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CHAPTER 18

VOICE TYPOLOGY

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1. TERMINOLOGY AND BASIC DEFINITIONS

1.1 Historical notes

The category of voice goes back to the ancient Greek grammatical tradition, where it appears under the name *διάθεσις* (*diáthesis*) ‘disposition’. The formal opposition between two diatheses, *ἐνέργεια* (*enérgeia*) ‘performance’ and *πάθος* (*páthos*) ‘experience’ (later rendered in the Latin grammatical tradition as ‘activum’ and ‘passivum’), amounts to the morphological opposition between two series of verbal inflectional morphemes, known in modern terminology as active and middle (for details, see Andersen 1994a: 125 ff., 1994b); cf., for instance, active: 1SG.PRS. *tí-thê-mi*, 2SG.PRS. *tí-thê-s*, 3SG.PRS. *tí-thê-si*, etc. ‘to put’ vs. middle: 1SG.PRS. *tí-the-mai*, 2SG.PRS. *tí-the-sai*, 3SG.PRS. *tí-the-tai*, etc. ‘to put (for oneself)’. Latin grammarians have adopted the concept of diathesis (with some important modifications) for the opposition between active and passive verbal forms, describing this morphological category in terms of *genera verbi* (‘verbal classes’) (see Andersen 1994a: 169 ff.). One of the terms used to refer to the active/passive forms, *vox* (*activa/passiva*) ‘(active/passive) expression’, eventually underlies ‘voice’ and ‘voix’ in the modern English and French grammatical traditions, where they refer, above

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all, to the opposition between the active and passive forms and constructions, as in *Jack builds the house* vs. *The house is built (by Jack)*.

1.2 Diathesis and valency patterns

There are many approaches to the definition and typological description of the category of voice; it is of course impossible to discuss all of them here, however. In what follows, the definitions of ‘voice’ and related concepts will be given within a slightly simplified version of the framework developed by the Leningrad–St Petersburg Typology Group.¹

This approach offers a powerful calculus of possible relations between two main levels of representation of the linguistic structure. These include (i) the level of semantic arguments, or semantic roles (Agent, Patient, Experiencer, etc.) and (ii) the level of grammatical relations, or syntactic functions (Subject [S], Direct Object [DO], Indirect Object [IO], Oblique Object [Obl]) (see Bickel, this volume). The first level is determined by the semantic class of the verb. For instance, the role of Experiencer is typically generated by verbs denoting feelings and emotions, such as *see*, *hear*, *like*, whilst the role of (a canonical) Patient is normally induced by verbs of destruction, such as *kill*, *split*, *break*. In fact, a language rarely needs to distinguish between all minor roles. Most often, only two or three basic oppositions within the complete inventory turn out to be syntactically relevant. This yields a much smaller inventory of main types of participants in a situation, or ‘macroroles’ (cf. the macroroles of Actor and Undergoer in the framework of Role and Reference Grammar; see Foley and Van Valin 1984 and Bickel, this volume). I will denote such macroroles by means of capital letters X, Y, Z, W.

The level of grammatical relations is responsible for the realization of arguments in the clause. The three main formal means of encoding grammatical relations are case marking, verbal agreement, and word order. Together, these three parameters determine the syntactic structure of the clause. In simple cases, the syntactic functions can be straightforwardly determined in terms of one of these parameters. Thus, the grammatical relations of S, DO, and IO often correspond to the nominative, accusative, and dative, respectively (in nominative–accusative case-marking languages); the clause-initial noun bears the grammatical relation of Subject in many languages; etc.

The most important theoretical concept that is determined in terms of these two levels of representation and enables one to capture the rich variety of voices is that

¹ This theoretical framework goes back as far as the seminal paper by Mel’čuk and Xolodovič (1970). For a detailed presentation of this approach, see Xrakovskij (1981, 1991), Geniušienė (1987), and Mel’čuk (1993, 1994: 135 ff.); a good many of the illustrative examples quoted in this chapter are borrowed from these works (as well as from Siewierska 1984). For a general sketch of the methodology of this group, see V. Nedjalkov and Litvinov (1995).

of **diathesis**. Diathesis is determined as a pattern of mapping of semantic arguments onto syntactic functions (grammatical relations).² The notion of diathesis is closely related to that of verbal valency/valence, which is inherently associated with the set of arguments governed by the verb in question.

An example of a diathesis can be schematically presented as, for instance, ‘X : S; Y : DO’; i.e. the first semantic (macro)role X (Actor) is mapped onto the grammatical relation of Subject, while the second semantic (macro)role Y (Undergoer) is mapped onto the grammatical relation of Direct Object.

The pattern where the Actor is mapped onto the Subject and the Undergoer onto the Direct Object is the most common, unmarked way of representing an event and therefore can be regarded as the basic, or neutral, diathesis³ of a simple transitive verb.⁴ This can be illustrated by the Latin and Sanskrit sentences in (1) and (2):

- (1) Latin
 Miles hostem occidit
 warrior.NOM enemy.ACC kill.PRS.3SG
 ‘The warrior kills the enemy.’
- (2) Sanskrit
 rāja rkṣaṃ han-ti
 king.NOM bear.ACC kill.PRS-3SG.ACT
 ‘The king kills the bear.’

Diatheses can be conveniently presented in a tabular form (which I will use hereafter in the present chapter). Thus, the diathesis exemplified by (1) and (2) can be schematized in table (3):

- (3) Basic transitive diathesis
 Semantic argument level (role)
 Syntactic function level (case)

X (Actor)	Y (Undergoer)
S (NOM)	DO (ACC)
(miles, rājā) (hostem, rkṣaṃ)	

² Using the term ‘diathesis’ to refer to mapping patterns is a terminological innovation of the Leningrad–St Petersburg Typology Group which is not widely accepted in the typological literature (but cf. e.g. Shibatani 2004: 1146 ff.). It should not be confused with the traditional usage of this term in Greek and, in general, Indo-European scholarship to denote the inflectional verbal category (active/middle type of inflection) and the related functions or meanings (such as active, middle, passive). Other possible terms are ‘syntactic pattern’, ‘valency/valence pattern’, and ‘construction type’. Compare also the notions of ‘valence pattern’ and ‘argument structure’, briefly discussed e.g. by Haspelmath and Müller-Bardey (2004).

³ For the notion of a basic diathesis (construction type), see Shibatani (2006: 257 ff.) in particular.

⁴ Determining the basic diathesis may pose serious difficulties in some languages. This is the case e.g. with voice in Philippine languages; see Shibatani (1988, 2004: 1153–5, 2006: 258 ff.) for details.

Changes in syntactic patterns can readily be described in terms of a modification of diatheses. For instance, the modification of the basic (neutral) transitive diathesis which results in the passive equivalent of a transitive clause typically suggests the following two (partly independent) syntactic phenomena: (i) the promotion of the initial Direct Object to the Subject (= the Subject of the passive construction); and (ii) the demotion of the initial Subject (usually, an Agent). The demotion of the Subject may amount either to its downgrading to an Oblique Object (passive Agent) or to its removal from the structure. This change in diathesis is exemplified by the passive equivalents of (1) and (2) in (4) and (5) and presented in tabular form in (6):

(4) Latin

A milite hostis occidi-tur
 by warrior.ABL enemy.NOM kill.PRS-3SG.PASS
 'The enemy is (being) killed by the warrior.'

(5) Sanskrit

ṛkṣo rājñā han-ya-te
 bear.NOM king.INS kill-PRS.PASS-3SG.MED
 'The bear is (being) killed by the king.'

(6) Passive diathesis

X	Y	⇒	X	Y
S	DO		Obl / -	S

In languages where the correspondence between grammatical relations and case-marking is relatively straightforward (see Primus, this volume, and Bickel, this volume), diathesis modification can also be formulated in terms of changes in case-marking. Thus, scheme (7) describes passivization in Sanskrit:

(7) Passivization in Sanskrit

X	Y	⇒	X	Y
S (NOM)	DO (ACC)		Obl (INS)	S (NOM)

1.3 Diathesis and voice

The category of 'voice' is determined on the basis of the concept of diathesis as follows: voice is a regular encoding of diathesis through verbal morphology.

Thus, many languages of the world encode the above-mentioned passive diathesis by means of a special verbal morpheme, which, accordingly, is interpreted as the marker of the passive voice. In Latin, the passive voice is expressed by means of a special series of endings (passive, or deponent, inflection; cf. 3sg.pass. *-tur* ~ 3sg. act. *-t*); in Sanskrit, by means of the present passive suffix *-ya-* and the middle inflection; in English, by means of the auxiliary verb *be* and past participle.

It is important to note that, in accordance with the definition given in 1.2, a modification in diathesis only suggests changes in the pattern of mapping of semantic arguments onto syntactic functions (i.e. in the valency pattern) but not in the semantics of the sentence. This is only possible in cases where the inventory of semantic roles remains unchanged: i.e. no role is removed from the base structure or added to it. Yet there are some system-related reasons to group together such syntactic alternations (which can be called ‘diathesis changes *sensu stricto*’; cf. passive, antipassive, dative shift, and some other diatheses discussed in 2.1) and those which do allow some operations on the set of semantic roles (‘diathesis changes *sensu latiore*’; cf. causative and anticausative, benefactive, and other diatheses discussed in sections 2.2 and 2.3). This terminological dilemma will be briefly discussed in section 3.

There is no need to argue that defining diathesis/voice, in general, and passive, in particular, primarily in syntactic terms simplifies the matter in some respects. Along with syntactic parameters, both semantics and morphology play an important role in the definition and adequate description of the passive and other voices. On the one hand, the fact that in many languages the morphemes labelled ‘passive’ include within the range of their functions non-canonical passive or even non-passive diatheses, such as the reflexive or the anticausative, apparently justifies a more morphologically oriented (form-oriented) definition of voice. In the present chapter, this problem is dealt with in terms of voice/diathesis clusters (as discussed in 3.1). On the other hand, a number of semantic features associated with the passive and other voices (see section 4) clearly show that the semantic aspects of this category should not be disregarded, either. In fact, the linguistic literature exhibits a rich variety of opinions and definitions, depending on whether priority is given to syntax, morphology (form), or semantics (for a survey, see e.g. Kazenin 2001a: 904–10).

An interesting attempt to avoid the shortcomings present in existing approaches has been made in Andersen’s (1991, 1994a) semiotic approach. According to Andersen (1991: 27), ‘the passive is not the *signatum* of the respective *sign*, but rather [...] just one of many *interpretantia* of the *sign*’.⁵ The choice of the syntactically oriented approach in the present chapter is largely stipulated by the elaborated character of the diathesis calculus (as developed within the framework

⁵ As Andersen (1994a: 295) explains, ‘Linguistic *signs* are [...] employed in contexts in which they exhibit particular inferred interpretations, i.e. the functional properties or *interpretantia* of the *sign*.’

of the Leningrad–St Petersburg Typology Group), which enables a clear, compact, and comprehensive overview of the phenomena typically grouped under the general label ‘voice’ and/or ‘diathesis’.⁶

1.4 Modification of diathesis without morphological marking: labile verbs

Many diathesis modifications (valency changes) remain unmarked in the verbal form; compare object deletion (8), dative shift (9), and Agent deletion, or anti-causative derivation, shown in (10):

(8) Russian

a. Ivan čitaet knigu
‘Ivan is reading a book.’

b. Ivan čitaet
‘Ivan is reading.’

(9) a. Mary gave John an apple.

b. Mary gave an apple to John.

(10) a. John opened the door.

b. The door opened.

Verbs (verbal forms) that can change their syntactic pattern, or diathesis (e.g. can be used both intransitively and transitively, as in (10)), without any change in their morphology are called ‘labile’.⁷

2. CALCULUS OF DIATHESES AND VOICES

The inventory of logically possible diatheses (or possible diathesis/valency changes) can readily be generated by a diathesis calculus. The task of a typologist is to check this inventory against the evidence available from the languages of the world, to

⁶ For correspondences and relationships between different frameworks and approaches, see e.g. Haspelmath and Müller-Bardey (2004: 1130 ff.) and Shibatani (2004: 1146 ff.).

⁷ The term is borrowed from Caucasian linguistics. Other terms occurring in the literature include ‘voice-neutral’ (Tchekhoff 1980), ‘optionally transitive’ (Miller 1993: 179 ff.), and ‘ambitransitive’ (Dixon 1994). In the English tradition of the last few decades, the intransitive member of pairs like *The door opened: John opened the door* is often termed ‘ergative’ (cf. Keyser and Roeper 1984); see Dixon (1994: 18–21) for a criticism of this terminological use and Kulikov (1999a, 2003) for a general survey.

study the actually attested diathesis alternations, and to draw theoretical conclusions on the structure and content of the category of voice.

2.1 Diatheses changes which do not affect the inventory of semantic roles: derived diatheses/voices *sensu stricto*

The first major class of diatheses includes those which do not affect the initial inventory of semantic roles. In other words, the derived diathesis preserves all semantic roles which are present in the basic, or neutral, diathesis (corresponding to the base or non-derived structure); even where some of them remain unexpressed, their presence is implied by the meaning of the sentence. To this category belong all diatheses and voices in the strict sense of the word.

2.1.1 Subject-demoting diatheses: *passive*

The most important class of diatheses includes those which suggest the syntactic demotion of the main participant of the situation (realized as the Subject in the initial structure) and its degrading down to an Oblique Object (Obl) or complete removal from the clause. This class consists of passives of various types.⁸

(a) Canonical passive: *S-backgrounding and DO-foregrounding*

This type of derived diathesis (which also represents a textbook example of diathesis/voice in general) was briefly discussed above (cf. (4)–(7)).

(b) Agentless passive

Probably, all languages that have a canonical passive can also freely omit the passive Agent (*a milite* and *rājñā* in the Latin and Sanskrit examples (4) and (5)), which results in the agentless passive, as shown in scheme (11):

(11) Agentless passive

X	Y	⇒	X	Y
S	DO		–	S

Next to the languages with canonical ('full') passive—such as English, Latin, or Sanskrit—there are languages that cannot express the Agent in passive sentences. This is the case with Amharic, Latvian, Turkic, and many other languages (see Siewierska 1984: 35). Thus, in Latvian, the genitive of the passive Agent can be used

⁸ There is a rich literature on passives; see e.g. Siewierska (1984), Shibatani (1988), Xrakovskij (1981, 1991), and Andersen (1991).

in noun phrases with passive participles but is virtually impossible with finite passives, as in (12b):

(12) Latvian

- a. darbinieki ceļ māju
workers.NOM build.PRS.3PL house.ACC
'The workers build the house.'
- b. māja tiek cel-t-a (*darbinieku)
house.NOM be.PRS.3SG build-PASS.PART-SG.F (workers.GEN)
'The house is being built (*by the workers).'

Likewise, in Limbu (Tibeto-Burman), there can be no overtly expressed agent in passive constructions with verbs derived by means of the passivizer (bound verb) *-tetmaʔ*, as in (13a, b):

(13) Limbu (van Driem 1987: 215 ff.)

- a. ni-deʔl
see-PASS
'It is visible. It will be seen.'
- b. cirik pha·k-tɛʔl
cloth fold-PASS
'The cloth is capable of being folded.'

A special subtype of the agentless passive diathesis is the potential passive, which suggests the non-referential status of the Agent ('someone, whoever') and often adds the meaning of habituality; potential passives are typically constructed with manner adverbials such as *well, easily, often*:

(14) Potential (agentless) passive

X	Y	⇒	(X)	Y
S	DO		–	S

(15) French

- a. Ils entendent la musique
they hear.PRS.3PL the music
'They hear the music.'
- b. La musique s'entend bien
the music REFL hear.PRS.3SG well
'The music is well heard.'

(16) Russian

- a. Oni otkryvajut dver'
 they.NOM open.PRS.3PL door.ACC
 'They open the door.'
- b. Dver' otkryvaet-sja legko
 door.NOM open.PRS.3SG-REFL easily
 'The door opens easily.'

In English, this diathesis change receives no marking in the verbal morphology (recall the labile pattern), yielding a construction called 'middle' by some scholars:

(17) English

- a. John reads the new novel by Stephen King.
 b. The new novel by Stephen King reads well.

(c) *Impersonal passive (backgrounding passive without DO-foregrounding)*

In some languages, the demotion of the initial Subject is not accompanied by the promotion of the Direct Object (see esp. Comrie 1977, Siewierska 1984: 93 ff.):

(18) Backgrounding passive

X	Y	⇒	X	Y
S	DO		Obl / –	DO

This results in constructions with a Direct Object, where the Subject position remains vacant. This diathesis (traditionally referred to as the 'impersonal passive') can (i) receive the same morphological marking on the verb as the standard (canonical) passive, as in Icelandic (19); (ii) be expressed by a special form, as is the case with the impersonal passive in Polish⁹ (20) and in Finnish¹⁰ (21) (which lacks a canonical passive); or (iii) have no special marking in the verbal morphology (so that no voice phenomenon arises), as in Russian (22):

(19) Icelandic

- a. Jòn gaf mér bókín-a
 John.NOM give.PST.3SG I.DAT book-ACC
 'John gave me the book.'

⁹ For a detailed analysis of Polish impersonal passives with the *to/no* participle, see Siewierska (1988: 269 ff.) and Wiemer (forthcoming).

¹⁰ This form is called by some scholars 'indefinite', 'suppressive', or 'subjectless impersonal'; for discussion, see Andersen (1994a: 260–71) and Manninen and Nelson (2004).

- b. Mér var gefin bókin af Jòn
 I.DAT was give.PART.SG.N book.NOM by John
 'I was given a book by John.'

(20) Polish

- a. Robotnicy budują szkołę
 workers.NOM build.PRS.3PL school.ACC
 'The workers build a school.'
- b. Zbudowan-o szkołę (robotnikami)
 build:PASS.PART-SG.N school.ACC (workers.INS)
 'A school is built (by the workers).'

(21) Finnish (Manninen and Nelson 2004: 212 ff.)

- a. Diane tappaa etana-n
 Diane.NOM kill.3SG slug-ACC
 'Diane will kill the slug.'
- b. Etana tape-taan
 slug.NOM kill-PASS
 'The slug will be killed./They will kill the slug.'

(22) Russian

- a. Burja povali-l-a derevo
 storm.NOM knock.over-PST-SG.F tree.ACC
 'The storm knocked over the tree.'
- b. Burej povali-l-o derevo
 storm.INS knock.over-PST-SG.N tree.ACC
 'The tree was knocked over by the storm.'

Since such S-backgrounding passives do not suggest DO-foregrounding, they are also possible for intransitive (mono- or bi-valent) verbs (cf. (23)), as in Turkish (24):

(23) Backgrounding passive of non-transitive bivalent verbs

X	Y	$\Rightarrow$	X	Y
S	IO / Obl		-	IO / Obl

(24) Turkish

- a. Hasan otobüs-e bin-di
 Hasan bus-DAT board-PST
 'Hasan boarded the bus.'
- b. Otobüs-e bin-il-di
 bus-DAT board-PASS-PST
 'The bus was boarded.'

Some languages do not tolerate constructions without an overt subject noun. This position is obligatorily occupied by a 'dummy' or empty Subject (symbolized as ∇ in the table below and glossed as *it* in examples (26), (28)–(30); cf. German *es*, French *il*, Dutch *er*):

(25) Impersonal passive with dummy Subject

X	Y	⇒	–	X	Y
S	DO		S = ∇	Obl/–	DO

(26) French

Il se construit beaucoup de ponts
 it REFL build.PRS.3SG a.lot.of bridges
 'They build a lot of bridges.'

A textbook example of a backgrounding passive with a dummy Subject is the Dutch impersonal *er*-passive, schematized in (27), which can degrade the initial Subject down to an Oblique Object (passive Agent), as in (28), or leave it unexpressed, as in (29):

(27) Impersonal passive of intransitive verbs

X	⇒	–	X
S		S = ∇	Obl / –

(28) Dutch

- a. De jongens fluiten
 the boys whistle.PRS.3PL
 'The boys whistle.'
- b. Er wordt door de jongens gefloten
 it PASS.AUX.PRS.3SG by the boys whistle:PASS.PART
 'There is boys' whistling.'

(29) Dutch

- a. Jan danst
 John dance.PRS.3SG
 'John dances.'
- b. Er wordt gedanst
 it PASS.AUX.PRS.3SG dance.PASS.PART
 'There is dancing./They dance.'

Similar constructions are found in some other Germanic languages, for example, in Swedish:

(30) Swedish

- a. Någon skjut-er ute
 somebody shoot-PRS outside
 'Somebody shoots outside.'
- b. Det skjut-s ute
 it shoot-PRS.PASS outside
 'There is shooting outside.'

(d) *Absolute passive*

Both the Subject and the Direct Object can be degraded (in particular, left unexpressed), which results in a structure displaying features of both the (canonical) passive (Subject demotion) and the antipassive (Direct Object demotion; see 2.1.2 below):

(31) Absolute passive

X	Y	⇒	X	Y
S	DO		–	–

(32) Welsh

- Nid addolir yn y capel
 not worship.PASS.3SG in this chapel
 'There is no service in this chapel.'

(e) *Conversive*

Next to the diathesis changes discussed in the previous sections and taken by all grammars as standard passives, there are some less common and/or productive syntactic derivations which share some features with the standard passive. Thus, if the semantic distance between the two main arguments, X and Y, is smaller than in the case of the canonical Actor and Undergoer, the initial Subject may degrade less crucially than in canonical passives, thereby becoming an Indirect or Oblique Object of relatively high rank. This results in a 'converse diathesis' (conversive).¹¹ This is often the case with verbs of perception and emotional

¹¹ The members of such oppositions are called 'converse terms' or 'converses'. For a lexicographic description of this phenomenon, see e.g. Apresjan (1974: 256–83 [1992: 315–57]) and Cruse (1986: 231 ff.).

states (mental events), constructed with two main arguments, Stimulus and Experiencer.¹²

(33) Conversive

X	Y	$\Rightarrow$	X	Y
S	DO		IO / Obl	S

(34) Russian

- a. Grom ispuga-l- $\emptyset$ sobaku
 thunder.NOM frighten-PST-SG.M dog.ACC
 ‘The thunder frightened the dog.’
- b. Sobaka ispuga-l-a-s' groma
 dog.NOM frighten-PST-SG.F-REFL thunder.GEN
 ‘The dog was frightened by the thunder.’

In some cases, it is even possible that the Stimulus and Experiencer roles switch their syntactic positions, which results in a symmetric conversive; cf. the syntactic relation between English constructions with the verbs *like* and *please* (which can be taken as members of a suppletive pair):

(35) Symmetric conversive

X	Y	$\Rightarrow$	X	Y
S	DO		DO	S

(36) English

- a. John likes Mary.
b. Mary pleases John.

2.1.2 *Object-demoting diatheses: antipassive and de-objective*

The demotion of the initial Direct Object produces an effect opposite to that observed in the canonical passive, hence the term ‘antipassive’ (cf. (37)). The Direct Object can (i) be degraded down to an Oblique Object, as in (38b) and (39b); or (ii) be entirely removed from the syntactic structure, as in (39c). The latter subtype is also called the ‘absolute transitive’, ‘object suppressive’, or ‘de-objective’:

¹² For a discussion of verbs denoting mental events, see esp. Croft (1993) and Kemmer (1993: 128 ff.).

(37) Antipassive

X	Y	⇒	X	Y
S	DO		S	Obl / –

Antipassives of type (i) are particularly common in ergative languages; cf. the examples from Chukchee (Paleo-Siberian) and Dargwa (Caucasus, Nakh-Daghestan):

(38) Chukchee

- a. 'aaček-a kimit'-ən ne-nl'etət-ø-ən
youth-ERG load-ABS 3PL.SBJ-carry.away-AOR-3SG.OBJ
'(The) young men carried away the load.'
- b. aaček-ət ine-nl'etət-ø-g'et kimit'-e
youth-ABS ANTIP-carry.away-AOR-3PL load-INS
'(The) young men carried away a load.'

(39) Dargwa

- a. Neš-li gazet-ø b-uč'-u-li sari
mother-ERG newspaper-ABS NHUM-read.IPFV-PRS-CVB be.F
'The mother is reading a/the newspaper.'
- b. Neš-ø gazet-li r-uč'-uli sari
mother-ABS newspaper-ERG F-read.IPFV-PRS-CVB be.F
'The mother is reading a/some newspaper.'
- c. Neš-ø r-uč'-uli sari
mother-ABS F-read.IPFV-PRS-CVB be.F
'The mother is reading.'

In English, absolute transitives do not receive any special verbal marking, thus following labile patterning:

(40) English

- a. John ate the cake.
b. John ate.

Finally, we also find instances of the identical marking of the passive and the antipassive (both decreasing the verbal valency); cf. the Russian antipassives in (41) and (42), which receive the same marking (the reflexive suffix *-sja*) as passives (cf. (16)):

(41) Russian

- a. Petja brosaet kamni
Peter.NOM throw.PRS.3SG stones.ACC
'Peter throws (the) stones.'

- b. Petja brosaet-sja kamnjami
 Peter.NOM throw.PRS.3SG-REFL stones.INS
 'Peter throws stones.' (Lit. 'Peter throws with stones.')

(42) Russian

- a. Sobaka kusaet devočku
 dog.NOM bite.PRS.3SG girl.ACC
 'The dog bites the girl.'
- b. Sobaka kusaet-sja
 dog.NOM bite.PRS.3SG-REFL
 'The dog bites' (in a habitual context).

A special variety of object deletion is instantiated by noun incorporation.¹³ The initial object is incorporated into the verbal form (usually in the form of a stem rather than as an inflected form), thus remaining overtly expressed in the sentence but losing the status of a syntactic argument (object). This phenomenon is well known, in particular, from many Amerindian and Paleo-Siberian (Chukchee, cf. (43)) languages. The incorporating strategy usually indicates the low referential status of the incorporated argument (generic, non-individuated, indefinite, etc.; see esp. V. Nedjalkov 1977, Mithun 1984).

(43) Chukchee

- a. ətləγ-e təkəč'-ən utkuč'-ək pela-ø-nen
 father-ERG bait-ABS trap-LOC leave-AOR-3SG.SBJ/3SG.OBJ
 'The father left the bait at the trap.'
- b. ətləγ-en utkuč'-ək təkəč'ə-pela-ø-g'e
 father-ABS trap-LOC bait-leave-AOR-3SG
 'The father left bait at the trap.'

2.1.3 Some derived diatheses and voices of trivalent verbs

(a) Dative shift and dative passive

The diathesis modification promoting the initial Indirect Object to the DO position is known in English grammar as dative shift, schematized in (44) and exemplified in (45b) (for a detailed study of this phenomenon, see Siewierska 1998d). The resulting construction can further be passivized, as in (45c), with the promotion of the new ('dative') Direct Object:

¹³ For syntactic aspects of noun incorporation, see esp. Baker (1988: 81 ff. and *passim*).

(44) Dative shift (and dative passive)

X	Y	Z
S	DO	IO

 $\Rightarrow$

X	Y	Z
S	DO ₂	DO

 $\Downarrow$

X	Y	Z
Obl / -	DO ₍₂₎	S

(45) English

- John gave a book to Mary.
- John gave Mary a book.
- Mary was given a book (by John).

(b) $2/3$ permutation (locative alternation)

The direct and non-direct (Indirect or Oblique) Objects of some trivalent verbs may switch. This derivation is known as ‘2/3 permutation’ (‘2-3 retreat’ in Relational Grammar), or ‘locative alternation’:

(46) 2/3 permutation (locative alternation)

X	Y	Z
S	DO	Obl/IO

 $\Rightarrow$

X	Y	Z
S	Obl/IO	DO

This diathesis modification can remain unmarked in the verbal morphology, as in English (47), but there are some languages, such as Chukchee, which have a special voice marker for it (cf. (48)):

(47) English

- John sprayed the paint on the wall.
- John sprayed the wall with paint.

(48) Chukchee

- a. *ətɫəɣ-e mətqəmət-ø kawkaw-ə kili-ø-nin*
 father-ERG butter-ABS bread-LOC spread-AOR-3SG.SBJ/3SG.OBJ
 ‘The father spread butter on the bread.’
- b. *ətɫəɣ-e kawkaw-ø mətq-e ɛna-rkele-ø-nen*
 father-ERG bread-ABS butter-INS 2/3.PERMUT-spread-AOR-3SG.
 SBJ/3SG.OBJ
 ‘The father spread the bread with butter.’

Subsections 2.2 and 2.3 deal with diatheses and voices in a broader sense of the term, i.e. with the changes in syntactic patterns which suggest some operations on the set of semantic roles and/or do not preserve this set intact.

2.2 Syntactic changes which preserve the inventory of semantic roles but impose certain operations on them ('operational diatheses')

2.2.1 *Reflexive*

The reflexive can be described in terms of the diatheses calculus as a derivation which encodes the referential identity of the main argument of the initial structure (X) and some other argument; for a detailed study of this derivation, see Geniušienė (1987), König and Gast (2008), and Ryan (2004). The most important type of reflexive, 'canonical reflexive', is the one where the Subject is co-referential with the Direct Object (*John_i loves John_i = John loves himself*).

Normally, the co-referential Direct Object is not repeated in the sentence but is either (i) replaced by the reflexive pronoun (cf. Eng. *oneself*, *him-/her-/itself*; German *sich*, etc.), or (ii) removed from the original structure. In the latter case we are dealing with a valency-reducing phenomenon, as shown in (49) and illustrated in (50); the verbal form obligatorily receives special morphological marking (called in some grammars 'reflexive voice'):

(49) Canonical reflexive

X	Y	$\Rightarrow$	X = Y
S	DO		S

(50) Russian

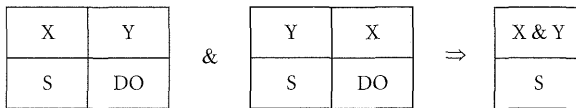
- a. Petja moet sobaku
 Peter.NOM wash.PRS.3SG dog.ACC
 'Peter washes the dog.'
- b. Petja moet-sja
 Peter.NOM wash.PRS.3SG-REFL
 'Peter washes himself.'

2.2.2 *Reciprocal*

The reciprocal derivation suggests another logical operation, which can roughly be described as a conjunction of the base proposition with its 'symmetric' equivalent, where two of the arguments switch (i.e. exchange roles); for a detailed study of this

derivation, see V. Nedjalkov (2000, 2004, 2007) and König and Gast (2008). As in the case of the reflexive, the most important and common ('canonical') type is represented by the 'Subject $\leftrightarrow$ Direct Object' reciprocal (*John loves Mary and Mary loves John* = *John and Mary love each other*). As in canonical reflexive constructions, the Direct Object is either (i) replaced by the reciprocal pronoun (cf. English *each other*, German *einander*, etc.), or (ii) removed from the original structure, and this valency change is obligatorily marked in the verbal morphology ('reciprocal voice'). As in the case of the reflexive, we are dealing with a valency-reducing phenomenon, as shown in scheme (51) and illustrated in (52) and (53):

(51) Canonical reciprocal



(52) French

- a. Pierre a embrassé Marie (& Marie a embrassé Pierre)
 Peter kiss.PST.3SG Mary Mary kiss.PST.3SG Peter
 'Peter kissed Mary.'
- b. Pierre et Marie se sont embrassés
 Peter and Mary REFL kiss.PST.3PL
 'Peter and Mary kissed (each other).'

(53) Russian

- a. Petja pocelova-l-ø Mashu
 Peter.NOM kiss-PST-SG.M Mary.ACC
 'Peter kissed Mary.'
- b. Petja i Masha pocelova-l-i-s'
 Peter.NOM and Mary.NOM kiss-PST-PL-REFL
 'Peter and Mary kissed (each other).'

Diatheses discussed in sections 2.1.1 and 2.1.2 (i.e. the majority of diatheses/voices in the strict sense of the word) and 2.2 ('operational diatheses') decrease the valency of the initial structure. Passives degrade the original Subject; antipassives and operational diatheses demote or remove the Direct Object.

2.3 Syntactic changes which do not preserve the inventory of semantic roles

There are two main types of changes in the inventory of semantic roles: changes that add new argument(s) to the base structure, and changes that delete some

argument(s) from the base structure. These two types generate valency-increasing and valency-decreasing diatheses, respectively.¹⁴

2.3.1 Valency-increasing derivations

There are three main types of valency-increasing syntactic derivations, depending on which syntactic argument is added to the original structure (shown by the grey-shaded boxes in diathesis schemes below). Adding a new Subject is the salient feature of causatives; adding a Direct Object typically yields an applicative; and adding an Indirect Object results in the benefactive derivation.

(a) Causative and syntactic phenomena in causative constructions

Causatives can be defined as verbs which refer to a causative situation, i.e. to a causal relation between two events, one of which is believed by the speaker to be caused by the other; see, for example, V. Nedjalkov and Sil'nickij (1969b), Shibatani (1976b), Comrie (1976b), Song (1996), and Kulikov (2001). In other words, a causative is a verb or verbal construction meaning 'cause to V_o', 'make V_o' (where V_o stands for the embedded base verb). Thus, the causative derivation adds the meaning 'cause' to the base proposition and a new actor, viz. Causer, to the set of semantic roles. The causer obligatorily takes the Subject position, ousting the initial Subject to a non-Subject (non-S) position. Accordingly, the general diathesis scheme of the causative derivation can be represented as follows:

(54) Causative (general scheme)

X	[...]	⇒	Causer	X (Causee)	[...]
S	[...]		S	non-S	[...]

The causee, ousted from the Subject position by the causer, is demoted down the hierarchy of grammatical relations (also known as the 'case hierarchy'): Subject > Direct Object > Indirect Object > Oblique Object. One may expect that it occupies the highest (= leftmost) free position, according to the principle labelled by Comrie (1976b) 'paradigm case'. This means that, if the embedded verb is intransitive, transitive, or bitransitive, the causee appears as Direct Object, Indirect Object, or Oblique Object, respectively, as shown in (55)–(57):

(55) Causative of intransitive

X	⇒	Causer	X (Causee)
S		S	DO

¹⁴ For valency-changing diatheses, see Dixon and Aikhenvald (2000) in particular.

(56) Causative of transitive

X	Y	⇒	Causer	X (Causee)	Y
S	DO		S	IO	DO

(57) Causative of bitransitive

X	Y	Z	⇒	Causer	X (Causee)	Y	Z
S	DO	IO		S	Obl	DO	IO

Paradigm cases are provided, in particular, in Romance (e.g. French) and Turkic languages (see Comrie 1976b); cf. the Tuvan (Turkic) examples (58)–(60), taken from Kulikov (2001: 890); the causee is shown in boldface:

(58) Tuvan

- a. ool doŋ-gan
 boy freeze-PST
 'The boy froze.'
- b. ašak **ool-du** doŋ-ur-gan
 old.man boy-ACC freeze-CAUS-PST
 'The old man made the boy freeze.'

(59) Tuvan

- a. ašak ool-du ette-en
 old.man boy-ACC hit-PST
 'The old man hit the boy.'
- b. Bajır ašak-ka ool-du ette-t-ken
 Bajır old.man.DAT boy-ACC hit-CAUS-PST
 'Bajır made the old man hit the boy.'

(60) Tuvan

- a. Bajır ool-ga bižek-ti ber-gen
 Bajır boy-DAT knife-ACC give-PST
 'Bajır gave the knife to the boy.'
- b. ašak **Bajır-dan** ool-ga bižek-ti ber-gis-ken
 old.man Bajır-ABL boy-DAT knife-ACC give-CAUS-PST
 'The old man made Bajır give the knife to the boy.'

Probably, no language conforms exactly to what Comrie calls the ‘paradigm case’ (cf. Song 1996: 160). Exceptions to the paradigm case fall into two main classes: extended demotion and syntactic doubling.

(i) Extended demotion

In some languages, the causee can ‘skip’ one or more free positions in the hierarchy and hence be demoted more than necessary according to the paradigm case. The most frequent type of extended demotion results in the marking of the causee in the same manner as the Agent in passive constructions, as if causativization applied to the passivized embedded clause. This alternative ‘passive marking’ competes in some languages with that conforming to the paradigm case; cf. (61b, c):

(61) French (Comrie 1976b: 262–3)

- a. Jean mangera les gâteaux
 Jean eat.FUT the cakes
 ‘Jean will eat the cakes.’
- b. Je ferai manger les gâteaux à Jean
 I make.FUT eat the cakes to Jean
 ‘I shall make Jean eat the cakes.’
- c. Je ferai manger les gâteaux par Jean
 I make.FUT eat the cakes by Jean
 ‘I shall make Jean eat the cakes.’

For a possible explanation of ‘passive marking’, see e.g. Saksena (1980).

Rarer are other types of marking of the causee, and still rarer are languages like Nivkh (Gilyak), where the special case ending *-ax* is used solely to express the embedded Subject of causative constructions (cf. V. Nedjalkov, Otaina, and Xolodovič 1995: 77 [1969: 195]).

(ii) Syntactic doubling

Alternatively, the causee can be demoted to a position which is already occupied; for instance, in nominative–accusative languages, it can appear as another noun phrase in the accusative alongside the embedded Direct Object (cf. Aissen 1979: 156–201), as shown in (62) and exemplified in (63):

(62) Causative of transitive: DO doubling

X	Y	⇒	Causer	X (Causee)	Y
S	DO		S	DO	DO

(63) Sanskrit

- a. dasaś coraṃ gṛbh-ṇā-ti
 servant.NOM thief.ACC catch-PRS-3SG.ACT
 ‘The servant catches the thief.’

- b. Der Meister be-arbeitet eine Platte
 the master.NOM APPL-works a slab.ACC
 'The master works on a slab.'

(66) Ndendeule, Bantu (Ngonyani 1996: 3)

- a. n-gheni a-ki-hemel-a ngoβo
 1-guest 1.SBJ-PST-buy-them 10:cloth
 'The guest bought clothes.'
- b. n-gheni a-ki-n-hemel-el-a mw-ana ngoβo
 1-guest 1.SBJ-PST-1.OBJ-buy-APPL-them 1-child 10:cloth
 'The guest bought the child clothes.'

(67) Bella Coola

- a. puλ^ʔ-∅ ti-ʔimlk-tx ʔɬ ti-nusʔülχ-tx
 jump-3SG.SBJ DEF-man-DEF on DEF-thief-DEF
 'The man jumped on the thief.'
- b. puλ^ʔ-m-is ti-ʔimlk-tx ti-nusʔülχ-tx
 jump-TR-3SG.SBJ/3SG.OBJ DEF-man-DEF DEF-thief-DEF
 'The man attacked the thief.'

Compare examples (8) and (9) from Worombori and Creek quoted in Kittilä's chapter, this volume.

(c) *Adding an Indirect Object: benefactive*

Adding an Indirect Object to the set of arguments and the meaning 'for (the sake of)' to the meaning of the base proposition typically yields the derivative called 'benefactive'. The Indirect Object refers to a participant, which usually bears the semantic role of Beneficiary,¹⁶ corresponding to the person or entity benefiting from the performed activity—hence the term 'benefactive'. Another term taken from the Kartvelian grammatical tradition is 'objective version';¹⁷ see Boeder (1969, 2005: 34 ff.):

(68) Benefactive

X	...	⇒	X	...	W
S	...		S	...	IO

(69) Georgian

- a. Sandro-m koka-∅ ga-ṭex-a
 Sandro-ERG jug-NOM PREV-break-3SG.AOR
 'Sandro broke the jug.'

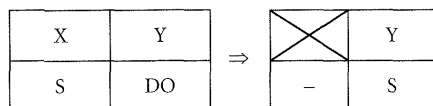
¹⁶ For some situations, this semantic role is closely related to or even (almost) identical with that of the Recipient.

¹⁷ 'Version' ← Georg. *kceva* 'change, transformation'.

2.3.2 Valency-decreasing derivation: anticausative

The main representative of the class of diatheses deleting some argument(s) from the base structure is the anticausative (decausative),¹⁸ which removes the Subject (Agent) from the structure:

(73) Anticausative



The anticausative has an important feature in common with the agentless passive: both entail the promotion of the initial Direct Object (Patient) and the demotion of the initial Subject (Agent), which accounts for their similar morphological marking in many languages. Some languages, nevertheless, make a morphological distinction between these two categories, compare (74b, c) in Russian:

(74) Russian

- a. Ivan razbi-l-∅ vazu
 John.NOM break-PST-SG.M vase.ACC
 ‘John broke the vase.’
- b. Vaza razbi-l-a-s’ (*Ivanom)
 vase.NOM break-PST-SG.F-REFL (John.INS)
 ‘The vase broke (*by John).’
- c. Vaza by-l-a razbi-t-a (Ivanom)
 vase.NOM be-PST-SG.F break-PART.PFV.PASS-SG.F (John.INS)
 ‘The vase was broken (by John).’

In cases where the markers of the passive and anticausative overlap, passives without an overtly expressed Agent can be distinguished from anticausatives only by *semantic criteria*. The standard description of this semantic opposition is given as follows by Comrie (1985b: 326): ‘Passive and anticausative differ in that, even where the former has no agentive phrase, the existence of some person or thing bringing about the situation is implied, whereas the anticausative is consistent with the situation coming about spontaneously.’ Distinguishing passives without an Agent from non-passive intransitives (anticausatives) is one of the most complicated problems with which a linguist is confronted when undertaking a syntactic study of the verb. Alongside clear instances of passives, which raise no doubts by virtue of the inherent agentive semantics of the corresponding verb (cf. such

¹⁸ Other terms used include ‘inchoative’ (cf. Haspelmath 1993), ‘unaccusative’, ‘ergative (intransitive)’, ‘quasi-passive’, and ‘fientive’ (now common in Indo-European scholarship); see Kulikov (2001: 888) for a survey. On anticausatives, see esp. Haspelmath 1987 and Schäfer 2008.

predicates as *build: is built*), and doubtless anticausatives (cf. *falls, grows*), there is an area of uncertainty, i.e. intransitive usages that allow for both passive and anticausative interpretations (cf. such meanings as ‘is born/arises’).

3. RELATIONSHIPS BETWEEN DIATHESES/VOICES

3.1 Diathesis/voice clusters

In some cases, a particular verbal form (voice) may correspond to just one particular diathesis. However, more often than not, we are faced with the situation where a group of (similar) diatheses is represented by the same verbal form (voice). That is, one morphological voice corresponds to a number of diatheses, a ‘diathesis cluster’ or ‘family’ (see e.g. Shibatani 2004: 1157 ff.). The diatheses belonging to the same cluster normally share some feature(s). The following groups of diatheses are often clustered together.

3.1.1 *Passive cluster*

Probably in all languages with passive, the class of constructions where the form called ‘passive voice’ is employed includes canonical and/or agentless passives, which suggest the demotion of the initial Subject (see section 2.1.1). The range of other members of this cluster (which differ in behaviour of other arguments) varies across languages. Thus, the passive cluster may optionally include backgrounding passives without DO-foregrounding, as in Polish or Dutch; include dative passives, as in English; or exclude from its members passives with an overtly expressed Agent, as in Latvian.

3.1.2 *Middle voice*

A much larger cluster is known under the traditional term ‘middle (voice/diathesis)’. Middle forms typically express a variety of diatheses which ‘focus’ the activity on the first argument (Subject) and/or intransitivize the base structure (for details, see Geniušienė 1987, Klaiman 1991: 44 ff., Kemmer 1993, and Kazenin 2001b). Here may belong the passive, conversive, anticausative, reflexive, reciprocal, antipassive, and autobenefactive (reflexive benefactive). Compare the Russian ‘reflexive’ morpheme *-sja/-s’*, which can express most of the above-listed functions (except for self-beneficent), as in (16b), (34b), (41b), (42b), (50b), (53b), and (74b). Several attempts have been made to capture the general, invariant meaning of the middle voice. One of the most elaborated theories is offered by Kemmer (1993). According to Kemmer (p. 243), ‘[t]he middle is a semantic area comprising events in which (a)

the Initiator is also an Endpoint, or affected entity[,] and (b) the event is characterized by a low degree of elaboration [...] The first property is a subaspect of the second. The (low) elaboration of events is a complex notion, which includes, in particular, such parameters as (low) distinguishability of participants and (low) distinguishability of events (pp. 109 ff., 208 ff., and *passim*).

3.1.3 Causative-passive polysemy

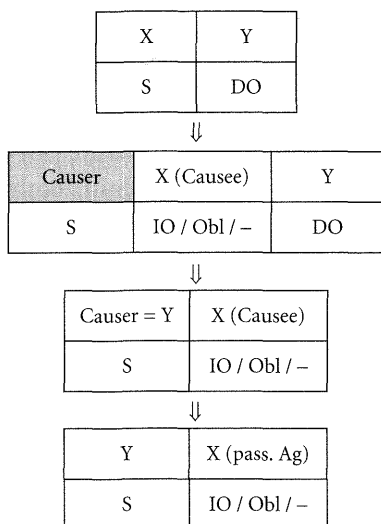
In Korean, some Altaic languages of Siberia (Tuvan, Yakut, Mongolian, Manchu, and other Tungusic languages), some West African languages (Songhai, Dogon), Bella Coola (Amerindian), and some other languages of the world, verbs with causative markers can also function as passives, as in (75):

(75) Manchu (I. Nedjalkov 1991: 5)

- a. Bata i-mbe va-ha
enemy he-ACC kill-PST
'The enemy killed him.'
- b. I bata-be va-bu-ha
he enemy-ACC kill-CAUS/PASS-PST
'He made (somebody) kill the enemy.'
- c. I (bata-de) va-bu-ha
he (enemy-DAT) kill-CAUS/PASS-PST
'He is/was killed (by the enemy).'

The passive usage is likely to have developed, most often and quite naturally, from the permissive (e.g. 'I let someone catch my hand' → 'I was grabbed by the hand', etc.) and/or from the reflexive-causative meanings ('I let someone photograph myself' → 'I was photographed'), as shown in (76):

(76) From causative to passive



For a general discussion, see V. Nedjalkov (1964), Andersen (1991: 75–82) (on cognitive sources of the causative/passive polysemy), and I. Nedjalkov (1991).

3.1.4 *Transitive cluster*

Some languages group together diathesis changes that increase the valency of the base pattern, most commonly, causative and applicative (see Kittilä, this volume). This is, for instance, the case of some Uto-Aztecan languages; compare Nahuatl *ni-mēwa* ‘I arise’ vs. *ni-k-mēwi-liya* ‘I raise him’ (causative), and *ni-čahči* ‘I shout’ vs. *ni-k-čahči-liya* ‘I shout to him’ (applicative) (see Tuggy 1988). For the causative/applicative polysemy, see, in particular, V. Nedjalkov and Sil’nickij (1973: 17–25 [1969b: 35–43]), Austin (1997), Dixon and Aikhenvald (1997: 77 ff.), Shibatani (2000: 563–71), and Shibatani and Pardeshi (2002: 116–22).

3.2 *Voices sensu stricto vs. sensu latiore:* their status in the grammar

According to the definition given in section 1, diatheses and voices in the strict sense of the concepts suggest only modifications in valency pattern with no semantic changes (but see also section 4); correspondingly, the addition or deletion of a semantic argument—as in the case of (anti)causatives, applicatives, and benefactives—which affects the propositional meaning cannot be considered a diathesis modification *sensu stricto*. Nevertheless, in a number of grammatical descriptions (in particular, in many Altaic and Uralic grammars), causative, reflexive, reciprocal, and some other derivations are grouped together with voices *sensu stricto* (‘causative voice’, ‘reciprocal voice’, etc.) (see Shibatani 2000: 547–48 in particular). Given a more rigorous definition of voice (see esp. Mel’čuk 1993), there are several reasons for treating such quasi-voices separately.¹⁹ Not only do they change the lexical meaning of the base verb, they can also be combined with other (quasi-)voices within one form (cf. passives derived from causatives, causatives derived from reflexives, etc.; see e.g. Muysken 1981: 457 ff. on the interaction between the causative and other derivational processes in Quechua) and even form double (e.g. double causatives), triple, and, theoretically, *n*-ple derivatives.

However, for some languages, there are also several system-related considerations in favour of the broader understanding of the term ‘voice’. This is particularly obvious in the case of large voice clusters, such as the middle, which may include diatheses in both the strict (e.g. passive) and the broad (e.g. reflexive) senses of the term.

¹⁹ Cf. also Mel’čuk (1993: 11, 1994: 324–6) and Babby (1983), where the causative in Turkish is regarded as a grammatical voice, in contrast with the (anti)causative in Russian.

4. SEMANTICS OF VOICES AND SEMANTIC EFFECTS OF DIATHESIS MODIFICATION

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The semantic content of voices and diatheses *sensu latiore*, such as the causative or benefactive, was briefly discussed above: the causative adds the meaning ‘cause’ and a new actor, the Causer; the benefactive adds the meaning ‘for (the sake of)’ and a Beneficiary. Likewise, applicatives may add a new semantic role (locative, instrumental, etc.). Besides, both benefactive and applicatives typically imply that the promoted participant (locative, instrumental, beneficiary) is ‘more thoroughly affected by the Agent’s action’ (Shibatani 2006: 245). A particular variety of valency increasing characterizes the voice traditionally called ‘adversative passive’. The textbook example is the Japanese verbal form with the suffix *-rare*: it adds the semantic role of the ‘affected’ participant in the same way as causativization adds a causer (see Kortlandt 1992); compare (77):

- (77) John wa dareka ni ie o yakareta
 John TOP someone DAT house ACC burn.PASS.PST
 ‘John’s house was burnt by someone; John was (negatively) affected by it.’

For the semantic content of the middle voice, see 3.1.2 above.

Diatheses in the strict sense of the word, such as passive, are often believed to be semantically (nearly) empty. Nevertheless, even canonical voices introduce some important semantic effects into the meaning of the sentence.

Thus, antipassives (see 2.1.2) typically introduce habitual meaning and non-referential status of objects (see esp. Hopper and Thompson 1980: 268–70); in addition, they may express the disposition of the actor to perform the action. The 2/3 permutation (see 2.1.3(b)) is generally used to express the complete character of the action which entirely affects its goal (cf. (47b)).

Finally, a number of important studies on the passive (see e.g. Givón 1979: 185 ff., Kazenin 2001a: 907 ff.) have essentially increased our understanding of the semantic conditions and effects of the use of passive (which was earlier considered a canonical example of a purely syntactic category, e.g. in the generativist tradition). In particular, it has been demonstrated that passives are more common in the backgrounded part of discourse (Hopper and Thompson 1980). They place the semantic focus on the non-agent argument (Undergoer or Theme) and detopicalize (de-focus or suppress) the Agent/Actor (Shibatani 1985, Givón 1994b, 2001, II: 123 ff.). The passive is typically used if the Agent has a relatively low degree of discourse relevance,²⁰ or topicality (Shibatani 2006: 248). In numerical terms,

²⁰ The high discourse relevance of an argument suggests a number of features, such as its salience in the speaker’s mind, its importance in the propositional act, and the focus of the hearer’s attention on it (see Shibatani 2006: 259).

passivization considerably decreases the ‘cataphoric persistence’ (or ‘topic persistence’) of the Agent of a clause, i.e. the frequency of the occurrence of its referent in the following part of the text (Givón 1994b, 2001, II: 123). This parameter can be measured by the number of clauses to the right in which the Agent appears as one of the semantic arguments. By contrast, the cataphoric persistence of the Patient is increased by passivization. Passivization has also some important implications for the characteristics of the event; in Shibatani’s (2006: 229) formulation: ‘voice is concerned with the evolutionary properties of an action’. In particular, passivization is often (but not always) accompanied by stativization and/or inactivization of the situation (Haspelmath 1990, Kazenin 2001a: 908, Shibatani 2006); it has recently been argued by Abraham and Leiss (2006) that impersonal passives are strongly correlated with the imperfective aspect. A detailed survey of the semantic and pragmatic effects (‘conceptual basis’) of voice can be found in Shibatani (1985, 1998, 2006).

5. DIACHRONIC SOURCES OF VOICE MARKERS

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Valency-decreasing morphemes, such as the passive and reflexive, as well as markers of the middle ‘voice’ (= voice cluster), often go back to reflexive pronouns, as in many Indo-European languages (cf. Russian *-sja*, Swedish *-s*, etc., which can be traced back to forms of the Proto-Indo-European pronominal lexeme **s(u)e-* ‘own, -self’). Passive morphemes may also originate from the third person plural pronoun (‘they’), as in Maasai (Kemmer 1993: 198). (For further discussion of the origin of passive morphemes, see Haspelmath 1990 and Givón 2001, II: 132 ff.) Reciprocal markers may result from reduplication of reflexive morphemes; compare Udehe *mene-mene-* ‘each other’ based on the reflexive pronoun *mene/me(n)-* (see V. Nedjalkov 2007). Causative morphemes often go back to half-auxiliary causative verbs meaning ‘make’, ‘let’, ‘allow’, ‘give’, etc., while applicative and benefactive markers can be based on or etymologically related to locative adverbials (cf. German *be-* ~ *bei* ‘at’) (see e.g. Haspelmath and Müller-Bardey 2004: 1142). Typical sources of causative morphemes also include directional or benefactive affixes, as discussed in Song (1990: 169–93, 1996: 80–106). For instance, in Lamang (Chadic), the causative suffix *-ŋà* may be related to the benefactive preposition *-ŋgà*; in Kxoe (Central Khoisan), the causative suffix *-kà* is identical to the directional preposition *-kà*. Finally, causative markers can develop from verbal affixes with non-causative meanings, such as intensive and iterative, as argued for in Li (1991), Kulikov (1999b), and Kölligan (2004). For a diachronic study of voices and valency-changing categories, see Kulikov (2010).

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