction, distinct from that occupied by the conominal.

(14) Balinese (Malayo-Sumbawan, Austronesian)
a *Cang nyemak baju ento.*
1SG AV.take shirt DEM
'I took the shirt.' (agent voice)
b *Baju ento jemak cang.*
shirt DEM PV.take 1SG
'I took the shirt.' (patient voice)
(Udayana 2013: 15)

As regards the non-prototypical transitive verbs of Balinese, the comparison between (14) and (15) unambiguously shows that, for example, *tingalin* 'see' has a transitive construction with the perceiver phrase and the stimulus phrase as A and P.

(15) Balinese (Malayo-Sumbawan, Austronesian)
a *Tiang ningalin Nyoman ibi.*
1SG AV.see PRN yesterday
'I saw Nyoman yesterday.'
b *Nyoman tingalin tiang ibi.*
PRN PV.see 1SG yesterday
'I saw Nyoman yesterday.'
(Arka 2003: 28-29)

However, in the case of 'see' as in the case of 'take,' the distinction between A and P is not apparent in the coding characteristics of the noun phrases, and can only be retrieved through voice marking:

– the unflagged NP in preverbal position is A if the verb is in the agent voice form, P if the verb is in the patient voice form;
– the unflagged NP in post-verbal position is P if the verb is in the agent voice form, A if the verb is in the patient voice form.

In the remainder of this book, the term PIVOT-PROMINENT TRANSITIVE CONSTRUCTION will refer to transitive constructions in which either of the core nominal terms can equally be coded in a way that designates it as the syntactically privileged term (or pivot), and verb morphology marks the relationship between the role of pivot and the TR-roles A and P.

1.3.3.4 S

S is defined as a TR-role found in intransitive clauses, i.e., in clauses that do not include a pair of nominal terms meeting the definition of A and P. By definition, S is the nominal term of intransitive clauses whose coding coincides with that of the sole argument of (a major subclass of) monovalent verbs (if such a term is present). For example, in the intransitive clause (13b) above, *kèê* 'the man' can be identified as fulfilling the role of S, since its coding characteristics coincide with those of the sole argument of verbs such as *bòyí* 'fall,' *kàsí* 'cry,' *kùurâŋ* 'get sick,' etc.

The reason why the definition I propose for S includes explicit reference both to the intransitive nature of the clause and to the monovalent nature of the verb (rather than simply defining S with reference to monovalent verbs) is the desire to avoid logical inconsistencies in the analysis of languages having an important class of monovalent predicates encoded as formally transitive light-verb constructions ('do running' for 'run,' 'do tears' for 'cry,' etc.).

Note that, as discussed in more detail in Chapter 5, in some languages (commonly referred to as 'split-S languages'), the sole argument of monovalent verbs is treated differently in different verb classes (Donohue and Wichmann 2008). Often, a subclass of monovalent verbs assigning A-like coding to their sole argument contrasts with another subclass assigning P-like coding. In other languages, the sole argument of a subclass of monovalent verbs is coded like the recipient of giving verbs. In such languages, the comparative concept of S conflates two (or possibly more) roles that must be considered as distinct in the languages in question.

1.3.3.5 Core nominal terms vs. obliques, and the notion of nuclear participant

In this book, CORE NOMINAL TERMS (or simply CORE TERMS) is the cover term encompassing the nominal terms of verbal clauses fulfilling one of the three TR-roles, A, P, and S. OBLIQUE NOMINAL TERMS (or simply OBLIQUES), symbolized as X, are defined as nominal terms of verbal clauses that do not meet the definition of either A, P, or S. Readers are invited to keep in mind that this is a broad cross-linguistic definition of obliques that glosses over the fact that individual languages may have syntactic roles meeting this definition but showing properties that make them similar to core terms in some respects.

In the description of valency alternations, it is helpful to have a general term for the participants in the event denoted by the verb which, regardless of their status according to the argument vs. adjunct distinction, are encoded as core nominal terms in a given construction. They will be designated as NUCLEAR PARTICIPANTS.

In order to prevent confusion, it should be stressed that the status of nuclear participant as conceived in this book does not refer to an intrinsic property of participants that would be determined by the semantic nature of their relationship to the verb, but to TR-roles in a given construction. In other words, 'nuclear participant' does not equate with 'argument' (or essential participant). For example, in *This bed has been slept in*, the participant designated as *the bed* is a nuclear participant, since it is coded as the S of an intransitive clause, although it is not an argument/essential participant of *sleep*.

1.3.3.6 Dative obliques

In the languages in which recipients in the construction of trivalent verbs such as 'give' have coding properties different from those of patients in the transitive construction,[18] the oblique noun phrases showing the same coding properties as the recipient phrase in the construction of trivalent verbs can be designated as DATIVE OBLIQUES, or simply DATIVES. In some languages, the behavior of dative obliques does not differ significantly from that of the other obliques, but it may also happen that dative obliques have properties suggesting to give them a special status, closer in some respects to that of core terms *stricto sensu* than to that of ordinary obliques.

[18] The variation in the coding frames of trivalent verbs is discussed in detail in §7.2.

The affinity between dative obliques and core terms is particularly apparent in indexation systems. Among the languages that have a mechanism of P indexation, many also have a mechanism of dative indexation, whereas the indexation of other types of obliques is very rare (although not totally unknown) in the world's languages. Moreover, in quite a few languages, dative obliques are flagged differently from patients, but are indexed by means of the same set of indexes. This is illustrated in example (16), where the same 2nd person singular index *n-* refers to a participant coded as an accusative noun phrase in (16c), and to a participant coded as a dative noun phrase in (16d). Note that, in Kanuri, indexation is limited to 1st and 2nd person participants.

(16) Kanuri (Western Saharan, Saharan)
a *Shí-ga cítáko.*
3SG-ACC PST.seize.$I_{S/A}$:1SG
'I seized him.'
b *Agógó shí-ro cóko.*
watch 3SG-DAT PST.give.$I_{S/A}$:1SG
'I gave him a watch.'
c *Nyí-ga n-jítáko.*
2SG-ACC I_P:2SG-PST.seize.$I_{S/A}$:1SG
'I seized you.'
d *Agógó nyí-ro n-jóko.*
watch 2SG-DAT I_P:2SG-PST.give.I_A:1SG
'I gave you a watch.'
(Cyffer 1991: 178-186)

Romance languages illustrate the same point, since in most of them, dative indexes and P indexes are distinct in the 3rd person, but identical in 1st and 2nd person.

However, readers are invited to keep in mind that:

(a) languages without dative obliques in the sense of the definition formulated above are not exceptional;
(b) according to the definition adopted in this book, dative obliques can only be recognized in the languages that code the recipients of trivalent verbs, such as 'give,' differently from monotransitive patients;
(c) even in the languages in which a notion of dative oblique can be recognized, the behavior of dative obliques does not necessarily distinguish them from the other obliques; for example, in Latin, Russian, or Hungarian, it can be argued that dative obliques do not have properties that would justify classifying them apart from the other obliques.[19]

In fact, the problem with the notion of dative, in a typological approach to the notions analyzed in this book, is similar to that raised by the notion of quasitransitive verbs/clauses introduced in §1.3.2.3. In descriptions of languages for which the notion of dative oblique is

[19] This question is discussed for Kamaiurá (Tupian) by Farrell (2005: 19–21), who concludes that, in Kamaiurá, nothing in the grammar suggests analyzing the syntactic function of the noun phrases showing the coding characteristics typical of recipients as distinct from a more general oblique function.

relevant, and in which the behavior of dative obliques is similar in some respects to that of P phrases, it may be tempting to treat dative phrases as an additional type of core syntactic role (as suggested by the traditional label 'indirect object'), rather than treating them as a particular variety of obliques. The reason why this approach is not explored here, as in the case of quasitransitive verbs/clauses, is simply that it would be difficult to pursue it consistently in a discussion not limited to a particular group of languages having dative obliques whose behavior shows important similarities with that of P phrases.

1.3.3.7 Languages without obliques

The question discussed in this section is the existence of languages in which the nominal terms of clauses can only be coded as S, A, or P. This is certainly not a common situation cross-linguistically, but some languages have been claimed to make a very marginal use of oblique NPs, or even to lack oblique NPs altogether. For example, Rhodes (2010: 439) evokes a "conspiracy to avoid nominal obliques in Algonquian."

In fact, it is not difficult to imagine how a particularly systematic use of cross-linguistically common mechanisms such as serialization or P-applicativization may result in the total lack of syntactic roles for NPs other than the three TR-roles S, A, or P.

In serial verb constructions, semantic roles in the event encoded by a given verb can be expressed as the P of another verb acting as a valency operator. For example, in (17), 'their left hand' is encoded as the P of a verb that has the ability to project monoverbal clauses denoting taking events (hence the gloss 'take'). However, in (17), 'their left hand' is not interpreted as the patient in a taking event, but as the instrument in the eating event denoted by the other verb involved in the construction.

(17) Baule (Tano, Kwa, Niger-Congo)

Bé	*fá'à*	*bé*	*sá*	*bɛ̂*	*bé*	*dí'à*	*lìkě.*
3PL	take-NEG	3PL	hand	left	3PL	eat-NEG	thing

'One does not eat with the left hand.'

lit. 'They don't take their left hand they don't eat.'

Therefore, in the languages that make a systematic use of the serialization strategy, semantic roles that cannot be expressed as core nominal terms of a verb denoting a given event can nevertheless be encoded as the P of another verb in a multiverbal construction.[20]

In P-applicative constructions (discussed in detail in §14.2), semantic roles other than those expressed as core terms in clauses projected by a verb in its base form are expressed as P terms of clauses projected by derived verbs. For example, in (18), 'spoon' is encoded as one of the two P terms of a double-P construction licensed by the applicative suffix attached to the verb form.

[20] It is well known that verbs acting as valency operators in serial verb constructions often tend to lose their verbal characteristics, which may make it difficult to decide whether, at a given point in the evolution of a language, they should still be analyzed synchronically as verbs, or rather as adpositions flagging oblique NPs. This is a very complex question, but the only thing that matters here is that some languages at least attest the possibility of constructions involving two words that do not differ in their verbal characteristics, but in which the P of one of the verbs only serves to express a semantic role in the event denoted by the other verb.

(18) Makhuwa (Bantu, Benue-Congo, Niger-Congo)
Amíná o-n-rúw-él' eshimá nkhóri.
PRN(cl1) $I_{S/A}$:cl1-PRS.CJ-stir-APPL shima(cl9) spoon(cl3)
'Amina prepares shima with a spoon.'
(van der Wal 2009: 72)

Therefore, the systematic use of the applicativization strategy may make the recourse to oblique NPs superfluous. This question is specifically discussed in §14.2.1.4, to which readers are referred for concrete examples of languages making a particularly systematic use of the applicativization strategy.

1.3.4 Alignment and the Obligatory Coding Principle

1.3.4.1 The notion of alignment

The etymology of the term ALIGNMENT suggests it should be interpreted as referring to similarities between two different constructions, and in this book, it will be consistently used with this meaning. A general definition of the notion of alignment can be formulated as follows:[21] a term T1 of a construction C1 and a term T2 of a construction C2 are aligned with respect to some parameter if they share the same value of the parameter in question.

This notion can be applied to various types of morphosyntactic constructions. For example, an important parameter in the typology of predicative possession is that the coding characteristics of the possessor phrase and the possessee phrase may be aligned with those of A and P in the transitive construction, as in (19), with those of the ground and the figure in locational predication, as in (20), or with those of the possessor and the possessee in adnominal possession, as in (21).

(19) Mandinka (Central Mande, Mande)
a *Fàatú yè kínòo tábí kèêlú yè.*
PRN CPL.TR meal.D cook man.D.PL for
'Fatou cooked the meal for the men.'
b *Fàatú yè báadíŋòlú sòtó ñĭŋ sàatêe tó.*
PRN CPL.TR relative.D.PL have DEM village.D LOC
'Fatou has relatives in this village.'

[21] Unfortunately, in the typological literature, one can find uses of the term 'alignment' referring to syntactic phenomena broadly related to the encoding of grammatical relations, but distinct from alignment in the precise sense of relationship between constructions. In particular, in 'hierarchical alignment' as introduced by Nichols (1992), 'alignment' does not refer to properties shared by terms belonging to different constructions, but to the mapping from the semantic roles of agent and patient onto morphosyntactic slots. The misnamed hierarchical alignment is rather a TYPE OF A/P CODING in which the coding characteristics of A and P are determined by their relative ranking with respect to the indexability hierarchy. It is true that this type of A/P coding raises specific problems for alignment typology, since, from a strictly logical point of view, it is difficult to compare the coding of the sole argument of monovalent verbs to that of A or P in languages in which it is impossible to define types of coding assigned to A and P independently from each other. It should, however, be clear that considering this situation as a particular type of alignment makes no sense, if alignment is understood as referring to similarities between constructions.

(20) Finnish (Finnic, Uralic)
a *Kadu-lla on auto.*
street-ADESS be.PRS.$I_{S/A}$:3SG car
'There is a car in the street.'
b *Peka-lla on auto.*
PRN-ADESS be.PRS.$I_{S/A}$:3SG car
'Pekka has a car.'

(21) Turkish (Turkic, Altaic)
a *Murat'ın otomobil-i*
PRN-GEN car-CSTR
'Murat's car'
b *Murat'ın otomobil-i var.*
PRN-GEN car-CSTR there.is
'Murat has a car'

Given the topic of this book, we will be mainly concerned by the alignment relationships between transitive and intransitive verbal clauses, and between the transitive construction and the coding frames of semantically trivalent verbs.

1.3.4.2 A-alignment and P-alignment

The central topic of so-called alignment typology is the alignment between the core terms of transitive and intransitive clauses, with respect to their coding characteristics and behavioral properties.

For example, in (22), the coding of the sole essential participant of *erori* 'fall' is aligned with that of the patient of *puskatu* 'break,' whereas the coding of the sole essential participant of *irakin* 'boil' is aligned with that of the agent of *puskatu* 'break.' In other words, the construction of *erori* 'fall' displays P-ALIGNMENT in its coding characteristics (in the sense that its sole core term is coded like the P of a transitive construction), whereas the construction of *irakin* 'boil' displays A-ALIGNMENT (in the sense that its sole core term is coded like the A of a transitive construction).

(22) Central Basque (Euskaran)
a *Ispilu-a erori da.*
mirror-SG fall.CPL be.PRS.I_{ZER}:3SG
'The mirror has fallen down.'
b *Ur-ak irakin du.*
water-SG.ERG boil.CPL have.PRS.I_{ERG}:3SG
'The water has boiled.'
c *Haurr-ak ispilu-a puskatu du.*
child-SG.ERG mirror-SG break.CPL have.PRS.I_{ERG}:3SG.I_{ZER}:3SG
'The child has broken the mirror.'

A-alignment illustrated in (22b) and P-alignment illustrated in (22a) are more commonly designated as 'accusative' alignment (or 'nominative–accusative' alignment) and 'ergative'

alignment (or ‘absolutive–ergative’ alignment) respectively. The reason for which I prefer avoiding these traditional denominations is that it may be confusing to use the same labels for case inflections and types of alignment, since ‘accusative’ alignment does not necessarily go together with accusative-marked Ps in transitive clauses, and ‘ergative’ alignment does not necessarily go together with ergative-marked As in transitive clauses. The risk of confusion is particularly great in a split-S language such as Basque, whose noun inflection includes an ergative case but no accusative case. In such a language, one can hardly be satisfied with a terminological practice leading to characterize the construction of the intransitive verbs assigning ergative case to the sole core term in their construction (such as *irakin* ‘boil’) as an instance of ‘accusative’ alignment (and designating such verbs as ‘unergative,’ as is commonly done, just adds to the confusion).

As regards the coding characteristics of transitive and intransitive clauses, A-alignment and P-alignment may coexist in the same language (as illustrated by example (22)), but most languages have a clear preference for either A-alignment or P-alignment. A-alignment is the general rule for example in Russian, as illustrated by example (23), where the P term in a clause projected by ‘heal’ and the sole core term in clauses projected by ‘come’ are equally in the zero case and equally control verb agreement.[22]

(23) Russian (Slavic, Indo-European)
a *Devuška priš-l-a.*
girl(F) come.PFV-PST-$I_{S/A}$:SG.F
‘The girl came.’
b *Doktor priš-ël-Ø.*
doctor(M) come.PFV-PST-$I_{S/A}$:SG.M
‘The doctor came.’
c *Doktor vyleči-l-Ø devušku.*
doctor(M) heal.PFV-PST-$I_{S/A}$:SG.M girl(F).ACC
‘The doctor healed the girl.’

P-alignment is the general rule for example in Avar, as illustrated by example (24), where the P term in a clause projected by ‘plough’ and the sole core term in clauses projected by ‘come’ are equally in the zero case and equally control verb agreement.

(24) Avar (Avar-Andic-Tsezic, Nakh-Daghestanian)
a *Pat’imat j-ač’-ana.*
PRN(F) $I_{S/P}$:SG.F-come-CPL
‘Patimat came.’
b *Aɦmad w-ač’-ana.*
PRN(M) $I_{S/P}$:SG.M-come-CPL
‘Ahmad came.’
c *Aɦmad-i-ca χur b-eƛ’-ana.*
PRN(M)-OF-ERG field(N) $I_{S/P}$:SG.N-plough-CPL
‘Ahmad ploughed the field.’

[22] The notion of zero case is defined and commented on in §2.4.3.

Note that S is not necessarily aligned with either A of P with respect to a given property. Taking 'alignment' in its strictest sense, if A and P behave in the same way with respect to the property in question, or if S behaves differently from both A and P, no alignment relationship can be recognized.[23]

Note also that the notions of A-alignment and P-alignment as just defined are unproblematic for languages whose transitive construction is organized in such a way that the A vs. P contrast is immediately apparent in the coding characteristics of the nominal terms of transitive clauses, but whose extension to the languages having pivot-prominent transitive constructions raises problems that would require further elaboration.

1.3.4.3 Alignment in coding and behavioral properties of core syntactic terms, and the question of 'syntactic ergativity'

The notion of alignment between the core terms of transitive and intransitive clauses can be considered not only for their coding properties (flagging, indexation and linear order, see Chapter 2 for more details), but also for their behavior in various syntactic mechanisms. Syntactic mechanisms in which S and A behave identically, and differently from P, can be characterized as displaying A-alignment, whereas those in which S and P behave identically, and differently from A, can be characterized as displaying P-alignment.

For example, in Mandinka, when verbal lexemes are used as event nouns (which, in Mandinka, does not necessitate the intervention of any derivational element), S and A are equally transposed as indirect genitives (i.e., genitival modifiers marked by the postposition *lá*), whereas P is transposed as a direct genitive (i.e., a genitival modifier directly juxtaposed to its head), as in example (25).

(25) Mandinka (Central Mande, Mande)

a *Mùsôo yè díndíŋó nàatí kàràmbúŋò tó.*
woman.D CPL.TR child.D bring school.D LOC
'The woman brought the child to school.'

b *mùsôo lá díndíŋó nàatóo kàràmbúŋò tó*
woman.D GEN child.D bring.D school.D LOC
'the fact that the woman brought the child to school'

c *Sùlóo kàná-tá wùlôo má.*
monkey.D escape-CPL.ITR dog.D POSTP
'The monkey escaped the dog.'

d *sùlôo lá kànóo wùlôo má*
monkey.D GEN escape.D dog.D POSTP
'the fact that the monkey escaped the dog'

[23] In the literature on alignment typology, one commonly finds the terms NEUTRAL ALIGNMENT for situations in which A, P, and S behave in the same way with respect to a given parameter, and TRIPARTITE ALIGNMENT for situations in which A, P, and S behave in three different ways. Situations in which A and P behave in the same way but differently from S are exceptional (although not totally unattested, see §2.4.4 and §4.8.3), and there is no term in common usage for them.

Consequently, event nominalization in Mandinka displays A-alignment. By contrast, in the same language, the similative incorporation construction, illustrated in (26), displays P-alignment.

(26) Mandinka (Central Mande, Mande)
a *Kàmbàanôo sólí-sáwùn-tá.*
boy.D leopard-jump-CPL.ITR
'The boy jumped like a leopard.'
b *Mòô-lú yé sùŋóo wùlù-fâa.*
person.D-PL CPL.TR thief.D dog-kill
'The people killed the thief like a dog.'

In (26a), logically speaking, the similarity relationship is between *JUMP(the boy)* and *JUMP(leopards)*, whereas in (26b), it is between *KILL(the people, the thief)* and *KILL(X, dogs)* ('The people killed the thief in the same way as one kills dogs'). Crucially, this construction is not available to express similarity between *KILL(the people, the thief)* and *KILL(dogs, Y)* ('The people killed the thief in the same way as dogs kill'). In other words, in terms of semantic roles, the incorporated noun can be identified to S in a corresponding intransitive clause, or to P in a corresponding transitive clause, but not to A.

A-alignment in syntactic mechanisms is commonly termed 'syntactic accusativity,' and P-alignment in syntactic mechanisms is commonly termed 'syntactic ergativity.'

In the literature on alignment, I am aware of no mention of languages in which A-alignment would be predominant in the coding properties of the core terms of transitive and intransitive clauses, but not in the way they behave in syntactic mechanisms. By contrast, the converse is not the case: many languages have been reported to have consistent P-alignment in the coding properties of S, A, and P, but very few instances of P-alignment (or none at all) in syntax. In the recent typological literature, there is also consensus that the postulation of a global contrast between 'syntactically accusative' and 'syntactically ergative' languages must be discarded as too simplistic.

In fact, no significant generalization can be proposed about the various syntactic mechanisms that have been claimed to display P-alignment in some languages, and the only conclusion that emerges from detailed analyses of the relevant data in individual languages, such as those in Coon et al. (2017) or Witzlack-Makarevich and Bickel (2019), is that the situation may be much more complex than commonly assumed, even in apparently unproblematic 'accusative' languages.

Moreover, the most striking thing in the literature on 'syntactic ergativity' is the lack of consensus between different authors analyzing the same languages, partly because there is no consensus on the syntactic mechanisms whose conditioning can be analyzed in terms of alignment. Polinsky (2017a) argues that the notion of syntactic ergativity as commonly manipulated encompasses a set of heterogeneous phenomena, and that significant generalizations can only emerge on the basis of a narrow definition of syntactic ergativity. Her proposal is to restrict the concept of syntactic ergativity to alignment with respect to accessibility to A´-movement (i.e., alignment relationships in syntactic operations such as relativization, focalization, or *wh*-question formation).

The issue of alignment in the behavioral properties of the core terms of transitive and intransitive clauses will not be further addressed in this book.

1.3.4.4 The Obligatory Coding Principle

As regards alignment relationships in the coding properties of core terms of transitive and intransitive clauses (commonly referred to as morphological accusativity/ergativity), the traditional distinction between predominantly accusative and predominantly ergative languages is best understood with reference to a very general (although violable) constraint on the set of coding frames available to express the participant frame of verbs in a given language, for which I propose the term OBLIGATORY CODING PRINCIPLE. The difference with the traditional approach to the characterization of languages in terms of alignment is that, instead of considering the alignment properties of two particular sets of verbs (prototypical transitive verbs and semantically monovalent verbs), the Obligatory Coding Principle concerns the whole set of verbs in a given language.

In a language that fully complies with the Obligatory Coding Principle, there is a particular type of participant coding that must be assigned by every verb to one of its participants, and consequently can be viewed as the unmarked (or default) type of participant coding in the language in question. In fact, the proportion of languages allowing for no violation of the Obligatory Coding Principle at all is difficult to evaluate, since the mere fact that a grammar does not mention the marginal existence of verbs with exceptional coding frames does not ensure that such verbs do not exist at all in the language in question. For example, very few French grammars (if any) mention explicitly that the verb *falloir* 'be necessary' is the only French verb that cannot be found in a construction with a participant encoded as a noun phrase governing the agreement of the verb in person and number. What is sure, however, is that many languages (probably the vast majority of the languages of the world) can be analyzed as allowing only for limited exceptions to the Obligatory Coding Principle.

For example, a situation similar to that just evoked for French is also found in Mandinka, where the verb *tú* 'remain' is the only verb with a possible coding frame in which no participant is coded as a noun phrase showing the same coding characteristics as the A term of the transitive construction.

Avar, quoted in (24) to illustrate P-alignment, is also a language in which the violations of the Obligatory Coding Principle are quite marginal. The difference with Mandinka is that, in Avar, the type of participant coding normally found in the coding frame of every verb (characterized by zero-flagging and control of verb agreement) coincides with the coding of the P term of the transitive construction.

In the languages that fully comply with the Obligatory Coding Principle or only allow for limited violations, there are only two logical possibilities: the type of participant coding obligatorily assigned by every verb to one of its participants can only coincide, either with A coding (in OBLIGATORY A-CODING LANGUAGES), or with P coding (in OBLIGATORY P-CODING LANGUAGES), and it is also the coding automatically assigned by monovalent verbs to their sole essential participant. The notion of obligatory A-coding language is consequently a reformulation of the notion of language consistently accusative in the coding properties of nuclear participants, and the notion of obligatory P-coding language is a reformulation of the notion of language consistently ergative in the coding properties of nuclear participants.

As already mentioned, most languages have participant coding systems in which the violations of the Obligatory Coding Principle are either nonexistent or marginal. This is, however, not the case in all languages. Basque is a case in point, with two classes of

intransitive verbs differing in the coding they assign to their S, as illustrated in (22). Moreover, even in the languages in which all (or almost all) intransitive verbs are most commonly found in a construction that can be characterized straightforwardly as displaying A-alignment or P-alignment, it may happen that intransitive verbs also have a less frequent alternative construction expressing a change in the perspectivization of the event that has no equivalent with transitive verbs (such as the impersonal 'presentational construction' of French analyzed in §6.5.1.1).[24]

1.4 The structure of this book

The present book consists of this introductory chapter, sixteen chapters dealing with particular aspects of transitivity, valency, or voice, and a concluding chapter. The sixteen chapters dealing with particular topics can be grouped into two big parts, a first part consisting of Chapters 2 to 7 and another consisting of Chapters 8 to 16, plus an isolated chapter (Chapter 17 on incorporation and valency) dealing with a specific question which cannot be considered as particularly related to the thematic focus of any of the two big parts.

The first part of the book (Chapters 2 to 7) discusses various aspects of the typology of transitivity. The second part (Chapters 8 to 16) discusses various aspects of the typology of valency alternations.

Chapter 2 is entitled "Participant roles and participant coding." After some clarifications about participant roles, this chapter examines, in general terms, the three mechanisms that may ensure the existence of formal contrasts between noun phrases representing distinct participants in the event denoted by a given verb: constituent order, indexation, and flagging. However, this chapter does not include a detailed discussion of the aspects of participant coding that concern specifically the transitive construction, which are dealt with in Chapter 4.

Chapter 3, entitled "Syntactic transitivity," is mainly devoted to clarifications about the articulation between semantic transitivity and syntactic transitivity, and to the analysis of various types of alternations that can be observed in the coding of the agent and patient of prototypical transitive verbs as involving, either variants of the transitive construction, or intransitive alternatives to the transitive construction. The other questions addressed in this chapter are pivot-prominent transitive constructions, the characterization of the construction of semantically bivalent verbs that do not select the transitive construction as their coding frame, and the possibility of evolutions by which the transitive construction is replaced by a construction which was initially an intransitive alternative to the transitive construction.

Chapter 4 is entitled "The transitive construction." It begins with a detailed examination of various phenomena that may complicate the coding of A and P: TAM-driven variation in A/P coding, A/P coding conditioned by the status of the clause, differential coding of A or P, scenario-driven A/P coding, and direct/inverse marking in transitive clauses. The cross-linguistic diversity in A/P coding is discussed in the last section of this chapter.

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[24] The notion of perspectivization (Borschev and Partee 2002; Partee and Borschev 2004) accounts for alternating constructions that involve no difference in the denotative meaning, and cannot be entirely explained in terms of information structure either, such as the relationship between locational and existential predication, or the transitive-passive alternation. This notion, discussed in cognitive linguistics in terms of 'viewpoint' or 'semantic starting point of predication,' is based on the idea that the first operation in the elaboration of a sentence consists in 'scanning' the situation to which the sentence refers, which implies taking one of its elements as the starting point.

Chapter 5 is entitled "Transitive–intransitive alignment." After a discussion of the relationship between types of A/P coding and types of alignment, it is mainly devoted to the discussion of participant coding systems involving non-marginal violations of the principle according to which, in a given language, the coding frame of every verb must include a particular type of participant coding. The last two sections of this chapter discuss the evolutions in participant coding systems that may result in violations of the Obligatory Coding Principle, either by creating intransitive verbs with coding frames that do not respect the dominant alignment pattern, or by creating new TAM forms whose construction is characterized by an alignment pattern different from that of the pre-existing TAM forms.

Chapter 6 is entitled "Impersonal and anti-impersonal constructions." After defining impersonal constructions as constructions violating the Obligatory Coding Principle in languages in which A-alignment is strongly predominant but not without exceptions, this chapter discusses a possible typology of impersonal constructions, and examines the question of anti-impersonal constructions, defined as the mirror-image of impersonal constructions in the languages in which P-alignment is strongly predominant.

Chapter 7 is entitled "Transitive coding and valency." After a reminder that the transitive construction is universally the most common type of coding frame for bivalent verbs, this chapter discusses the cross-linguistic variation in transitivity prominence (i.e., the extension of the transitive construction to a greater or lesser proportion of the bivalent verbs that do not meet the definition of prototypical transitive verbs), the possible alignment patterns between the transitive construction and the coding frames available for trivalent verbs, and the possible use of the transitive construction with monovalent verbs.

Chapter 8 is entitled "Voice alternations." Voice alternations are defined as valency alternations involving verbal coding. Morphologically oriented voice alternations are particularly common. They can be described as involving an initial construction and a derived construction. The basic notions for the analysis of morphologically oriented voice alternations are NUCLEATIVIZATION (a participant which is not encoded as a core term of the initial construction is encoded as a core term of the derived construction) and DENUCLEATIVIZATION (a participant encoded as a core term of the initial construction is not encoded as a core term of the derived construction).[25] Symmetrical voices and inflectional voices are also discussed in this chapter.

Chapter 9 is entitled "Passivization and S-denucleativization." Passivization is defined as denucleativization of A without nucleativization of any other participant. In obligatory A-coding languages, canonical passivization, in which the initial P acquires the coding characteristics of the S term in canonical intransitive constructions, must be distinguished from impersonal passivization (I-passivization), in which P converted into the sole core term of an intransitive construction maintains P-like coding characteristics. S-denucleativization is defined as denucleativization of S without nucleativization of any other participant, a type of valency alternation whose specificity has been largely overlooked so far.

Chapter 10 is entitled "Antipassivization." It is devoted to antipassivization, defined as denucleativization of P without nucleativization of any other participant.

Chapter 11 is entitled "Decausativization, reflexivization, reciprocalization, and middle voices." After discussing decausativization (aka anticausativization), reflexivization, and

[25] The term 'nucleativization' is borrowed from Zúñiga and Kittilä (2019).

reciprocalization, this chapter focuses on the development of middle voices defined as multifunctional voices whose productive uses include the marking of decausativization.

Chapter 12 is entitled "Causativization." The analysis of causativization is based on a broad definition according to which the characteristic feature of causativization is that the derived construction is a transitive construction in which the referent of the A term outranks the referent of the initial A or S in agentivity.

Chapter 13 is entitled "Non-causative A/S-nucleativization." Like causativization, the voice alternations examined in this chapter involve the nucleativization of a participant taking over the A or S role in the derived construction. They differ from causativization in that the nucleativized participant cannot be characterized as a causer or instigator.

Chapter 14 is entitled "Applicativization." The analysis of applicativization is based on a broad definition according to which the characteristic feature of applicativization is that, in the derived construction, a noun phrase in a syntactic role other than A or S (the APPLIED PHRASE) represents a participant that either can be expressed in the initial construction with a non-core coding different from its coding in the derived construction, or cannot be expressed at all in the initial construction.

Chapter 15 is entitled "Flexivalency alternations." It discusses the typology of uncoded valency alternations, for which FLEXIVALENCY is used as a cover term. The uncoded valency alternations involving a change in transitivity are grouped under the term AMBITRANSITIVITY, with two main subtypes: A-ambitransitivity (in which the S of the intransitive construction corresponds to the A of the transitive construction) and P-ambitransitivity (in which the S of the intransitive construction corresponds to the P of the transitive construction).

Chapter 16 is entitled "The noncausal–causal alternation, the psych-alternation, and the undirected–directed alternation." It deals with the cross-linguistic analysis of three functional types of valency alternations that, from one language to another, may variously involve suppletivism, ambitransitivity, equipollent derivation, transitivization, or detransitivization.

Chapter 17 is entitled "Noun incorporation, transitivity, and valency." Incorporation is defined as a morphological operation creating verbal lexemes by compounding a verbal lexeme and a lexeme belonging to another category. Noun incorporation can be subdivided into several subtypes that differ in the relationship between the valency properties of the compound verb and those of the verb from which it is formed.