Valency Reduction in Estonian

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A thesis submitted in fulfilment of requirements for the degree of
Doctor of Philosophy

to
Theoretical and Applied Linguistics
School of Philosophy, Psychology and Language Sciences,
University of Edinburgh

March 2004

Declaration

I hereby declare that this thesis is of my own composition, and that it contains no material previously submitted for the award of any other degree. The work reported in this thesis has been executed by myself, except where due acknowledgement is made in the text.

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Abstract

Theories of voice based on a model of passivisation such as that exhibited by English tend to characterise valency modification as primarily a syntactic phenomenon which preserves propositional content, involving the mapping of underlying semantic roles to non-canonical syntactic argument positions. This dissertation finds such an approach insufficient to account for the observed phenomena in the more complex domain of voice in Estonian. The thesis provides a description of voice in Estonian, through an in-depth study of four valency-reducing constructions: the impersonal, personal passive, generic apersonal, and anticausative. These all involve semantic and lexical-level changes to the argument structure of a predicate. In order to arrive at a satisfactory theoretical account of voice in Estonian, the analysis must consider semantic and pragmatic information alongside the realignment of syntactic rules linking argument places with grammatical functions.

The status of verbal arguments undergoing demotion in valency-changing operations is shown to be crucial to the interpretations that the various constructions give rise to. The thesis establishes a hierarchy of implicit arguments as a key element of these differences in interpretation. The impersonal argument, although non-overt, is shown to be psychologically and linguistically salient, being present for both semantic interpretation and such syntactic purposes as anaphoric reference and control. The impersonal actor is argued to be only slightly demoted, the more important property assigned to the actor argument of impersonals being that of non-specificity. Following the impersonal on the proposed Demotion Hierarchy is the personal passive, with a true demoted agent, which can, however, be re-established through an agentive adverbial, and which forms part of the interpretation of the passive construction. Generic apersonal constructions have a less accessible actor referent, whose interpretation crucially

involves pragmatic inferencing. The anticausative retains only a single under-goer argument in its logical structure, which reveals both proto-agent and proto-patient characteristics. Only this derivationally formed predicate truly deletes its actor argument.

The thesis also makes a theoretical contribution to the representation of valency changes. The multi-tiered demotion of actors has implications for the location of valency changes in argument linking. Two semantic levels of representation are implicit in the analysis: one in the lexicon, with abstract valency slots, and the other on a construction-specific level, with fully specified arguments. The latter is realised syntactically through linking rules.

The description of the Estonian voice constructions demonstrates that a theory based on semantics is well equipped to account for the particular semantic and pragmatic effects of these operations, and the differences between them. The analysis is implemented within the framework of Role and Reference Grammar (RRG) and is based on RRG's assumption that the abstract logical structure of verbs underlies overt syntactic phenomena. RRG's generalised semantic macro-roles are found to be useful for various aspects of grammatical description. Tran-sitivity as defined by macroroles underlies several basic phenomena in Estonian grammar, including partitive case-marking and the syntactic behavior of verbal arguments.

The thesis proposes that the semantic representation of predicates with the vari-ous types of demoted argument requires modification of the RRG representation of voice. This is shown to have implications for interpretation and the linking between semantics and syntax. The range of voice constructions in Estonian, each assigning a different status to the demoted actor, raises significant issues with regard to the typology of voice and valency and the formal representation of argument structure.

Acknowledgments

List of Abbreviations

1PL	First Person Plural	GEN	Genitive
1PTC	First Participle (Past Active)	ILL	Illative
1SG	First Person Singular	IMP	Impersonal
2PL	Second Person Plural	IMV	Imperative
2PTC	Second Participle (Past Passive)	INE	Inessive
2SG	Second Person Singular	INF	Infinitive
3PL	Third Person Plural	INT	Interrogative
3SG	Third Person Singular	JSV	Jussive
A	Transitive Subject	MR	Macrorole
ABE	Abessive	MSG	Masculine Singular
ABL	Ablative	NEG	Negative
ACT	Actor	NOM	Nominative
ADE	Adessive	O	Transitive Object
ALL	Allative	PAR	Partitive
ANTC	Anticausative	PAS	Passive
APR	Apersonal	PL	Plural
COM	Comitative	PRS	Present
CND	Conditional	PST	Past
CST	Causative	QTV	Quotative
DAT	Dative	REF	Reflexive
E	Extension to Core	RRG	Role and Reference Grammar
ELA	Elative	S	Subject of Intransitive
EMPH	Emphatic	SG	Singular
ESS	Essive	TRL	Translative
FSG	Feminine Singular	TRM	Terminative
FOC	Focus	UND	Undergoer

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Introduction

Passivisation and voice are among the central phenomena which must be accounted for by any theory of syntax. This thesis looks at the domain of voice in Estonian, a non-Indo-European language with a rich voice paradigm and much variation to challenge theories of voice based on languages like English with a single passive operation. This introductory chapter provides some context for situating the thesis both theoretically and in terms of previous work on similar topics.

A review of the literature on voice, valency and related concepts gives background for some of the ideas in the thesis, and definitions of terms and concepts used. This is followed by an overview of linguistics in Estonia, which sets the scene for the position of this dissertation in relation to work done on Estonian, and the particular gaps which exist. Finally, the theoretical approach and formalism used in the thesis, that of Role and Reference Grammar (RRG, Van Valin & LaPolla 1997), is sketched. The basic assumptions and operations of RRG are given in this chapter, to make the framework accessible for discussion in later chapters.

1.1 Voice

The concepts associated with voice have been given numerous treatments, not all of them mutually compatible. The use of terms and notions relating to voice requires working definitions. This section investigates both the terminology and

the approaches taken in the literature regarding voice, valency, and transitivity. The concept of voice has been used to cover such a broad collection of disparate phenomena that, more often than not, theoretically-minded work narrows its gaze to concentrate on a few more familiar Indo-European types of active-passive voice distinctions. Typological work, however, demonstrates how varied the voice phenomena are, and even how varied passivisation can be. Results from typological work also suggest how central a category voice is to many areas of language, and hence how important it is for any linguistic theory to account for voice modulation in argument selection.

Trask's (1993) *Dictionary of Grammatical Terms in Linguistics* defines VOICE as the "grammatical category expressing the relationship between, on the one hand, the **participant roles** of the NP arguments of a verb and, on the other hand, the **grammatical relations** borne by those same NPs" (1993:299, original emphasis). Shibatani (1988) notes that there is always a typological question of how many disparate grammatical phenomena to consider under the umbrella of voice. But as his guiding concept, he claims that "voice is to be understood as a mechanism that selects a grammatically prominent syntactic constituent—subject—from the underlying semantic functions (case or thematic roles) of a clause" (1988:3). These two definitions, both attempting atheoretical objectivity, already give dissimilar accounts of the grammatical category of voice. Trask defines it as a relation between the semantic roles and syntactic functions of verbal arguments, whereas Shibatani sees it as a "mechanism," and places the subject relation at the core of the definition, rather than including all arguments.

Klaiman (1991) explicitly defines grammatical voice as a category of the verb, and offers the observation that "grammatical voice is manifested in systems in which alternations in the shapes of verbs signal alternations in the configurations of nominal statuses with which verbs are in particular relationships" (1991:1). Importantly, Klaiman reiterates that voice is a verbal category, to be distinguished from case, which is a nominal category "whereby the relationship of some particular nominal to some verb is signaled" (1991:1).

Voice is usually thought of as a verbal category, as its roots in linguistics are in descriptions of classical languages where the distinctions between voices are marked by verbal inflection. This thesis takes voice to be a category of the predicate, meaning the verb and its arguments, and to involve alternations in the relationship between the verb and its arguments. It is an overarching term including several more specific notions. The most important of these is that of valency.

1.1.1 Valency

VALENCY, at its simplest, is "a unit of combining power" (Porter 1996 [1913]). The use of the chemical term *valency* to describe a verb's interaction with its nominal associates was first proposed by Tesnière (1959). In chemistry, valency refers to the number of openings a particular atom has for combining with other atoms in order to make a stable compound. "The doctrine of valency...is an essential factor in explaining the chemical structures of compounds" (Porter 1996 [1913]). It is a particularly felicitous term for the linguistic phenomena it is intended to describe. Most verbs are also seen to have a fixed number of openings or slots which need to 'combine with,' or be filled by, the requisite number of noun phrases in order to create a 'stable'—or grammatical—clause. Tesnière (1959) notes that the "voice of the verb depends crucially on the number of arguments that it can be composed of," and it is the information regarding these relations which he includes in the notion of valency (1959:238, my translation). The link between chemical and linguistic valency is the importance of the number of elements needed to fulfill the valency requirements of a given item, and the centrality of this notion to describing the structure of those combined constructions, either chemical compounds or linguistic clauses.

Allerton (1982) describes "the concept of VALENCY[1]...as a foundation of describing—on a more comprehensive basis—the different potentials that individual verbs have for occurring in a variety of sentence structures" (1982:2). This is a good start for building a working definition of valency. Difficulties arise, however, with the question of where this concept is located, on which level of linguistic structure. Indeed, valency-altering devices have formed one of the key motivating sources for positing additional levels of syntactic structure in theories of syntax. Allerton (1982) notes a crucial problem with Tesnière's (1959) analysis of passives and actives. Namely, Tesnière appears to be "trying to deal with three layers of description, 'surface' grammar, 'deep' grammar (i.e. valency grammar) and semantic patterning in a single analysis" (Allerton 1982:41).

Tesnière (1959) divides the non-verbal elements of a sentence into two groups, the *actants*, more commonly known now as arguments, which fulfill the valency requirements of a verb, and the adverbial *circonstants*, generally known as adjuncts, which are optional and flexible, considered to be able to appear with any

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[1]While both *valency* and *valence* are in use as synonymous linguistic terms, this thesis employs *valency*, as this term is less liable to be confused with the drapery hanging around the edge of a bed.

verb in any context. Tesnière (1959) further divides the *actants* into the *prime actant, second actant,* and *tiers actant*. This subdivision corresponds to the traditional grammatical categories of subject, direct object and indirect object, and it is central to the relation between semantic and syntactic valency, but, as Allerton points out, Tesnière (1959) is not entirely clear about how to identify these categories, nor is he consistent in his application of these terms to syntactic or semantic notions.

Tesnière (1959) distinguishes between the *actants* in an active clause semantically (essentially describing the *prime actant* as an actor), whereas with a passive verb, the *prime actant* no longer picks out the actor, but rather the subject. The semantic actor, expressed as an oblique in the passive voice, is now given the label of *contre-sujet*.[2] The label *contre-sujet* is referred to as a semantic one, yet it seems to be defined almost entirely syntactically. Tesnière's lack of clarity regarding semantic and syntactic distinctions involved in voice and valency demonstrates the importance of this distinction and the difficulty involved. The task of teasing out semantic and syntactic valency and defining how many levels of structure are needed in linguistic theory in order to account for the data runs through the half-century of valency research since Tesnière (1959), and as yet, no consensus has been achieved. As a bare minimum, the active-passive voice contrast (and Tesnière's run-in with unfortunate logical representation, given in section 1.1.3) suggests that semantic and syntactic valency—semantic roles and syntactic relations—need to be distinguished.

Allerton (1982, along with a host of others, such as Chomsky 1965 and Perlmutter & Postal 1983) concludes that two syntactic levels are required: surface and deep structure. According to Allerton, the deep (or D-structure) grammatical roles are determined by a verb's valency requirements, and so a distinction between surface subject and valency subject is proposed. The key point here is that valency is given a syntactic meaning, and is placed at an intermediary level between semantic roles and surface structures. Voice selection links valency structures with surface structures, and the lexicon links valency structures with semantic-level information. Role and Reference Grammar resolves the same dilemma semantically, positing valency information directly in the lexical semantics of the verb (Van Valin & LaPolla 1997). This is described in section 1.3.

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[2]Structurally, according to Tesnière, it is the *second actant du passif* (1959:109).

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It is generally accepted that voice is a phenomenon which occurs at the linking between semantics and syntax, regardless of whether it is seen as essentially a verbal category or a predicate-level operation. Valency, on the other hand, refers to information associated with a verb. This information may be stored in the lexicon. Since the lexicon is a notion which cannot be directly observed (the 'mental dictionary' component of language), the description of it and the sort of information accessible in it is open to various theoretical interpretations.

Valency information can also be said to be stored not *with* the verbal lexeme in the lexicon, but rather as part of the syntactic processes involved in forming a predicate or clause, becoming associated with a verb during the argument selection process. Since the valency information refers to elements co-occurring with a verb, this information could be written into the rules regarding the combining of constituents, the very part of syntax where the information is required. Valency differences account for the sort of distinction at play between English active and passive clauses, such as those in example (1.1).

(1.1)   a.   Charlie ate the prize-winning profiteroles
          b.   the prize-winning profiteroles were eaten (by Charlie)

Transformational theories (e.g. Chomsky 1965) account for this difference by means of the movement of the direct object in (1.1a) to subject position in (b), thereby placing the voice contrast in the domain of syntactic rules, and viewing the unmarked active construction in (1.1a) as underlying marked voice constructions like (b). Relational Grammar (Perlmutter & Postal 1983) is non-transformational, in that it does not use the notion of NP movement, but it posits two levels of syntactic structure, wherein grammatical relations are primitives, and accounts for the distinction above by means of a shift in grammatical relations triggered by the promotion of the direct object. Lexicalist theories (e.g. Bresnan 2001, Grimshaw 1990, Van Valin & LaPolla 1997) assign this same information to the lexical level, allowing for richer semantics associated with lexemes and sparser syntactic rules operating on them.

Pragmatics is also central to the operations involved in voice and valency. In actual use, pragmatics and discourse notions such as topic and focus are key factors determining the choice between different voice forms and operations fulfilling valency requirements in various ways. However, although pragmatics is part of the motivation for the *use* of voice phenomena, a *definition* of voice and valency

can exclude pragmatics, and thereby exclude a number of construction types which have pragmatic effects similar to those of voice phenomena, but which operate on a different level. Topicalisation devices include passives, but also include topicalising constructions such as *this book, I've read*, which is clearly not a voice construction, as it involves no change in grammatical function or argument structure. Word order more generally, in languages with flexible constituent order, is also to be excluded, as well as left-dislocation and cleft sentences. I take valency to be a property of predicates, whereas the other phenomena just listed operate on the level of the clause (see section 1.3 for a discussion of the Role and Reference Grammar notion of the layered structure of the clause). Voice is a verbal category, and valency is also associated with verbs, but involves the entire predicate (in ways which are dealt with in greater detail later, both in section 1.3 and in Chapter 4).

A *characterisation* of passives (or passive prototypes) involves semantic, syntactic, and pragmatic concepts, as well as morphological properties (Shibatani 1985). However, in order to *define* what is included under voice and valency, it is common to leave pragmatic considerations aside, in order to ensure a focus on constructions which involve argument realisation and syntactic linking procedures.

Typologists also include ergatives and antipassives as voice phenomena, but as these are external to the Estonian voice domain, I leave them out of this thesis (Shibatani 1988, Comrie 1988).[3] A relevant point, however, is that although both ergative and passive constructions select the patient as the grammatically prominent constituent, they are clearly distinguishable as distinct voices, at least for their markedness properties in the particular languages in which they occur. Shibatani cites Mayan languages which exhibit both, showing that they are not mutually exclusive.

1.1.2 Transitivity

Whereas valency is a predicate-level concept, TRANSITIVITY as it is now commonly used is a clause-level semantic notion.

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[3]Andersen (1991) criticises the Shibatani (1988) volume for its disparate convictions, which "not only differ from author to author, they are for the most part also not compatible with each other and there simply is no general consensus to be culled from the volume" (1991:1). This is true, but it merely serves to show the lack of consensus in research into passivisation and voice in general, which may not be surprising for a phenomenon which contains so many diverse construction types.

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	High Transitivity	Low Transitivity
A. PARTICIPANTS	2 participants or more	1 participant
B. KINESIS	action	non-action
C. ASPECT	telic	atelic
D. PUNCTUALITY	punctual	non-punctual
E. VOLITIONALITY	volitional	non-volitional
F. AFFIRMATION	affirmative	negative
G. MODE	realis	irrealis
H. AGENCY	A high in potency	A low in potency
I. AFFECTEDNESS OF O	O totally affected	O not affected
J. INDIVIDUATION OF O	O highly individuated	O non-individuated

Table 1.1: **Properties of Transitivity** (Hopper & Thompson 1980)

The traditional concept of transitivity is grammatical, involving the single binary factor of whether or not a verb takes a direct object. As this information is coded in the lexicon, with the semantics of the verb, but expressed in the syntax, it is unclear as to what stratum this information belongs to. Defined in this way, transitivity also looks suspiciously similar to a pretheoretical notion of valency. Hopper & Thompson (1980) revise this grammatical notion, giving transitivity a clause-level semantic definition (in a similar spirit as Halliday 1967–68). Their concept of transitivity is based on a cluster of semantic parameters that interact to convey what is depicted as a scalar notion. The semantic criteria are repeated in Table 1.1, as they are fundamental to the notion of transitivity used by many authors since Hopper & Thompson's (1980) seminal paper.

The 'Transitivity Hypothesis' predicts that "these component features of Transitivity CO-VARY extensively and systematically" (Hopper & Thompson 1980:254), meaning that if a grammar pairs two of the features listed in the table, then both features will exhibit either high or low transitivity. The hypothesis is taken to show transitivity to be central to the grammars of human languages, and it spawned a great deal of research into the effects of transitivity on grammar and discourse, beginning with Hopper & Thompson's (1982) own edited volume of papers on the syntax, semantics, and discourse properties of transitivity cross-linguistically. Although critics have questioned whether Hopper & Thompson's (1980) list does not contain redundancy, and whether it could not be made more concise (e.g. Tsunoda 1985), the idea of a cluster of properties has informed much work on the semantic properties and grammatical correlates of transitivity, including the RRG framework.

Although the two concepts of valency and transitivity may seem to be relatively clearly distinguished, there is still terminological and conceptual confusion surrounding them. A recent example of this is the title of Dixon & Aikhenvald's (2000) *Changing Valency: Case Studies in Transitivity*. The subtitle seems to imply that the terms *valency* and *transitivity* are synonymous, perhaps even interchangeable. But in the introduction to that volume, a distinction is made in that transitivity is binary, either intransitive or transitive, whereas valency refers to the number of core arguments, which can vary from zero to three. This is discussed in the next section.

In this thesis, valency is seen as a notion very similar to argument structure. A verb's lexical entry contains reference to a certain number of arguments. This constitutes an abstract argument structure until the verb is used in the context of an *n*-place predicate. In a predicate, the verb interacts with any filled arguments. Overt arguments fill semantic and syntactic valency requirements, whereas various constructions can be used either to make an argument implicit or to remove it from the predicate's valency. Transitivity is understood to encompass a wider range of clausal phenomena. Valency has both semantic and syntactic dimensions; transitivity is primarily semantic, with various *effects* on the grammar. Passive-like constructions can affect either one or the other or both. "Most generative approaches fall short in assuming that the two notions will always coincide" (Broadwell 2003:1).

1.1.3 Arguments of the Verb

As already mentioned, Tesnière (1959) is cited as being at the forefront of modern linguistics for conceiving of the verb as central to a clause, the *régissant*, and seeing all the other constituents of a sentence as depending on it. This section looks briefly at the other primary constituents, the one, two, or three arguments in close semantic relation and grammatical dependency with the verb.

Arguments versus adjuncts

Following typological conventions, the short-hand used to refer to arguments of the verb in a clause, where it is not important to distinguish between semantic and syntactic arguments, is as follows: 'S' denotes the single argument in a monovalent predicate, and 'A' and 'O' are the two core arguments in a direct relation with the predicate in a multivalent structure. A is the subject, typically

associated with the canonical agentive subject, while O is associated with the affected patient as object in a transitive clause.

As noted above, Dixon & Aikhenvald (2000) divide transitivity into intransitive (with a core argument S and optional extension to core E) and transitive clauses (with two core arguments, A and O, and the optional extension to core E). Valency divides into monovalent (S), bivalent (A and O *or* S and E), and trivalent (A, O, and E). Passives without an A only have an S (and so are monovalent) but when they have an expressed oblique agent, then they are 'bivalent' but 'intransitive' (S and E).

Returning once more to Tesnière, his representation of the core verbal arguments betrays the confusion over the semantics-syntax distinction mentioned earlier. The notation used to denote these various relations does not indicate that the *contre-sujet* (or actor in a passive clause) is opposed to the *sujet* (active subject and actor), but rather indicates that the central opposition must lie between the transitive object/patient and the passive oblique actor, as shown in (1.2).

	prime actant	subject	actor	O′
(1.2)	*second actant (actif)*	object	patient	O″
	contre-sujet/ second actant (passif)	oblique	actor	″O

As is evident from (1.2), the **O″** and **″O** have neither semantic nor syntactic properties in common, despite the apparent implication of the notation that they are somehow related. A possible resolution of this problem is to consider the *contre-sujet* not as an argument of the clause at all, but rather as an adjunct, or in Tesnière's (1959) terminology, a *circonstant*. Hence, from the very beginning of the notion of valency in linguistics, the area is confronted with the problem of defining core arguments versus peripheral adjuncts, as well as the subclassification of arguments.

Traditionally, a distinction has been made, for instance, between sentences like (1.3a), containing arguments of the verb, and those like (1.3b), with an argument and an adjunct (Allerton 1982, Cruse 2000).

(1.3)	a.	Matthew put the bike in the garage
	b.	Matthew repaired the bike in the garage

The primary difference is that arguments are syntactically obligatory, whereas adjuncts are optional. This is correlated with the semantic distinction of arguments referring to participants in an event, and adjuncts referring to circumstantial dependents. Hence, the prepositional phrase *in the garage* is an argument in (1.3a) and an adjunct in (1.3b). Arguments are normally coded as subject, object or indirect object. Omitting an argument (but not an adjunct) "leads to 'latency' (i.e. 'missing' element must be recovered from context, as with the direct object of *watch* in *Somebody's watching*)" (Cruse 2000:282). Additional evidence for less clear-cut examples (such as *Oliver became an expert*, Allerton 1982:6), can come from the ability to passivise (arguments) and the ability to be replaced with an adjective or adverb (adjuncts).

Allerton (1982) refers to the various elements which can co-occur with a verb, in addition to the subject, as 'verb elaborators' (1982:33). These can include ∅, NPs, adjectives, prepositional phrases, combinations of these, and other elements. I distinguish between arguments, which form part of the lexical entry of the verb, and adjuncts, which do not. This distinction, however, is not fool-proof. It is difficult to draw and often involves the analyst in difficult encounters with borderline examples.

In addition, again no consensus has been reached as to what theoretical significance this distinction may claim. Minimalism (Chomsky 1995) gives completely different analyses for arguments and adjuncts. RRG (Van Valin & LaPolla 1997), likewise, gives a privileged theoretical status to semantic arguments of the verb. Recent versions of Head-driven Phrase Structure Grammar (Bouma, Malouf & Sag 2001), on the other hand, consider these differences relatively minor and give exactly the same treatment for arguments and adjuncts for the purpose of extraction, for instance. For present purposes, and to ease implementation in RRG, I distinguish between the core arguments of a verb and other constituents. Estonian typically distinguishes between arguments, marked with core grammatical cases, and adjuncts, marked with any of a number of semantic cases.

Semantic roles

The concept of a limited, cross-linguistically valid set of semantic roles (participant roles, thematic roles, or theta roles) underlies much of the research on valency and linking procedures. The earliest proposals for a finite set of participant roles were those of Fillmore (1968), who includes the semantic roles of Agentive, Instrumental, Dative, Factitive, Locative, and Objective. Later proposals

subdivide various of these roles, relabel the dative as an Experiencer and the Objective as a Patient, as well as adding various new participant roles to the list (Cruse 2000). Lakoff (1977), for instance, subdivides the Agentive role into fourteen characteristics. Other proposed sub-divisions of the agentive role include force, instrumental and instigator.

However, the approach taken in this thesis is rather to generalise over these various (and conceivably infinite) semantic roles. The notion of generalised semantic roles is of particular interest in the mapping from semantic-level information to syntactic argument positions. Allerton (1982) hints at a view to generalising over semantic roles, although he does not develop this into a theoretical principle, saying that "'actor', 'force', and 'instrument' would then be subvarieties of 'agent', with the proviso that 'actor' and 'instrument' can co-occur..., and that when they do so, the 'actor' takes precedence as subject by the general criteria for subject selection...It is possible to be over-precise in the specification of semantic roles" (1982:68). Kibrik (1985) proposes generalised semantic roles which he calls 'hyperroles' and applies to the distinction between accusative and ergative languages.

Dowty (1991) lays a solid theoretical grounding for the use of 'Proto-roles' which he claims to be "higher-order generalizations ABOUT lexical meanings" and which function in the selection of arguments (1991:577). Dowty's proto-agent and proto-patient refer to lists of prototypical agent and patient properties. The properties contributing to proto-agents include volitionality, sentience, causation, movement and existence, whereas those contributing to patienthood involve undergoing a change of state, incremental theme, affectedness, stationariness, and non-existence independent of the event (Dowty 1991:572). For the linking of any predicate, these properties are assigned to each participant in the event denoted by the verb. If the arguments do not exactly correspond to the prototypes, then the properties of each argument are compared relative to each other, and that with more proto-agent properties is assigned to the agentive position in the argument structure, and that with more proto-patient properties to the other position. Note that Dowty's (1991) notion of proto-roles is gradient.

Foley & Valin (1984) and Van Valin & LaPolla (1997) elaborate a theory of macroroles, which are similar to Dowty's (1991) system except that they are discrete rather than gradient. They are selected based on an ordered hierarchy of more

particular semantic roles (based on lexical semantics). Macroroles form a corner-stone of the theory, and a key to RRG's semantics to syntax linking operation. They are discussed further in section 1.3.3.

Others who have built on the generalised semantic roles include Ackerman & Moore (2001), who place the proto-agent and proto-patient characteristics (elaborating on Dowty 1991) at the center of a theory of argument selection. They posit two distinct notions of valency and proto-properties of arguments, thereby ensuring that processes such as causativisation do not necessarily increase valency. These two levels function independently, and can interact but are not forced to directly affect each other. Jackendoff (1990) has an 'action tier' in his semantic representation, which also makes use of similarly generalised agent and patient roles.

1.1.4 Valency Modulation

Valency has been established as a notion associated with the lexical semantics of a verb, the abstract logical structure associated with the verb. But constructions, expressing a verb with all or some of its argument positions filled, also have a particular valency. This is syntactic valency. The linking between argument positions determined by semantic valency and the realisation or non-realisation of those arguments in a syntactic structure are also key components of syntactic theory, though various approaches place different emphasis on this issue. A question addressed in this thesis is how much information to include in semantic versus syntactic representations of valency. This section reviews the literature on marked voice constructions and valency modulation.

Marked voice

Marked voice refers to non-canonical argument mapping from the valency associated with the logical structure of a verb to the valency of a predicate. Shibatani (1988) describes argument selection strategies through the treatment of the agent. Accusative languages select an agent as unmarked subject, and *marked* voice simply "denies the agent the subject role. In many, but by no means all, languages a patient assumes the subject role in this marked voice" (1988:3). Others see argument selection as less agent-centered. Valency modulation is then described as a more general deviation from the usual relations between a verb and its arguments, rather than non-linking of agent to subject. Klaiman attributes to Fillmore

(1968) the view that the "function of voice marking is to signal intactness or disruption of normal relations" (1991:9). Klaiman herself, however, claims that this view does not cover the range of voice phenomena attested cross-linguistically.

The diversity which Klaiman allows in the voice category includes, but extends beyond, derived voice, which is the category described above. "Marked voices consist, essentially, of syntactic rules which have the effect of altering the assignments of nominals in basic structural configurations to the grammatical relation of Subject" (1991:14). Derived voice includes both passives and impersonals, but not voice in those grammars for which the term was originally used, such as Greek. Note that this definition is again centered around subject-assignment.

Klaiman's (1991) second category of valency modulation is 'basic voice', meaning that one voice is not a derivative of (and more marked than) the other. In basic voice systems, voice is an alternation in the subject's participant status, but not necessarily a difference in grammatical relations. Finally, Klaiman also describes the properties of 'inverse voice', a purely pragmatic voice. In all of these, voice is signalled by morphological oppositions in the verb, and they all involve variability in how syntactic argument relations relate to participant roles. Keenan (1985) remarks, in his typology of passives, that the marked passive constructions all effect fore- and backgrounding "by forming derived predicates whose argument structure differs" in particular ways from those they are derived from (1985:280).

Passive and impersonal constructions

Keenan (1985) describes 'basic passives' (such as *John was slapped*) as distinct from other kinds of passive in that "(i) no agent phrase (e.g. *by Mary*) is present, (ii) the main verb (in its non-passive form) is transitive, and (iii) the main verb expresses an activity, taking agent subjects and patient objects" (1985:247). These passives are 'basic' in that they are the most widespread cross-linguistically. Keenan proposes as a universal that if a language has any passives, it has ones such as those characterised by him as basic.

This has two possible implications, vis-à-vis impersonals. If Keenan does not classify impersonals as passive, then there is no competition between having basic passives and impersonals. However, his tentative suggestions for expanding his notion of passives to passives of intransitive verbs, or 'impersonal passives' indicates that this is not the case. Data from a number of languages (including

Finnic and Celtic languages, and Turkish) with impersonals as the more basic unmarked voice casts doubt on Keenan's generalisation.

Siewierska (1984), in a thorough typological overview of passivisation, also includes impersonals as passives. She classifies them based on two parameters along which languages with impersonals differ: that of having a subject in impersonal clauses (whether a 'dummy' subject or an indefinite human pronoun) or no subject, and that of displaying distinct passive verbal morphology or not. The Finnish and Estonian type of 'impersonal passive' is that with no overt syntactic subject and distinct morphology, and is claimed to be the least controversial as a passive. The primary generalisation made by most authors regarding impersonalisation is that impersonals implicate a generalised human agent.

Shibatani (1988) claims that his view of passivisation, emphasising the treatment of the agent nominal, "naturally accommodates the so-called impersonal passives—those passive forms that involve intransitive clauses, as e.g. in Latin and German, and those involving transitive clauses without promotion of a patient, as in e.g. Hindi and Ute; they all deny the agent the subject role" (1988:3).

Comrie (1977), in a seminal paper, attempts to account for impersonal passives through 'spontaneous demotion'. His paper is primarily an amendment to assumptions adopted by Relational Grammar, which relies on argument promotion as a trigger for argument demotion. Comrie (1977) proposes that spontaneous subject demotion should be allowed as an operation involved in passivisation, although elsewhere it is explicitly ruled out. He cites data from languages such as Spanish, Latin, German, Polish, Welsh and Finnish as evidence for the existence of subject demotion without object promotion. It is impersonal constructions such as those in Welsh and Finnish which provide the clinching evidence, namely that there is no surface subject in the impersonal constructions, and that even with impersonals of transitive verbs, the object retains its status as is, rather than being promoted to subject. Comrie (1977) also emphasises that demotion and deletion must be subsumed under a unified process of 'removal', in order to account for impersonal and personal passives in a unified way.

Perlmutter & Postal (1984), in turn, reject Comrie's (1977) proposal of spontaneous demotion, positing a promoted 'dummy' subject with no overt phonetic material and appealing to (and relying on) two specific predictions regarding impersonal passives. The first is the prediction that "impersonal Passives of *initially unaccusative clauses* cannot be well formed in any language." The second is that

"impersonal Passives of *personal Passive clauses* cannot be well-formed in *any language*" (1984:132, original emphasis). Both of these predictions hinge on the idea that only clauses with 'initial subjects' can be passivised.

Blevins (2003) criticises these two stated predictions, not on grounds of their theoretical insight, but rather for the mislabelling of the 'impersonal' construction as Passive. He argues that the impersonal has more in common with active clauses than passives. Once the impersonal is reclassified as an active construction, the generalisations which impersonal passives seem to challenge remain standing. Blevins (2003) is one of the most recent voices addressing the problem of classifying valency-changing constructions. As he is one of the few to use data from Estonian, his paper is discussed at greater length in section 1.2.3 below.

Although this discussion is focussing on impersonals, the reason the 'impersonal passives' pose such a challenge for theories such as Relational Grammar, and create problems cross-theoretically, is that they have been much less focussed on and are less fully described than personal passives. Blevins (2003) notes that while accounting for passives is important for any theory of syntax, impersonals have a "strikingly different status," remaining "almost entirely neglected in theoretical work" (2003:473). Traditional grammar has been biased toward the personal passive model of valency alteration. This is borne out by a number of articles which focus solely on arguing that a certain voice construction in a given language is *not*—contrary to established opinion or prominent theoretical or descriptive assumptions—a passive. Fife (1985) argues that a Welsh construction which is often called a passive is, in fact, entirely un-amenable to a passive analysis. The construction in question is an impersonal. More or less the same line is argued in Noonan (1994) with regard to Irish Gaelic, in Givón (1982) on the impersonal in Ute, and in Shore (1988) for Finnish.

Keenan (1985) suggests tentatively that his analysis is applicable to impersonal passives, though these have been little studied compared to personal passives, and he does not give a full list of their properties. He demonstrates the mystification surrounding impersonal passives in the statement that "in fact, bogglingly, Noonan (1978) shows that a basic passive in Irish may be further subject to the impersonal construction in that language" (1985:276). In Chapter 6, I demonstrate that Estonian too exhibits this further impersonalisation of a passive, and that it is not boggling if given an adequate analysis.

Givón (1982) posits three primary distinct functional domains involved in passivisation: clausal topic assignment, impersonalisation, and detransitivisation. He claims that passives lie along a major continuum of interactions of these functional domains with syntactic coding properties marking various types of passive. The extreme ends of the continuum are represented by the English personal passive and the Ute impersonal passive. The Ute impersonal can apply to any verb with some topicalisable argument or even adjunct (such as manner adverbials); it retains the transitivity of the active, allows any case role to become the topic of the impersonal, and involves obligatory deletion of the agent. For now, it suffices to say that the description of the Ute impersonal could fairly easily apply to the Estonian impersonal as well, except that in the case of Estonian, it does not require even one co-occurring nominal. Shibatani takes the notion of gradience within the passive domain one step further, opining that "passives form a continuum with active sentences," rather than forming discrete voice domains (Shibatani 1985:821).

Frajzyngier (1982) argues against *both* Comrie (1977) and Perlmutter (1978), drawing a distinction between passives of transitive verbs and impersonal passives, and giving a functional analysis of impersonals. Frajzyngier (1982) proposes that the primary function of the passive formed of intransitive verbs is "to indicate that a sentence has an unspecified human agent which is also subject of the sentence," (1982:271) and claims that this indefinite human agent ('subject') is possibly a universal property of impersonals (1982:287).

Shore (1988) provides an insightful look at the Finnish impersonal, which is very similar to the Estonian impersonal in many ways. She claims that the Finnish impersonal has a generalised exophoric referent, meaning that the referent takes its meaning from outside the preceding discourse. The generalised referent implies the existence of at least one actor. Setting up two semantic prototypes for the uses of the impersonal, Shore compares her Prototype I with the English use of the indefinite pronoun *they*. The actor has a generalised reference, implies more than one participant, and is plural in number. There is no theme in these clauses, as they tend to be verb-initial and involve only a rheme, focussing the verb or "presenting a process" (1988:162). The scope of the indefinite actor referent can be delimited by location or temporal adverbs (e.g. *Suomessa* 'in Finland', *1800-luvulla* 'during the 1800s'). Prototype I is exemplified by examples such as (1.4a), which, as Shore points out, do not seem to have much in common with English or cross-linguistic passives, on a functional or semantic level.

(1.4)　　a.　yleensä　vietetään　　　viikonloput maalla
　　　　　　　generally spend.IMP.PRS weekends　country.ADE
　　　　　　　people generally spend the weekends in the country[4]
　　　　b.　Nigeriassa　tehtiin　　　sotilasvallankaappaus
　　　　　　　Nigeria.INE do.IMP.PRS military-coup
　　　　　　　there was a military coup / a military coup was carried out in Nigeria[5]

Shore's (1988) Prototype II, illustrated in (1.4b) is more similar to the English agentless passive. The 'indefinite' actor refers to a specific person or group who performs the action, but leaves the identity of this actor unspecified. In this case, the actor "would not be interpreted as having generalised exophoric reference, but as referring to an unspecified group of people... As the participant is textually unimportant, its precise identity remains unspecified" (1988:166).

Andersen (1991) illustrates that it is possible to define the passive as "(i) a syntactic construction, (ii) a syntactic process (passivization), and (iii) a constellation of syntactic properties (passiveness) or prototype." This division is true about valency-modulating constructions more generally as well. This thesis looks at the first two, the constructions in Estonian that have been categorised as passives, and other voice modulating constructions, as well as the syntactic operations which form them. Questions about argument selection and linking are raised specifically with regard to the voice constructions in Estonian, and particular amendments to the RRG formalism are proposed in connection with the results of the research on Estonian voice.

1.2　Estonian Linguistics

Estonian is a Finno-Ugric language (more specifically Balto-Finnic), genetically unrelated to Indo-European. Because of Estonia's geographic position, however, the language has been in contact with various European languages besides Finnish, its closest living relative. Having been occupied at various times by Denmark, Germany, Sweden and Russia, it shows traces of many linguistic influences.

Estonia first became an independent republic between the two World Wars, then was fought over and finally occupied by the Soviet Union in 1944 and regained

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[4]Shore (1988:164)
[5]Shore (1988:166)

independence in 1991. Since then, the major influences on Estonian language have been English, through the powers of mass media, and a continued influence of Russian, through contact with both a sizable Russian minority within the country and Russia itself. Finnish has also had a serious influence, through personal contacts, tourism and Finnish television. A large portion of northern Estonia's inhabitants have some command of Finnish.

The Estonian-speaking population within the country is currently just under a million, amounting to two thirds of the population of Estonia. Together with Estonian speakers in the diaspora, there are an estimated 1.1 million speakers worldwide. As Estonia is preparing to join the European Union in 2004, its contact with (and influence from) Europe and European languages is likely to increase.

1.2.1 Historical Development

The development of linguistics in Estonia, and the study of the Estonian language, mirrors the various stages of Estonian history and the political contexts which have dictated the trends and conditions of higher education and research in the country.

"The earliest known observation published on the Estonian language is contained in a note of fourteen lines which J. Köll appended to his translation of Simon Wanradt's catechism (1535)," where he comments on the fact of linguistic variation throughout the country (Raun & Saareste 1965:5). In the 17th century, grammars were published for foreign clergymen. Up until the mid-19th century, there was no Estonian educated class, and so the study of the Estonian language was in the hands of Baltic German scholars living in Estonia. Their conceptual starting point was Latin grammar, or Latin-based German grammar (Erelt 1997).

Erelt (1997) cites F. G. Arvelius, who, writing at the turn of 19th century, considered differential object-marking to be illogical, and claimed that Estonians ought to be retaught to simply use the partitive case as the accusative object-marker. This is, to be sure, an extreme example of the effects of approaching the language with linguistic biases. In 1838 the Estonian Learned Society was founded in Tartu by F. R. Faehlmann. In 1884 the first grammar of Estonian written by an Estonian, in Estonian, was published (Hermann 1884).

Also in the 19th century, linguists began to study Estonian as a Finno-Ugric language, and toward the end of the century the historical comparative method was applied to the language. Erelt (1997) claims that "from the start, the language history and the language family were overemphasised in synchronic linguistic description. From the perspective of descriptive grammar, overemphasising diachrony meant using categories and systems of classification which were justified in diachronic but not synchronic linguistics" (1997:20).[6] The diachronic perspective had its useful influences as well, however, as in the mid-19th century, orthography based on the German model was changed to a system based on the phonologically more appropriate Finnish model, after the publication of the Finnish-influenced Estonian grammar by Ahrens, in 1853 (Erelt, Erelt & Ross 1997:12).

The decades between 1850–1890 saw the National Awakening, which was followed by a period of Russification. The Awakening marked the beginnings of the self-awareness of Estonians as a nation and the recognition of Estonian culture as an object of study. During this time some Estonian scholars began going to Helsinki to attend university, and so the influence of Finnish linguistics was felt from the birth of native Estonian linguistics. In fact, in the late 19th to early 20th centuries, the study of Estonian was dominated by Finnish linguists, although native Estonian linguists were also beginning to emerge. Erelt also claims that the descriptions of Estonian relied overly much on the Finnish model. The effect of this on normative grammar was the assumption that, from a Finno-Ugric perspective, anything older was better.

After the Russian Revolution a new renaissance brought about prosperity and an Estonian educated class. With the founding of the first Estonian Republic in 1918 Estonians began to take over the study of their language, although Erelt (1997) sees a disproportionate influence of Finnish linguistics even today in the study of Estonian, both socio-politically and linguistically. In 1922, Saareste led a project to systematically collect Estonian dialect data and compile a dictionary of Estonian popular language. Around the same time, a committee of the Estonian Literary Society initiated a project of language standardisation.

Linguistics did not escape the waves of emigration that took place during and after World War II, when several Estonian linguists emigrated to Sweden and other places in the West. Estonian linguistics began to gather momentum again in the

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[6]Translations from Estonian are my own.

late 1950s, when the first generation of post-war Estonian linguists had come of age, and it came into its own in the mid-1960s (Erelt, Erelt & Ross 1997:17). Structuralism, the attempt to describe language non-prescriptively, as an autonomous system, abstracted from its use and cultural context, came to affect Estonian linguistics on a conscious level only in the 1960s. It had gotten its start in the West earlier, and in some less deliberate ways had come into Estonian linguistics as well prior to the 1960s.

1.2.2 Current Trends

Under the influence of trends in the West, which slowly but surely made their way into Cold War Soviet Estonia, universalist aims appeared in Estonian linguistics in the 1960s, through both the transformational Universal Grammar of Chomsky and the language universals of Greenberg. The 1960s saw the development in the Estonian language department in Tartu University of the Generative Grammar Group. This group, studying under the influential Huno Rätsep, intended to put together a complete generative grammar of Estonian. Before this aim was achieved, however, traditional generative grammar "went out of fashion," according to Erelt (1997).

The "most extensive and systematic fragment of generative grammar" to come out of this period, however, was Rajandi's thesis on impersonals and passives, originally written in 1969, and published posthumously in 1999 in a series of publications of the Estonian Language Institute (Erelt 1997:23). It is perhaps unsurprising that the primary publication to come out of the dedicated research of the Generative Grammar Group was a study of impersonals and passives. This chapter has already shown how fundamental a concept voice is to grammatical theory.

Functional linguistics

Currently, typology and functional linguistics form the dominant approaches in linguistics in Tartu. This includes the assumption that variation is the norm, and the rapid arrival of Anglicisms and western Europeanisms into Estonian is seen as an object worthy of study alongside Estonian dialects, syntax and semantics. However, Erelt laments the fact that this has only had a slight influence on descriptive grammar or on normative rules. The most ambitious and authoritative grammar published in Estonian to date is the *Eesti keele grammatika*, volumes

I (Erelt, Kasik, Metslang, Rajandi, Ross, Saari, Tael & Vare 1995) and II (Erelt, Kasik, Metslang, Rajandi, Ross, Saari, Tael & Vare 1993). An English-language overview of Estonian has just been published (Erelt 2003). In 1996, the Estonian Language Department in Tartu University began to publish a series in English entitled *Estonian: Typological Studies*. This series embraces an array of perspectives on Estonian in functional linguistics. Up until recently, Estonian linguistic work was published primarily in Estonian and Russian. This is beginning to change, as demonstrated by this series and other recent publications.

Other important trends in Estonian linguistics today reflect the enormous emphasis the government has placed on getting the nation on-line and supporting advances in information technology. The University of Tartu Computational Linguistics Research Group is productive, and a project is under way to produce a much larger text corpus than is currently available. The corpus is to consist of texts representing each decade of the 20th century, and will be an invaluable resource for anyone doing research on change and variation in Estonian, or even synchronic linguistic analysis. I have used parts of the corpus that are currently available,[7] and it has been invaluable in providing various examples for this thesis. The corpus is untagged though, and so at times it is just as rewarding to search the Internet, either through a general Google search or within Estonian web domains. As much as possible, I have marked the sources of attested examples in footnotes.

1.2.3 Valency in Modern Estonian Linguistics

Theoretical issues related to valency and voice have not been a hotbed of debate within Estonia, despite Rajandi's (1999) early (orig. 1969) monograph on the two prominent voice constructions. Besides Rajandi (1999), there has been only one monograph, Pihlak (1993), which has taken voice in Estonian as its primary focus of study. Both of these are discussed below. The question of voice is, of course, also dealt with in grammars, inasmuch as how the impersonal and passive constructions are categorised. Tauli (1972) lists two voices in his verbal categories, 'active' and 'passive', with a side-note that the terms 'personal' and 'impersonal' are also used (1972:72).

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[7]The homepage of the Computational Linguistics Research Group is at http://www.cl.ut.ee and the corpus of examples of written Estonian used most in this thesis is located at www.cl.ut.ee/ee/corpusb/1980ndad.html

In a more recent handbook of Estonian, published in Bloomington, Indiana, Mürk (1997) states, "in Estonian **voice** refers to whether the subject or agent of an action is known or unknown. If the subject is explicit in the context then personal forms of the verb are used" (1997:21). In general, modern grammars such as Tauli (1980), Erelt et al. (1995), and Erelt, Erelt & Ross (1997), classify both the impersonal and the personal passive as passives. These two constructions, along with one further construction, the *saama* 'get'-passive (a type of affective passive) form the core of the voice category as described by these grammars. An example of the canonical use of the impersonal is given in (1.5).

(1.5) meie   peol   lauldi   ja   tantsiti
       1PL.GEN party.ADE.SG sing.IMP.PST and dance.IMP.PST
       people sang and danced / there was singing and dancing at our party

The Estonian personal passive, and its cousin the *saama* 'get'-passive, are exemplified in (1.6a–b). All of these constructions are introduced and described in greater detail in Chapter 3.

(1.6) a. pannkoogid   on   ära söödud
           pancake.NOM.PL be.PRS.3PL away eat.2PTC
           the pancakes are/ have been eaten up
       b. kokk   sai   kiita
           cook.NOM.SG get.PST.3SG praise.INF
           the cook was/got praised

Erelt, Erelt & Ross (1997), in the *Handbook of Estonian*, and the central grammar (Erelt et al. 1995) refer to both the impersonal and the personal passive as 'passives', and distinguish them by calling the first a 'subjectless passive', and the second a 'passive with subject'. This is an important clue to the different functions of the two, although Erelt, Erelt & Ross (1997) point out that in colloquial speech even the subjectless passive can sometimes involve verb agreement with a nominal non-subject argument.[8] Erelt et al. (1995) refer to the 'subjectless passive' as central to the Estonian verbal system. They state that the passive with subject, or personal passive, is atypical in Estonian, whereas 'passive adjectivisation,' also known as 'stative passivisation', is more wide-spread. This distinction is based on the use of 'passivisation' to refer to a syntactic process which changes the pragmatic orientation of the sentence (as in English), whereas the Estonian

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[8]This non-standard agreement is looked at more closely in Chapter 7.

construction changes the semantic roles of the sentence, making a more fundamental change to the structure and relations in the clause.

On the other hand, Mihkla & Valmis (1979), Rajandi (1999), Torn (2002), and Blevins (2003) all classify the impersonal as an active voice form, or at least definitively not a passive. Pihlak (1993) and Tommola (1993) clearly distinguish the passive and impersonal, but give a new label to impersonalised forms, namely 'suppressive' (following Mel'čuk 1991), considering them to be voice operations, but emphasising the differences between them and true passives.

Rajandi 1999

Rajandi's (1999) thesis on Estonian impersonals and passives fills an important function in Estonian linguistics, both for its exposition of classical generative theory and its thorough description of two basic voices in Estonian. Rajandi makes a clear and precise distinction between impersonals and passives, or 'passive adjectivisation' in his terminology. Impersonals are, crucially, treated as not only dynamic but also active, forming part of the active voice verbal paradigm, not the passive voice paradigm. Personal passives are situated in Rajandi's (1999) analysis between verbal passives and true adjectives, operating as part of the verbal paradigm, yet also taking on adjectival characteristics. This is meant not as a diachronic process of adjectivisation but rather as a stable relation between active transitive verbs and their passive participial forms, parallel to the relation between intransitive verbs and their active participles. The capacity of the passive to straddle the categories of verb and adjective derives from the ambiguous nature of participles, as non-prototypical members of both verbal and adjectival categories. Rajandi (1999) claims that the personal passive construction contains a variety of more and less adjectivalised forms, although they all involve some change in the semantics of the lexical verb.

It is not clear that the distinction between 'true' personal passives and stativising passives is as robust as it is sometimes made out to be (Nedjalkov 1988, Keenan 1985). The distinction comes partly from a Germanic model, where there is a clear difference between a dynamic and a stative passive. Keenan (1985) describes the neat distinction exhibited by the examples repeated here in (1.7a–b).

(1.7)   a.   Das Haus wird   verkauft
                 the house becomes sold
                 the house is being sold[9]
          b.   Das Haus ist verkauft
                 the house is sold
                 the house is sold

"If (a) obtains, you will have a chance to buy the house, whereas if (b) obtains you are too late" (Keenan 1985:258). However, in English and other languages there is an ambiguity in the reading of many passives (e.g. *the vase was broken*). In addition, Keenan (1985) gives many examples of languages with stative and per-fective passives (Latin, Russian, Kinyarwandan), but does not hesitate to include these in his passive classification.

Rajandi gives an overview of various classifications of the two constructions that have been given over two centuries, noting that the great majority use some form of passive voice to describe both constructions. The three basic analyses Ra-jandi outlines are those that make no distinction (place both constructions in one paradigm), those where only the impersonal belongs to the verbal paradigm, whereas the personal passive is classified as an ordinary adjective, and those wherein the constructions are distinct, but both form part of a passive category, and both are part of a verbal paradigm.

Underscoring the importance of the label 'impersonal', Rajandi explicitly makes two broad distinctions—one between personal and impersonal, the other be-tween active and passive voice. He declares that "this is not merely bare ter-minological demagogy, but a contentful issue" (1999:107). The two major voice constructions in Estonian are then classified as impersonal active and personal passive, which allows room for other subtler distinctions to emerge. The sen-tences he calls as evidence for this are discussed toward the end of this thesis, in Chapter 6. For now, it is enough to note that Rajandi's (1999) claim is a serious departure from the traditional classification of impersonal and passive construc-tions.

Pihlak 1993

Pihlak's (1993) monograph on voice in Estonian takes a functional-typological approach, and it draws extensively on comparisons with Finnish, English, and

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[9]Both examples glossed and translated as in Keenan (1985:258)

Russian. Whereas Rajandi's (1999) view of Estonian voice might be seen as unusually sparse, as the impersonal is not viewed as a voice construction at all, but rather as an active verb form, Pihlak's (1993) is quite the opposite, with a full "five distinctly different derived morphosyntactic Voices in Estonian" (1993:37). Pihlak, along with the Finnish linguist Tommola (1993), draws on a unique set of descriptive terms, including dynamic versus stative and passive versus suppressive, for describing these constructions. He emphasises that the active-passive opposition is not characteristic of the voice paradigm in Estonian. The term 'suppressive' is taken from Mel'čuk (1991). Pihlak and Tommola find a third alternative to the active-passive debate.

Pihlak's (1993) typologically-inclined work lists the Dynamic *saama* 'get'-passive, Static Passive, Dynamic Suppressive, Static Suppressive, and Dynamic *saama* Suppressive, and contributes a good deal of data to the study of Estonian voice. Pihlak, like Rajandi, claims that the impersonal (Suppressive) is at the core of Estonian voice. Pihlak (1993) argues that the suppressive is distinct from the cross-linguistic passive in that: it involves "suppression of the grammatical Subject, and doesn't involve any conversion of the semantic Object into the grammatical Subject" (1993:91); the impersonal is typically dynamic rather than stative; the impersonal has a synthetic verb form, whereas the passive is analytic; and the 'static passive' (personal passive) can be impersonalised, unlike a true passive construction which creates a derived intransitive from a transitive predicate.

Other studies

The most recent publications on the Estonian impersonal display a variety of perspectives. Holvoet (2001) appears in a volume on 'Circum-Baltic languages' and makes an areal comparison of impersonal and passive forms in Finnic (Finnish and Estonian) and Baltic (Latvian and Lithuanian). The chapter makes several inaccurate statements regarding Estonian, making it evident that more work needs to be made available to an English-language readership on Estonian, in order to avoid the assumption that data from Finnish necessarily reflects the Estonian data as well. Holvoet (2001) makes claims about 'Finnic' which in fact apply only to Finnish, and not to Estonian. Among these are the claim that "there does not seem to be a tendency in Finnic to develop the agentless passive [impersonal] into a passive proper" (2001:368). His use of the two 'passives' mentioned might be open to different interpretations, but this claim is paired with the following, which shows that he does not have access to the full story on Estonian voice:

Even though some forms of the passive [in Finnish] are periphrastic and consist of a participle, combined with the auxiliary *olla* 'be', there will be no agreement in those cases. . . the auxiliary is always in the 3rd person singular. . .

In modern standard Estonian, the situation is basically similar to Finnish. (Holvoet 2001:367–68)

While the categorisation of these constructions may not be fully agreed upon, it is incontestable that the auxiliary agrees with the patient NP, even more often than not, in these constructions in Estonian. Moreover, this constitutes one of the interesting differences between Finnish and Estonian. Since much more work has been published on voice and the impersonal in Finnish, the Estonian construction has been neglected.

Blevins (2003) constitutes a step toward redressing this lack, with an analysis in English of Estonian impersonals. Blevins (2003) argues against the characterisation of Finnic impersonals (and Celtic 'autonomous' verb forms) as passive constructions. The paper supports the generalisation proposed in Relational Grammar (RG) that "there can be no characterization of the languages that permit unaccusative and transitive passives, because, as claimed in RG accounts, there are no such languages" (2003:474). The issue is not the RG subject-promotional account of passivisation, but rather, the frequent misclassification of impersonal constructions. In this, Blevins (2003) agrees with both Rajandi (1999) and Pihlak (1993), that the impersonal is more like an active verb form with a demoted or suppressed, but not deleted, actor.

The primary point made by Blevins (2003) with regard to the Estonian data is that impersonalisation is a "relation-preserving operation with an insensitivity to argument structure and a sensitivity to human agency" (2003:488–89). This description makes it very clear that the Estonian impersonal is quite different from most of the definitions of passivisation above.

On the other hand, just as recently, voices from the opposite side of the impersonal classification debate are arguing *for* the recategorisation of the Finnish impersonal as a passive construction. Manninen & Nelson (2002) point out several features in which the impersonal aligns with the prototypical passive typologically described as above, in section 1.1.

Manninen & Nelson (2002) argue that the Finnish construction in fact involves promotion to subject on a structural level, in that "Spec,IP must be filled by phonetically overt material if V is specified for 3rd person" (2002:4).[10] The material filling the Spec, IP position can in fact be anything from an event patient to locative or manner adverb, and so still differs in relevant ways from the typological description of a prototypical promotional passive. These are adjuncts rather than arguments, and this view of promotion is a theory-specific one.

The paper also gives examples of an incipient optional agreement developing between a patient NP and the auxiliary verb (*contra* Holvoet 2001), as well as the use of agent phrases with the impersonal construction. On the whole, many of the points made by Manninen & Nelson (2002) could easily be applied to the Estonian impersonal as well. However, the central argument, that impersonalisation involves promotion to subject, is not easily transferable to the Estonian data. One important piece of evidence for the notion that the preverbal position is a subject position comes from the observation that Finnish has developed a subject expletive (Holmberg & Nikanne 1994). Regardless of the theoretical status of this expletive, Estonian lacks this element. Example (1.8a) shows that in a clause with an object which could be potentially promoted, it is just as natural to have a temporal adverb occurring preverbally, which calls into question the analysis of this as a subject. In addition, example (c) is less natural than (a), and is given an interpretation of having contrastive focus on the patient.

(1.8)   a.   hiljem tapeti   aias   tigusid
             later   kill.IMP.PST garden.INE snail.PAR.PL
             snails were killed later in the garden[11]
        b.   aias   tapeti   tigusid
             garden.INE kill.IMP.PST snail.PAR.PL
             they killed snails in the garden
        c.   tigusid   tapeti   aias
             snail.PAR.PL kill.IMP.PST garden.INE
             it was snails that they were killing in the garden

Information structure can be used to explain the word order facts in Estonian. Where the clause contains an adverbial, patient or other constituent, that will typically occur before the verb, as above, because the impersonal verb itself is

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[10]The last caveat simply brackets the modern use in Finnish of the impersonal construction for 1PL readings.

[11]Estonian translations inspired by the Finnish data in Manninen & Nelson (2002)

unusual (though possible) as a topic. It is prototypically used for focussing an event or commenting on a locative or temporal phrase. Example (1.8a) is thetic: it has whole-predicate focus, and it is only in this way that it is marked. In addition, Estonian does not require preverbal material as rigidly as Finnish does, and verb-initial impersonals are not ungrammatical even with bivalent predicates, as shown in (1.9a–b). They depend instead on the discourse context.

(1.9) a. lõhuti   aknaid
           smash.IMP.PST window.PAR.PL
           windows were smashed
       b. joodi   piima
           drink.IMP.PST milk.PAR.SG
           people drank milk

I return to these questions in Chapter 3, where the constructions are properly introduced.

Although the Estonian voice category has been thoroughly studied, the current situation is that not enough data is available outside Estonia. Neither Rajandi (1999) nor Pihlak (1993), for example (Pihlak 1993 being written in English), is easily available outside Estonia. No consensus exists regarding the classification of impersonals and passives in Estonian, although a few studies have made very clear statements regarding the distinction between the cross-linguistic passive and the Estonian impersonal. This thesis aims to contribute both to making more data available and toward eventually achieving some conclusions regarding the relation between Estonian voice constructions and the cross-linguistic prototypes.

1.3 Role and Reference Grammar

As demonstrated in section 1.1, the domain of valency is located on the interface between syntax and semantics. The data on voice and argument structure in Estonian cannot be analysed without reference to semantic roles. In this thesis, I assume that semantics forms the foundation for syntax, both cognitively and formally. A primary question addressed here concerns the extent to which syntactic structures can be explained by way of semantics.

For a formal representation of syntax based on this assumption, the framework developed in Role and Reference Grammar (henceforth RRG) is adopted

SYNTACTIC REPRESENTATION

↑

Linking algorithm

↓

SEMANTIC REPRESENTATION
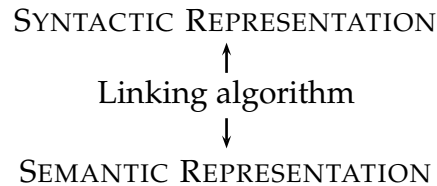
Figure 1.1: **Organisation of the theory of grammar** (Van Valin & LaPolla 1997:21)

(Van Valin & LaPolla 1997). Argument linking is based on the semantics of the logical structure of a predicate, which is then linked to the syntactic structure by way of a few basic rules.

A clear distinction is drawn between the levels of morphosyntactic coding devices, semantic roles and referential characteristics of participants, and syntactic behavior. The interaction between these levels can then be more clearly defined. This section provides a general introduction to the basic principles and concepts of RRG as background for the use of the theory in subsequent chapters.

1.3.1   Semantics-Based Syntax

The single most important contrast between Role and Reference Grammar and transformational grammar is that in RRG, there is no underlying syntactic representation. This is seen as unnecessary, and indeed as potentially misleading. RRG posits only one level of syntactic representation, namely the surface syntax. In fact, one of the aims of the theory is to show "how a single-level syntactic theory can account in a direct and elegant way for many of the phenomena which have been adduced as evidence in favor of multilevel syntactic analyses," thereby demonstrating that additional abstract layers of syntactic representation are superfluous (Van Valin & LaPolla 1997:21). The single layer of syntactic representation is concrete rather than abstract, even in terms of the linear ordering of the clausal constituents.

The basic organisation of RRG is given in the simple diagram in Figure 1.1, taken from Van Valin & LaPolla (1997:21).

The theory is founded on the assumption that what is universal in languages is semantic in nature, based on cognitive universals. Universal linguistic distinctions include that between predicating and non-predicating elements, and between NPs and adpositions which are verbal arguments and those which are

CLAUSE

CORE		PERIPHERY
Ben	bounced	the ball	in the bathtub

NUCLEUS
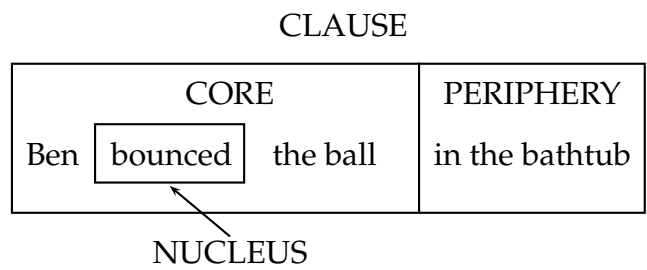
Figure 1.2: **Components of the Layered Structure of the Clause** (Van Valin & LaPolla 1997:26)

not. The basic structure RRG assigns to utterances is based on these two distinctions, with the aim of universal applicability. Figure 1.2, based on Van Valin & LaPolla (1997:26), presents these distinctions pictorially, with the verb—the nucleus—and its arguments forming the core of the clause, and the core and periphery together forming the clause.

The primary division in this representation is between the core of the clause, containing the predicate and its arguments, and the periphery of the clause, containing non-arguments, or adjuncts. All together, these form the clause, which combines with extra-clausal elements to form a sentence. The RRG Layered Structure of the Clause is shown in Figure 1.3. This is a flat structure, which directly represents the surface strings in a language.
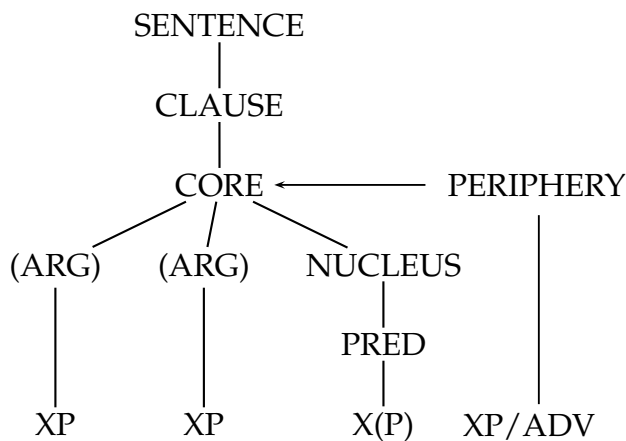
Figure 1.3: **Representation of the Layered Structure of the Clause** (Van Valin & LaPolla 1997:31)

30

The motivation behind this representation is that the universal aspects of clause structure are semantic. Those aspects which are not universal, such as detached phrases and pre- and post-core slots (e.g. WH-phrases), are pragmatically motivated. As the diagram reflects the surface syntax of the construction it represents, each language contains a particular inventory of syntactic templates corresponding to its basic sentence types. This inventory is language-specific, and the type of information contained in these templates is also variable. English, for instance, has a set of rigidly ordered templates, whereas languages with more pragmatic ordering of constituents, like Russian and Estonian, have less rigidly ordered templates which become ordered by information structure, after template selection. This is discussed further below, in section 1.3.4.

1.3.2 Grammatical Relations

The Layered Structure of the Clause is based on semantic categories, which are argued to arise from universal cognitive categories. Semantic relations, according to RRG, are the primary linguistic relations. Pragmatic relations are communicatively basic. Only when semantic and pragmatic relations fail to account for linguistic behavior do grammatical relations come into play.

Grammatical relations involve a restricted neutralisation of semantic relations. If the neutralisation of semantic relations is unrestricted, then the construction in question does not say anything about grammatical relations. This is the case, for instance, with relativisation in English and Estonian, where the relative pronoun can take any semantic role, as indicated by example (1.10).

(1.10)   a.   Piret   rääkis   naisega,...   kes   külla   tuli
               P.NOM talk.PST.3SG woman.COM.SG who.NOM visit.ILL come.PST.3SG
               Piret talked to the woman who came to visit

          b.   ...keda   ta   oli   aias   näinud
               ...who.PAR 3SG.NOM be.PST.3SG garden.INE see.1PTC
               whom she'd seen in the garden

          c.   ...kelle   poolt   ta   oli   hääletanud
               ...who.GEN side.ABL 3SG.NOM be.PST.3SG vote.1PTC
               for whom she'd voted

          d.   ...kellega   ta   jooksmas käib
               ...who.COM 3SG.NOM running   go.PRS.3SG
               with whom she goes running

RRG defines grammatical relations as "a restricted neutralization of semantic roles for syntactic purposes" in a grammatical construction (1997:253). Verb agreement is an example of a grammatical relation, as it neutralises semantic relations for syntactic purposes, but it does not neutralise them indiscriminately, as the relative pronouns do, but rather in a restricted fashion.

As Table 1.2 shows, English verb agreement cross-cuts semantic relations, agreeing not with the actor, but with the first NP in the core of the clause. This excludes pre-core elements such as fronted objects and adverbials. Verb agreement in English, then, neutralises actor and undergoer, but in restricted contexts. The undergoer of an active, transitive verb, for instance, cannot control verb agreement, which is clearly a grammatical phenomenon, rather than semantic or pragmatic.

Subject is a language-specific grammatical relation. The central grammatical role in RRG is called the Privileged Syntactic Argument (PSA), defined on a construction-specific basis. Those languages which have the same PSA in all, or most, constructions, can be described using the notion of subject. The subject is a generalised PSA. In English, the subject is canonically the first NP in the core of a clause.

The PSA is defined on a construction-specific basis, as either the controller or the pivot of a particular morphosyntactic phenomenon. In the examples in Table 1.2, for instance, each construction (e.g. transitive active, derived intransitive passive, etc.) defines one controller of verb-agreement, and that is the PSA of this phenomenon. The omitted argument in certain cross-clausal phenomena, such as 'want' control-constructions or matrix coding, is referred to as the pivot. Both controllers and pivots can be either semantic or syntactic. The notion of subject subsumes both controllers and pivots, and codifies the assumption that a given language is consistent across constructions in its choice of controllers and pivots.

The farmer picks apples	ACTOR, transitive V
The farmer dances	ACTOR, intransitive V
The farmer sleeps	UNDERGOER, intransitive V
*The farmer eat apples	*UNDERGOER, transitive V
The apples are eaten	UNDERGOER, passive V

Table 1.2: **Agreement in English: Restricted Neutralisation of Semantic Roles**

However, even a subject-centered language like English has exceptions to its choice of PSA. The *tough*-construction (as in 1.11) is an example where, in English, the PSA is not the subject: the undergoer is the pivot here.

(1.11)   a good novel is tough to write

In this construction, the PSA is defined by a semantic pivot, namely the undergoer. Control verbs like *persuade* and *encourage* select semantic controllers: the controller is always the undergoer, and so these constructions define a semantic controller and a syntactic pivot. This distinction is an important one, and the tools provided by RRG are useful both for recognising this difference and for describing it.

Estonian, like English, has a generalisable PSA, and so does make use of a subject relation. However, there are more instances in Estonian than in English of exceptional PSAs, where the RRG division of PSA into pivots and controllers, and semantic and syntactic versions of each, proves to be more useful than the notion of subject. Traditional Estonian linguistics has struggled with constructions like existentials and possessives, which lack a canonical subject (more on these in Chapter 2). Terms such as 'partial subject' are created, along the same lines as the 'partial object', but the RRG terminology provides a more parsimonious description, and one which seems to be more in line with an explanation for the variable PSA-marking exhibited in Estonian. This is discussed in more detail in the following chapter.

A final note about the Privileged Syntactic Argument of RRG is that it does not form part of a tripartite distinction of grammatical relations, as the subject relation does, standing in opposition to the direct and indirect object grammatical relations. RRG makes use of only the PSA. Each construction may define one controller and/or one pivot. The direct object and indirect object arguments are derived from the logical structure of verbs, by the linking rules of a particular language. The direct object, or second core argument, falls out of the semantics and the linking. Case-marking rules, for instance, do not need to appeal to anything outside that. So the PSA is privileged not only grammatically but also theoretically, as the only argument which needs specification with regard to particular morphosyntactic phenomena.

An important theoretical assumption of RRG, shared by a number of other theories, is that thematic roles can be ordered in a hierarchical continuum. The notion of semantic macroroles rests on this ordering of thematic roles, and macroroles are foundational for the RRG notions of linking between semantics and syntax and transitivity. Verbs can have a maximum of two macrorole (MR) arguments, the generalised actor macrorole and the generalised undergoer macrorole. The actor MR includes the semantic roles on the agentive side of the thematic role hierarchy (such as agent, experiencer, instrument, recipient, source), while the undergoer MR covers the patientive roles (such as patient, theme, recipient, source). Macrorole selection is based on the particular logical structure of a particular verb, which can include zero, one or two macroroles.

Grammatical rules in RRG refer to macroroles rather than specific arguments in the logical structure of verbs. Accusative languages have the actor MR generally linked to a privileged position in the syntax. In marked voice constructions, the undergoer may be linked to a privileged syntactic argument position. Ergative languages work in the opposite way, with the undergoer linked to a privileged argument position in unmarked constructions, and the actor linked to the privileged syntactic argument position in marked voice.

RRG defines transitivity by way of macroroles. A verb's valency refers to the number of arguments it takes. Semantic valency refers to the semantic arguments in a verb's logical structure, and syntactic valency refers to the number of morphosyntactically encoded arguments in a fully formed predicate. The syntactic and semantic valencies of a verb do not necessarily correspond to each other. Likewise, M-transitivity (or Macrorole-transitivity), although it is a semantic concept, is not always the same as semantic valency. Macroroles generalise over particular semantic roles, and they also play a function in the syntactic linking of a clause. Trivalent verbs have an M-transitivity of two. Further complications in the relation between valency and transitivity of certain classes of verbs are discussed in Chapter 4.

The default Macrorole assignment principle states that the number of macroroles is always less than or equal to the number of arguments in a verb's logical structure; and secondly, that the nature of the macroroles can be read directly from a verb's logical structure. If there are two MRs, then they will always be actor and undergoer, mapped in a consistent way from the semantic representation. And if

ACTOR				UNDERGOER

Arg. of	1st arg. of	1st arg. of	2nd arg. of	Arg. of state
DO	**do′** (x,…)	**pred′** (x,y)	**pred′** (x,y)	**pred′** (x)

[′⟶′= increasing markedness of realisation of argument as macrorole]
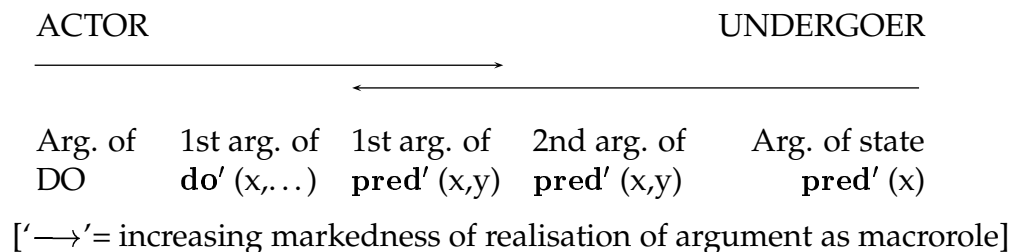
Figure 1.4: **The Actor-Undergoer Hierarchy** (Van Valin & LaPolla 1997:146)

there is only one macrorole, then the type of predicate contains the information regarding MR assignment. The presence of an activity predicate entails an actor MR, and the absence of an activity predicate signals that the single MR is an undergoer. Hence, for the vast majority of verbs, both the number of macroroles and their nature can be read directly from the verb's semantic representation. When the M-transitivity cannot be directly related to the argument positions in logical structure, then it is explicitly specified.

Finally, the Actor-Undergoer Hierarchy is essential for the theory in recognising which arguments map to which macrorole. The Hierarchy (shown in Figure 1.4) gives the markedness of assigning a particular argument in the logical structure to either macrorole: the unmarked choice for the argument of DO is actor, and the unmarked choice for the argument of a state predicate, **pred′** (x), is undergoer. DO is only used in the theory for verbs with lexicalised agency, so the hierarchy illustrates that the actor macrorole is the only possible choice here. With regard to the semantic representation of predicates shown in Figure 1.4, this is clarified and developed in Chapter 4. For now, it is of primary interest to note that this sort of hierarchy exists, and that it is used in the linking of arguments from the semantics to the syntax, and vice versa.

1.3.4   Linking

The linking procedures in RRG work bi-directionally, from the semantics to the syntax, and from the syntax to the semantics. These are not simple inverses of each other, as the language production process involves a different set of operations than the comprehension process, although they make use of the same models. The speaker constructs utterances through semantics to syntax linking, and the hearer interprets the utterances through syntax to semantics linking. Van Valin & LaPolla (1997) underscore the importance of the bidirectional model

as responsible for the psychological adequacy of the theory. A theory of syntax ought to be able to account for both production and comprehension, and the parser component is integral to the theory.

RRG is a "construction grammar" (though not forming part of Construction Grammar proper), in that it posits a syntactic inventory of basic sentence templates which are used by speakers to form constructions. The particular selection of templates at a speaker's disposal is language-specific. As mentioned before, the importance of ordering, for instance, varies between languages. The syntax to semantics linking involves a parser. No inventory of templates is necessary, only the successful identification and interpretation of one template. However, this is the more difficult of the two linking procedures, because it necessarily involves deducing semantic meaning from morphosyntactic form.

An obvious but important restriction is the Completeness Constraint, which says that all of the explicitly specified arguments in the semantic representation of a clause must be linked to material in the syntactic representation, and that all referring expressions in the syntactic expression must be linked to argument positions in the semantic representation. The phrase "explicitly specified arguments" is key for the valency-modifying constructions examined in this thesis. Arguments which are represented in the logical structure can be given a '∅', indicating the presence of the argument in the argument structure, but the absence of any overt argument referent in the particular construction. The Completeness Constraint is a primary factor in the selection of syntactic templates for a particular utterance. In English, all sentences have a minimum of one argument. In Estonian, predicates like *sadama* 'rain', which have no semantic arguments, also have no syntactic arguments. The number of overt syntactic arguments is centrally relevant to the pragmatic interpretation of a clause in Estonian, as this thesis demonstrates.

As argument linking is central to voice phenomena, this section gives an overview of the principles behind RRG linking procedures through an example of semantics to syntax linking.

Semantics ⟶ syntax linking

This thesis focusses on constructions which involve simple clauses, and so I restrict my review to the RRG linking of simple syntactic and semantic representations.

To begin with, there is an elementary, straightforward one-to-one mapping between the number of argument positions in the logical structure of a verb and the syntactic arguments (and argument-adjuncts) which are expressed. Various grammatical operations affect this one-to-one mapping in language-specific ways, but at its most basic and universal level, RRG maps semantic arguments directly to the syntactic ones.

The first step in the semantics to syntax linking process is the selection of the logical structure of a verb from the lexicon and an appropriate syntactic template from the inventory, following the constraints outlined above. Logical structure and the semantic classification of predicates are introduced and discussed more thoroughly in Chapter 4. For now, let us take a simple Estonian example, such as the transitive verb *sööma* 'eat', in its on-going activity sense. The logical structure for this verb is $\mathbf{do'}\ (x,\ [\mathbf{eat'}\ (x,\ y)])$.

Next, the NPs for the participants in the event (in this case, for instance, the 1SG pronoun, and *pähklid* 'nuts') are inserted into the LS, which gives us a more complete semantic representation of the predicate: $\mathbf{do'}$ (1SG, [$\mathbf{eat'}$ (1SG, pähklid)]). Now the macrorole assignment must be determined. The 1SG pronoun is the highest-ranking argument according to the Actor-Undergoer Hierarchy as stated above in Figure 1.4. This is linked to the actor macrorole by default. This leaves the only other argument *pähklid*, which is given undergoer status, and stands as the second core argument.

With the assignment of macroroles, the semantic phase of the linking is complete, and all that remains is the mapping of this structure into the syntactic representation. The default mapping for an accusative language like Estonian is for the actor to be linked to the Privileged Syntactic Argument. The case assignment rules (assumed to be similar to those suggested in Van Valin & LaPolla 1997 for German) state that the PSA should be assigned nominative case. The default case-marking for the second core argument in Estonian is to assign it partitive case.[12] The finite verb agreement rule for Estonian (as in German) declares that the finite verb agrees with the PSA. Finally, any adverbials and non-core adjuncts ('last night', 'for fun') are linked to the periphery. For a language like English, this is a complete linking, while for Estonian, information structure now determines the internal ordering of the syntactic template according to discourse constraints and relevance.

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[12]This is a gross over-simplification of a much more complex case system, which is only minimally covered in this thesis.

For the most part, giving the semantic representation of a predicate is considered sufficient for the purposes of this thesis, as the rest of the linking can be read directly from the semantic structure (summarised in Van Valin & LaPolla 1997:326).

Syntax $\longrightarrow$ semantics linking

Parsing an utterance is not a mere converse of the production of an utterance, though it is based on the same set of universal and language-specific principles. If a language has a voice system, as Estonian does, then the voice of an utterance is the first clue in assigning macroroles. As Estonian typically assigns nominative case to the PSA of a construction, the parser begins by interpreting the nominative argument as the PSA, in a canonical example.

The first step is determining the functions of the core arguments. If the construction is in the unmarked voice, then the PSA is the actor. Once the functions of the core arguments are established, the logical structure of the nucleus predicate must be called up from the lexicon. Now the first step from above, that of determining macrorole assignment, must be repeated, but with some alterations. In Estonian, the undergoer is marked by case marking, so the problem of English where there is more than one choice for undergoer does not usually arise. The actor is assigned to an argument in the logical structure, if the verb has an actor. And finally, after both macroroles are determined, the linking of any non-macrorole core arguments is established.

I do not elaborate the entire syntax to semantics linking algorithm here, but this component of felicitous communication is important for the interpretation of voice constructions, as elsewhere. Chapter 7 in particular proposes that ambiguities impeding processing underlie an ongoing grammatical change, and this presupposes a view of processing similar to that put forth in RRG. In the thesis, I primarily make use of the logical structure component of RRG, rather than the full linking procedure, but the logical structure is meant to represent information which feeds into the sort of linking algorithm sketched here and developed more fully in Van Valin & LaPolla (1997). The RRG assumptions regarding production and comprehension underlie much of the approach here, though they should be supplemented with a theory of pragmatic processing and inferencing in order to represent a model of communication.

1.4   Outline of Thesis

The following presents a brief outline of the thesis. Chapters 2 and 3 provide the basic details regarding Estonian. Chapter 2 introduces the grammatical system of Estonian in general, while Chapter 3 provides a more detailed look at the morphosyntax and semantics of the valency-reducing constructions investigated here.

Chapter 4 provides the formal tools required for a semantic analysis of these voice constructions. The logical structure used in RRG is introduced and applied to Estonian. A single augmentation of this to include the event variable of event-based semantics allows a fine-grained analysis which is able to distinguish between the different effects of the different valency operations. These effects are looked at in Chapter 5, which focusses on the extent of promotion and demotion of the arguments of the verb. An Actor Demotion Hierarchy is proposed.

Further effects of the differences in degree and kind of demotion of the actor are examined in Chapter 6, through an investigation of the possibilities of combining voice forms. A particular combination, the impersonalised impersonal, which is problematic for various analyses, appears to be a signal of a change in progress in Estonian. Chapter 7 is dedicated to an investigation of this construction. The solution proposed with regard to this form involves diachronic change and grammaticalisation.

Other than simple constructions to demonstrate basic forms, the majority of the examples are culled from the text corpus mentioned in section 1.2, the Internet, or observations from naturally occurring dialogue. Whenever possible, I note the source of the examples in footnotes. Translations of Estonian passages in the literature are my own, and the originals are omitted. Where translations are not my own, I include the original text as well.

2

A Grammatical Sketch of Estonian

This chapter describes the basic properties of the grammatical system of Estonian. The morphosyntax of canonical clauses is outlined, with a description of nominal categories and case-marking followed by a description of the verbal system. Some predicates with non-canonical case marking are also discussed, and word order is given a brief overview. This chapter provides a basis for the following chapter, which examines voice-marking in Estonian, and introduces the constructions which are of central concern to this thesis.

2.1   Nominal Morphosyntax

The Estonian case-marking system famously has a total of fourteen morphological cases (which is fewer than the case systems of Finnish or the more distantly related Hungarian). The fourteen include three abstract, or grammatical cases, NOMINATIVE, PARTITIVE, and GENITIVE, each of which are involved in marking grammatical functions; these are discussed below. The remaining cases include six locative cases, interior—ILLATIVE, INESSIVE, and ELATIVE—and exterior—ALLATIVE, ADESSIVE, ABLATIVE. Both interior and exterior sets make a three-way distinction between lative (moving toward), locative (being at), and separative (moving away from) relations. These correspond closely to English 'into', 'in', 'out of', and 'onto', 'on', 'off of', and as with English prepositions, all these cases have a range of other functions, both metaphorical and grammatical. They are classified as concrete, or semantic cases. Estonian nouns also inflect for other semantic cases, the TRANSLATIVE 'becoming', TERMINATIVE 'up to, until', ESSIVE 'as', ABESSIVE 'without', and COMITATIVE 'with' cases.

Case	Singular	Plural	
NOMINATIVE	raamat	raamatud	book(s)
GENITIVE	raamatu	raamatute	of the book(s)
PARTITIVE	raamatu*t*	raamatuid	'some books' [see discussion]
Interior Local			
ILLATIVE	raamatu*sse*	raamatu*tesse*	into the book(s)
INESSIVE	raamatu*s*	raamatu*tes*	in the book(s)
ELATIVE	raamatu*st*	raamatu*test*	from, out of the book(s)
Exterior Local			
ALLATIVE	raamatu*le*	raamatu*tele*	to the book(s)
ADESSIVE	raamatu*l*	raamatu*tel*	at the book(s)
ABLATIVE	raamatu*lt*	raamatu*telt*	off of the book(s)
Other Oblique			
TRANSLATIVE	raamatu*ks*	raamatu*teks*	turning into the book(s)
ESSIVE	raamatu*na*	raamatu*tena*	as the book(s)
TERMINATIVE	raamatu*ni*	raamatu*teni*	until/up to the book(s)
ABESSIVE	raamatu*ta*	raamatu*teta*	without the book(s)
COMITATIVE	raamatu*ga*	raamatu*tega*	with the book(s)

Table 2.1: **Noun Declension Paradigm**

A full declension paradigm of a regular noun, *raamat* 'book', is given in Table 2.1, with the names and forms of cases and their approximate basic meanings.[1]

2.1.1 *Grammatical Cases*

The three abstract cases are all primarily used for marking the core arguments in a clause. The Privileged Syntactic Argument (PSA, introduced in section 1.3) can be generalised as a subject in canonical clauses in Estonian, and is signalled by the nominative case and verb agreement. The second core argument, the direct object, is marked with either partitive, genitive, or sometimes nominative case. This section outlines the factors affecting the use of these grammatical cases. Indirect objects are marked as obliques (e.g. illative, allative, or adessive) and are not discussed here in any detail.

Nominative

Nominative is the unmarked case (Jaksobson 1936, Timberlake 1975), and is used canonically for marking subjects. Nominative subjects trigger verb concord in person and number (2.1).

---

[1]This is adapted from (Saagpakk 1982:xlvii).

(2.1) a. karu **ronib** mäe tippu
bear.NOM.SG climb.PRS.3SG mountain.GEN.SG top.ILL.SG
the bear is climbing to the top of the mountain

b. karu**d** roni**vad** mäe tippu
bear.NOM.PL climb.PRS.3PL mountain.GEN.SG top.ILL.SG
the bears are climbing to the top of the mountain

c. **me** roni**me** mäe tippu
1PL.NOM climb.PRS.1PL mountain.GEN.SG top.ILL.SG
we are climbing to the top of the mountain

Nominative also marks objects under certain conditions. This is discussed below, in section 2.1.2.

Genitive

Genitive case has two primary functions. The attributive-possessive function of the genitive is similar to Indo-European genitive uses and does not require expatiation here. In Estonian the genitive is also used to realise an accusative object relation with singular NPs. Section 2.1.2, below, discusses object marking in greater detail.

In addition, the genitive is basic to the morphological formation of other cases. The semantic (non-grammatical) cases in the singular are formed from the genitive singular as a stem, to which suffixes are added (the only exception is the short form of the illative without *-sse*). The nominative plural of most nouns also uses the genitive singular as a root to which the plural marker is affixed. This can be seen both in Table 2.1, above, and in the examples in Table 2.2.

Adjectives agree with the modified noun in number and case. The last four cases listed in Table 2.1 are exceptions to this rule. An adjective modifying a noun in any of these cases agrees only in number, and receives genitive case-marking.

Sg.	NOM	laud *table*	õun *apple*	tütar *daughter*
	GEN	**laua**	**õuna**	**tütre**
	ALL	laua*le*	õuna*le*	tütre*le*
Pl.	NOM	laua*d*	õuna*d*	tütre*d*

Table 2.2: **Case Formation**

Partitive

The partitive case is the default object-marking case (Sulkala 1996:170, Tauli 1968:216, Heinämäki 1984). It primarily marks partiality and low transitivity (Helasvuo 1996). For a plural or mass noun, partitive can signal 'some x' (e.g. some coffee, marbles, sand). The singular partitive case is also used in plural numerical phrases, as in *kolm meest* (three.NOM man.PAR.SG) 'three men', and some other expressions of quantity, as in *liiter piima* (liter.NOM milk.PAR.SG) 'a liter of milk', or *veidi kannatust* (some patience.PAR.SG) 'a little patience'. But the partitive also functions fully as a grammatical object marker for partially affected objects. Partial objects, discussed in the following section, are marked with partitive case in both singular and plural.

2.1.2 Object Marking: Total and Partial Objects

The basic object marking system depends on two properties of the object: number and affectedness of the object referent. Traditional Estonian linguistics describes the two object-marking choices with the partially semantic, partially syntactic labels 'total object' and 'partial object'. Partial objects are always marked with partitive case, whereas total objects are realised in different contexts with different morphological cases, sometimes subsumed in descriptions under an abstract 'accusative' case (e.g. Ackerman & Moore 1999, 2001 and Hiietam 2002, as well as much earlier grammars, e.g. Hermann 1884).[2] Most verbs which take an object make the distinction between a partially affected or indefinite object and a definite and wholly affected object.

Singular NP objects in canonical active clauses are marked with either partitive case if partially affected or genitive if totally affected. Plural objects are partitive (when partial) or nominative (when total). This is summarised in Table 2.3.

	Partial O	**Total O**
Singular	PAR	GEN
Plural	PAR	NOM

Table 2.3: **Object Case-Marking**

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[2]In Estonian, there is no dedicated accusative marker for any nominal elements, unlike Finnish, which marks pronominal objects with a distinct accusative ending. I refer to total and partial objects, which can be variously marked with nominative, genitive or partitive case. This is not to make any theoretical claims regarding abstract cases such as accusative, and indeed the term 'total object' serves a similar purpose in description as the abstract 'accusative' does.

As has been mentioned, partitive is the default object case in several senses. Only under specific semantic and grammatical circumstances does an object receive total object marking (realised syntactically by either genitive or nominative case). Under negation, nearly all objects become partitive, including those marked with nominative in non-canonical clauses (Erelt et al. 1993:51).

The object is treated as total only if *both* the event is bounded *and* the object denotes a bounded and wholly affected quantity. The total object NP denotes a whole quantity or a complete, definite collection, and the referent is completely affected. The situation or event described in the clause must be bounded, complete or intended to be completed, and the clause must be in the affirmative. Example (2.2) gives some examples of total objects: a plural total object in nominative case (2.2a), and a singular total object in genitive case (2.2b).

(2.2)   a.   Marek   tappis   kõik herilased
                  Marek.NOM kill.PST.3SG all   wasp.NOM.PL
                  Marek killed all the wasps
          b.   Kaarel   leiutas   uue   mängu
                  Kaarel.NOM invent.PST.3SG new.GEN.SG game.GEN.SG
                  Kaarel invented a new game

If any of the above criteria are not met, then the object is partial, and receives partitive case marking. Example (2.3a) involves a negation of (2.2a), and (2.3b) shows an incomplete, unbounded activity counterpart to (2.2b).

(2.3)   a.   Marek   ei   tapnud kõiki   herilasi
                  Marek.NOM NEG kill.1PTC all.PAR wasp.PAR.PL
                  Marek didn't kill all the wasps
          b.   Kaarel   üritas   uut   mängu   leiutada
                  Kaarel.NOM try.PST.3SG new.PAR.SG game.PAR.SG invent.INF
                  Kaarel tried to invent a new game

A partial object, or partitive case-marking, is the unmarked object choice, used if any one of the total object requirements fails to apply, whereas a total object marks high transitivity (Erelt et al. 1993, Kont 1958, Sulkala 1996, Nemvalts 1996). An object marked with partitive case is essentially unmarked, as it can signal atelicity, unboundedness of the event, indefinite quantity, negation, partial affectedness of the object, or simply an unaspectual verb. A large class of verbs,

including perception and cognition verbs like *nägema* 'see' and *meenutama* 're-member', takes only partitive objects. Erelt et al. (1993) note that there exists a very small class of verbs which only take total objects, and give as examples *ammendama* 'exhaust' and *andestama* 'forgive' (1993:51). However, native speakers I have consulted readily accept clauses such as example (2.4), with *andestama* taking a partial object. This class is, then, very limited, possibly limited to only *ammendama* 'exhaust'. The primary divide in terms of transitive verbs is between those which only take a partial object and those which take both.

(2.4)   ta   andestas   mulle   igasuguseid   asju
          3SG.NOM forgive.PST.3SG 1SG.ALL all-kinds.PAR.PL thing.PAR.PL
          s/he forgave me for all sort of things

Partial objects appear in clauses, as above, where there is not a full transfer of force or completion of the activity denoted by the aspectual verb. This semantic condition includes clauses with imperfective aspect (as in 2.5a) and negative clauses. But the usage of partial versus total object is governed by strict syntactic conditions as well. Negation, for instance, is a syntactically determined condition, which can be motivated by the semantic explanation, but applies regardless of any semantic factors. The partial object in the imperfective example (2.5a) contrasts with the total object in the perfective (2.5b).

(2.5)   a.   Holmes luges   ajalehte,   kui   Watson saabus
               H.NOM read.PST.3SG paper.PAR.SG when W.NOM arrive.PST.3SG
               Holmes was reading the newspaper when Watson arrived
        b.   Holmes luges ajalehe   läbi,   enne kui Watson saabus
               H.NOM read paper.GEN.SG through before that W.NOM arrived
               Holmes finished reading the newspaper before Watson arrived

The partitive case denotes low transitivity on Hopper & Thompson's (1980) scale. I return to this observation in section 2.4, comparing the use of the partitive as an object case and as a non-canonical PSA case marker in existential clauses.

Finally, in constructions which lack an overt nominative subject, such as the imperative, impersonal and certain infinitival constructions, any total object (singular or plural) is coded with nominative case. Examples of total objects in nominative case are given in (2.6).

(2.6)   a.   võta   see   kühvel   kaasa
             take.2SG.IMV this.NOM.SG shovel.NOM.SG along
             take this shovel along

        b.   nüüd on   vaja   tappa   see   draakon
             now be.PRS.3SG necessary kill.INF this.NOM.SG dragon.NOM.SG
             now it's necessary to kill this dragon

The object case in bivalent predicates is relevant for such typically verbal categories as telicity, aspect, and negation, in addition to nominal categories such as definiteness, quantification, and affectedness. The basic marker of aspect in Estonian is the case-marking of the object,[3] but aspect is not obligatorily marked even in canonical transitive clauses (Sulkala 1996, Heinämäki 1984, Erelt et al. 1993). Object case and the coding of patient arguments in various constructions becomes crucial for the analysis of the status of arguments in various valency-altering constructions.

2.1.3   Pronouns

First person pronouns (*mina/ma*-NOM.SG, *meie/me*-NOM.PL),[4] second person pronouns (*sina/sa*-NOM.SG, *teie/te*-NOM.PL) and reflexive pronouns (*(ise)enese/ (ise)-enda*-GEN, *(ise)ennast/ (ise)end*-PAR; reflexives have no nominative case) do not follow the same object-marking rules as full NPs do. They never take nominative as an object case. While the full NPs in (2.6) above are in nominative case, the same clauses with any of these pronouns have partitive object marking, as demonstrated in (2.7).

(2.7)   a.   võta   mind   kaasa
             take.2SG.IMV 1SG.PAR along
             take me along

        b.   nüüd on   vaja   tappa   iseennast
             now be.PRS.3SG necessary kill.INF self.PAR
             now it's necessary to kill oneself[5]

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[3]Object marking operates alongside other markers of aspect such as "measure adverbials, the inessive of the *m*-infinitive. It is also expressed partly by certain lexico-grammatical means... and partly by the semantics of the verb" (Sulkala 1996:169).

[4]The alternatives given here are simply long and short (reduced) forms of the pronouns, which do not differ in their syntactic functions.

[5]Adapted from Aavik (1982:lxvi)

In imperative and impersonal constructions, first and second person object pronouns are always partitive. Recall that in the case of nouns, canonical object-marking patterns differentiate between total and partial objects. Where full NPs show a nominative object case, as in imperatives, these pronouns are partitive. In addition, the plural first and second person pronouns never receive differential object marking, and are *always* partitive as objects. They show no distinction between total and partial object, even in canonical clauses (Erelt et al. 1993:53). An example of this is given in (2.8).

(2.8)   a.   draakon   sööb   rüütli   ära
             dragon.NOM.SG eat.PRS.3SG knight.GEN.SG up
             the dragon will eat up the knight

        b.   draakon   sööb   su   ära
             dragon.NOM.SG eat.PRS.3SG 2SG.GEN up
             the dragon will eat you up

        c.   draakon   sööb   meid/teid   ära
             dragon.NOM.SG eat.PRS.3SG 1PL.PAR/2PL.PAR up
             the dragon will eat us/you all up

Example (a) exhibits a canonical clause with a full NP with genitive case marking the total object relation. Example (b) shows that some pronouns distinguish between total and partial object in this context, but (c) shows that first and second person plural pronouns do not follow these general rules.

This difference is likely to have partially derived from the syncretism between nominative and genitive forms in the plural pronouns. The linguistic priority of distinguishing between subject and object would be expected to take precedence over distinguishing between total and partial object in the case of personal pronouns.[6] The high position of first and second person pronouns on the animacy hierarchy gives them a distinct status as discourse elements. These pronouns are highly salient, being animate, human, and participants in the discourse. This makes them atypical as affected objects, being natural pragmatic topics and syntactic subjects. Hence, they are associated with subject marking, and any object function is marked as a single non-prototypical category. The pronouns exhibit slightly different syntactic behavior from their nominal counterparts, just as in Finnish. However, unlike Finnish, they do not exhibit an accusative case.

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[6]However, many full nouns have the same form in the genitive singular as nominative singular. This is characteristic of open-class nouns with vowel-final nominative singular forms, e.g., *maja*[-NOM] 'house', *maja*[-GEN] (Erelt, Erelt & Ross 2000:240f). Hence, this syncretism alone is not an explanation for the peculiar behavior of the first and second person plural pronouns.

Non-Past		Singular		Plural
1st	(ma)	laula*n*	(me)	laula*me*
2nd	(sa)	laula*d*	(te)	laula*te*
3rd	(ta)	laula*b*	(nad)	laula*vad*
Past				
1st	(ma)	laul*si-n*	(me)	laul*si-me*
2nd	(sa)	laul*si-d*	(te)	laul*si-te*
3rd	(ta)	laul*is*	(nad)	laul*si-d*

Table 2.4: **Verb Inflection, Non-Past and Past**

2.2 Verbal Morphosyntax

Verbs in canonical clauses (both transitive and intransitive) agree with the nominative subject in person and number. Verbs also express tense, mood, voice and negation. Aspect is expressed by the predicate as a whole, signalled by a complex of object case (see section 2.1 on object case marking), verb tense, and aspectual particles such as *ära* 'away', *läbi* 'through', and *maha* 'down'.[7] Synthetic finite forms are older forms in Finnic and analytic forms reflect innovations (Laakso 2001:190). In general, perfect tenses tend to be analytic and simple tenses are synthetic.

2.2.1 Tense

Past and non-past are the two morphological tenses. The paradigms are given in Table 2.4, with the verb *laulma* 'to sing'. Estonian is less agglutinative than Finnish, which has retained a higher degree of affixal morphology, but in these simple paradigms it can be seen that the past morpheme is not (always) combined with person morphemes. It is also clear that the singular and plural inflections in each person are related to each other.

Non-past is used for reference to both present and future time, depending on the context. Future time, though not part of the morphological tense paradigm, can be expressed in three ways: (2.9a) non-past predicate + future time adverbial (e.g. 'tomorrow', 'in three hours'), (2.9b) non-past form of *hakkama* 'start' + *-ma* infinitive, and (2.9c) non-past form of *saama* 'get' + *-ma* infinitive.

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[7]The particles are an Estonian innovation among Finnic languages. They can be used to emphasise boundedness, but in some cases they are obligatory. Indeed they sometimes serve as the only overt signal of boundedness, particularly where the object noun has syncretic partitive and genitive forms, and hence does not overtly signal the distinction between total and partial object (as with *kivi*-GEN, *kivi*-PAR 'stone'; *talu*-GEN; *talu*-PAR 'farm').

(2.9) a. ma   tulen   homme   linna
           1SG.NOM come.PRS.1SG tomorrow city.ILL
           I'm coming to town tomorrow

       b. ma   hakkan   mõne minuti   pärast tulema
           1SG.NOM start.PRS.1SG few minutes.GEN.SG after come.INF
           I'll come in a few minutes

       c. järgmine kooliaasta   saab   raske   olema
           next   school-year.NOM.SG can.PRS.3SG difficult be.INF
           the next school year's going to be difficult

The last of these is designated as that which is most grammaticalised in con-
temporary Estonian as a future time marker, although it is generally limited in
use to stative predicates. The verb *hakkama* 'start' is also moving in the direction
of a grammaticalised future marker, but remains primarily limited to inchoative
verbs, because it has not lost its lexical semantic associations (Erelt, Erelt & Ross
1997:396–97).

Perfect forms are analytic, usually formed with the auxiliary *olema* 'be'. The dif-
ference between an actor-oriented perfect clause and an undergoer-oriented pas-
sive is marked in English with a difference in auxiliary. In Estonian, the same
auxiliary is used, and the difference is signalled by the occurrence of an active
participle (glossed as 1PTC) versus a passive participle (2PTC) (2.10a–b).

(2.10) a. sipelgas   on   **söönud**
            ant.NOM.SG   be.PRS.3SG eat.1PTC
            the ant has eaten

        b. sipelgas   on   **söödud**
            ant.NOM.SG   be.PRS.3SG eat.2PTC
            the ant has been eaten

2.2.2 *Negation*

Negation is most commonly expressed with the negative particle *ei* 'no, not'. The
negative verb has been generalised to all persons from a 3SG form, to effectively
become an uninflected negative particle in Estonian, unlike the inflected negative
verb in Finnish (Laakso 2001:193). However, the negative particle retains some
auxiliary verb-like status in that it blocks subject agreement on the lexical verb
following it. In a non-past indicative clause, *ei* is followed by the stem of the

lexical verb, regardless of the person and number of the subject, as shown in (2.11).

(2.11)   a.   sa   ei   leia kukeseeni
              2SG.NOM NEG find chanterelle.PAR.PL
              you are not finding/ won't find any chanterelles
       b.   nad   ei   leia kukeseeni
              3PL.NOM NEG find chanterelle.PAR.PL
              they are not finding/ won't find any chanterelles

Past tense is signalled with the active past participle (1PTC), as in example (2.12), also uninflected for person and number.

(2.12)   me   ei   leidnud ühtegi   seent
          1PL.NOM NEG find.1PTC one.PAR.SG.FOC mushroom.PAR.SG
          we didn't find a single mushroom

The negative particle does show person and number in its imperative and jussive forms (*ära*-2SG, *ärge*-2PL, *ärme/ärgem*-1PL, *ärgu*-3SG/3PL), which can also trigger optional verb agreement on the following verb, as shown in (2.13).

(2.13)   a.   ära   otsi   seeni
              NEG.IMV.2SG search-for mushroom.PAR.PL
              don't look for mushrooms
       b.   ärme   otsi(me)/ ärgem   otsigem   seeni
              NEG.IMV.1PL search-for/ NEG.IMV.1PL search-for.1PL mushrooms
              let's not look for mushrooms

Negation can also be expressed in non-finite forms with abessive suffixes or with "one of the very few Finnic prefixes," *eba* in Estonian, which "also serves lexical negation," e.g. *ebatavaline* 'unusual' or *ebaõnn* 'misfortune' (Laakso 2001:194).

2.2.3 Mood

Estonian codes five moods morphologically: indicative (the unmarked mood, 2.14a), conditional (2.14b), imperative (2.14c), quotative, or *modus obliquus*, (2.14d), and jussive (2.14e). The unmarked word order for active indicative clauses is SVO.

(2.14)   a.   nad   korjavad   sügisel   seeni

                 3PL.NOM gather.PRS.3PL autumn.ADE.SG mushroom.PAR.PL

                 they gather mushrooms in the autumn

      b.   nad   korjaks(id)   seeni,   kui saaks

                 3PL.NOM gather.CND.PRS(.3PL) mushroom.PAR.PL if   can.CND.PRS

                 they'd gather mushrooms if they could

      c.   korja   mõningaid seeni   salatiks

                 gather.2SG.IMV some.PAR.PL mushroom.PAR.PL salad.TRL.SG

                 gather some mushrooms for the salad

      d.   nad   korjavat   metsas   seeni

                 3PL.NOM gather.QTV forest.INE.SG mushroom.PL.PAR

                 they're allegedly gathering mushrooms in the forest

      e.   võtku   seenesalatit

                 take.JSV mushroom-salad.PAR.SG

                 let them take some mushroom salad!

Evidentiality can be expressed either with the quotative verb form, as in (2.14d), or with an Estonian innovation[8] of the active past participle as predicate with no finite verb, as in example (2.15) (on the development of this form, see Muižniece, Metslang & Pajusalu 1999, Campbell 1991).

(2.15)   nad   korjanud   meeletult palju   seeni!

        3PL.NOM gather.1PTC madly   many mushroom.PL.PAR

        apparently they gathered an astonishing amount of mushrooms

Interrogatives are formed periphrastically.[9] Polar yes-no interrogatives can be formed from an interrogative word (neutral *kas*, 2.16a, or the negative question marker *ega*, which is followed by a negative clause, as in 2.16b) followed by SVO word order, or by an inverted word order, VSO (2.16c).

(2.16)   a.   kas sa   tood   lilli   kaasa?

                 INT 2SG.NOM bring.PRS.2SG flower.PAR.PL along

                 are you bringing flowers along?

      b.   ega   sa   lilli   ei   too?

                 NEG.INT 2SG.NOM flower.PAR.PL NEG bring

                 you're not bringing flowers, are you?

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[8]This innovation probably stems in part from contact with Baltic languages; see Muižniece, Metslang & Pajusalu (1999)

[9]Some of the other modalities can also be expressed periphrastically, as an alternative to the morphological variant given here.

c. tood   sa   lilli   kaasa?
    bring.PRS.2SG 2SG.NOM flower.PAR.PL along
    are you bringing flowers along?

2.2.4 *Voice*

Constructions involved in voice alternations are analysed in detail in the course of this thesis, including impersonals, personal passives, and anticausatives. Chapter 3 gives an initial overview of the morphosyntax and semantics of several voice constructions, and the following chapters analyse these further.

The concept of semantic valency refers to the number of arguments associated with a verb's logical structure. Semantic representations of logical structure are introduced in Chapter 4. In Estonian a key distinction in bivalent verbs involves the case-marking of a verb's objects. Verbs which do not allow total objects are referred to as unaspectual or partitive verbs (requiring a partitive object), and those which allow object case alternation are referred to as aspectual.

The unaspectual verbs are non-prototypical transitive verbs or verbs with low transitivity, including mental and sensory experiencer verbs (e.g. *austama* 'respect', *maitsma* 'taste', *solvama* 'insult') and verbs of duration and evaluation (e.g. *jätkama* 'continue', *takistama* 'obstruct'), among others (Erelt et al. 1993:50–51). The sole choice of partitive marking with these verbs is in line with the grammatical logic behind partitive marking with aspectual verbs. Verbs which allow differential object marking use partitive to mark the lower transitivity variant, and a total object signals high transitivity. As voice constructions are the subject of the next chapter, they are not presented here.

2.2.5 *Non-Finite Verb Forms*

Non-finite forms are divided into three basic types: nominal, adjectival, and adverbial verb forms (Erelt, Erelt & Ross 1997:218). Each verb has two infinitival forms. The two infinitives, *-Ta-*[10] and *-ma*-infinitives, belong to the nominal verb forms. The *-Ta*-infinitive is syntactically the most diverse, and can function as subject, object and complement to control verbs, among other functions. The *-Ta*-infinitive has three realisations, namely *-da* (*elada* 'live'), *-ta* (*hakata* 'start'), and *-a* (*süüa* 'eat'). The *-ma*-infinitive, or supine, has functions that tend to relate to

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[10]The allophone 'T' here is realised as the long voiceless stop, (IPA [t:], orthographic 't'), the short voiceless stop (IPA [t], orthographic 'd'), or sometimes ∅.

a successive activity or purpose clause, but the use of each infinitive is defined syntactically, or lexically as complements to particular control verbs. The supine also declines for several nominal cases (Erelt, Erelt & Ross 1997:221).

The *-vat* verb form is also a nominal non-finite form, otherwise known as the quotative. The quotative does not inflect for person, but can be used with any person or number and can also take an impersonal form.

(2.17) a. ma   arvasin   sind   magavat
            1SG.NOM thought.PST.1SG 2SG.PAR sleep.QTV
            I thought you were sleeping

        b. kuulsin   toas   lauldavat
            hear.PST.1SG room.INE.SG sing.IMP.QTV
            I heard that people were singing in the room

The adjectival forms are participles, which are discussed more in the next chapter, section 3.2. The adverbial forms are gerunds, formed with *-Tes*.

2.3   Word Order

Constituent order in canonical clauses in Estonian is subject to variation both for pragmatic topicalising or focus-marking purposes and in certain types of basic clause. The least marked order is SVO. The standard Estonian reference grammar (Erelt et al. 1993:14–15) categorises Estonian sentences into three basic types, "NORMAL SENTENCES" (example 2.18a), (2) EXPERIENCER-POSSESSOR SENTENCES (2.18b), and (3) EXISTENTIAL SENTENCES (2.18c).

(2.18) a. me   ehitame   sauna
            1PL.NOM build.PRS.1PL sauna.PAR.SG
            we're building a sauna

        b. Raivole   meeldivad   koerad
            Raivo.ALL please.PRS.3PL dog.NOM.PL
            Raivo likes dogs

        c. poisist   kasvas   mees
            boy.ELA.SG grow.PST.3SG man.NOM.SG
            the boy grew into a man

Note that in these examples the initial topic NP is only marked nominative in the "normal" clause. Normal, or unmarked, clauses are those where the grammatical

subject, semantic actor and pragmatic topic are all identified with the same NP (S=Actor=Topic).

Experiencer-possessor sentences, as in examples (2.18b) above and (2.19a) below, typically have the actor, or highest semantic role, as the pragmatic topic and in clause-initial position, but this is not coded as a nominative subject (S≠Actor=Topic). If there is a nominative subject, it is the (non-topical) possessed NP (such as *saladus* 'secret' in 2.19a), but it is not essential to have a nominative subject, as shown in (2.19b). This example has a semantic experiencer pronoun (1PL), which is not a nominative subject, and no other subject candidate. The infinitive verb might be considered a possibility, but in fact if the infinitival element is replaced with a declined nominal, the same construction assigns partitive case to the NP, as shown in (2.19c), which marks this as a non-subject. The infinitive in (b) and the partitive NP may operate as PSA for at least some constructions, but they are not subjects.

(2.19) a. Eerikal on   saladus
            E.ADE be.PRS.3SG secret.NOM.SG
            Eerika has a secret

        b. meil   on   vaja töötada
            1PL.ADE be.PRS.3SG need work.INF
            we need to work

        c. meil   on   vaja õpetajat
            1PL.ADE be.PRS.3SG need teacher.PAR.SG
            we need a teacher

Finally, existential clauses identify the grammatical subject with the actor, or the NP with the highest semantic role (usually theme), which is not the pragmatic topic (S=Actor≠Topic). The NP whose referent's existence is being predicated can alternate between nominative (2.18c above, or 2.20a) and partitive (2.20b) case, triggering verb agreement when nominative, but never occurring clause-initially. Placing such an NP in clause-initial position produces a canonical rather than an existential clause.

(2.20) a. aias   sumisesid   mesilased
            garden.INE.SG buzz.PST.3PL bee.NOM.PL
            bees were buzzing around in the garden

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b. aias   sumises   mesilasi
garden.INE.SG buzz.PST.3SG bee.PAR.PL
there were bees buzzing around in the garden

In all three basic clause types Estonian shows a tendency toward verb-second behavior in affirmative clauses (Erelt et al. 1993:193). Non-canonical "scrambled" word orders usually retain the verb in second position, so that the most common word orders in Estonian are SVO (25%, according to Tael 1988:6) and XVS (24%, Tael 1988). XVS here includes both OVS (where the object is established in the discourse as old information and the subject is new, as in 2.21a), and AVS (where A is an adverbial phrase or other adjunct, as in 2.21b)[11] (Vilkuna 1989).

(2.21)   a.   sind   otsib   politseinik
2SG.PAR look-for.PRS.3SG policeman.NOM.SG
there's a policeman looking for you

        b.   avasui   jälgisid   poisid   esinemisi
open-mouthed follow.PST.3PL boy.NOM.PL performance.PAR.PL
the boys watched the performances with their mouths agape

V3 is also acceptable, but usually only with unstressed pronouns (Erelt, Erelt & Ross 1997:431), and even then, ASVO (2.22a) is often less natural than AVSO (2.22b).

(2.22)   a.   eile   ma   nägin   rebast
yesterday 1SG.NOM see.PST.1SG fox.PAR.SG
I saw a fox yesterday

        b.   eile   nägin   ma   rebast
yesterday see.PST.1SG 1SG.NOM fox.PAR.SG
I saw a fox yesterday

The verb is found at the end of the clause in negative clauses beginning with anything other than a subject, interrogatives beginning with a question-word like *kuidas* 'how', exclamations beginning with a word like *küll* 'sure enough', and

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[11]Example from Tael (1988:6). Tael includes the partitive NPs of existential-type clauses in subject counts, which is different from my approach. The point to take from her statistics, however, is how varied word order is in Estonian. This variability would only increase, given more sentence sub-types, if partitive NPs were not counted as subjects. It is also worth noting that her data shows that Estonian has a much freer word order than Finnish, which is also said to be discourse-configurational, but which has 61% of clauses starting with the subject, compared to 33% in Estonian (1988:8).

some subordinate clauses. The verb is at the beginning of the clause in questions using inversion rather than a question-word, conditionals formed with inversion in lieu of *kui* 'if', exclamations using inversion in lieu of *küll*, imperatives (in parallel with V2 imperatives, and in warning and prohibition clauses with verb-first as the only option), and clauses with *teine/teised* 'other(s)' with a third person pronoun meaning (Erelt, Erelt & Ross 1997:433). Finally, focussing can also move the verb to the front of the clause.

V2 is a tendency, not a rule, but it is a strong tendency. Vilkuna notes that "Estonian has a clear Verb-second (V2) character, usually considered to be the result of German and Scandinavian influence" (1998:180). However, she also notes that "the V2 phenomenon is not identical in Estonian and Germanic," primarily in that it is not obligatory in Estonian (1998:180). Many exceptions can be found; sentences violating V2 order are not judged ungrammatical, especially with weak pronominals; and Estonian allows SOV order in main clauses as well as variable orders in subordinate clauses.

Nevertheless, Tael (1988) reports that, while in Finnish the strongest constraint on word order is 'Theme First', in Estonian the V2 constraint overrides this information-structural tendency. Although verbs do appear clause-initially, the most common constituent orders by far place the verb second. This is of importance in establishing grammatical functions and topicalisation in non-active constructions in later chapters.

2.4   Non-Canonical Marking

As Estonian generally conforms to the canonical nominative-accusative language pattern, the terms 'subject' and 'object' are useful for describing the basic grammatical system. Subjects are canonically marked with nominative case, and objects with genitive or partitive case. However, Estonian also exhibits a number of clause types which do not conform to this standard pattern. This section briefly reviews some of these.

2.4.1   Objects

Object marking with the nominative case is discussed in section 2.1.2. Total objects take part in various case-marking patterns. Plural total objects are marked

with nominative case (2.23b). The nominative case is also used for all total objects in clauses which lack an overt nominative subject, such as affirmative imperatives, impersonals, and jussives, as well as for direct objects of *-da*-infinitives, when the infinitival phrase is the subject of the clause or attribute of some other NP (Aavik 1982). Both of these contexts are discussed above, and are not in fact non-canonical, as they adhere to the standard language-internal rules, proving to be entirely systematic rather than exceptional.[12]

(2.23)   a.   su   vend   sõi   koogi   ära
                   2SG.GEN brother.NOM.SG eat.PST.3SG cake.GEN.SG away
                   your brother ate the cake up

         b.   su   vend   sõi   kõik   koogid   ära
                   2SG.GEN brother.NOM.SG eat.PST.3SG all.NOM cake.NOM.PL away
                   your brother ate all the cakes up

Other instances that have been claimed to constitute non-canonical object marking include verbs whose arguments take a local case. These are not considered to be objects in this thesis. Verbs can take core arguments which are not assigned macroroles, and they can also take core arguments other than subject and object. Lexically determined cases such as local object case are not considered here.

2.4.2   Subjects

A more challenging group of examples for the explanation of the Estonian grammatical system is 'non-canonical subject case marking'. There are a few different contexts for this, with the purported subjects realised in either a local case, as in necessives and various experiencer clauses, or partitive case, as in existentials and possessive clauses.

This section looks at some examples of these. Role and Reference Grammar provides a set of terminology and mechanics of explanation for these cases. Applying the term 'subject' here is clearly inappropriate, stretching the definition of that cross-linguistic grammatical relation. Instead, these constructions may be said to have non-canonically marked Privileged Syntactic Arguments. Likewise, some of these constructions may select one argument as PSA for certain purposes and another for other purposes. Finally, the pragmatic topic and semantically central argument of the clause are not necessarily the same as the PSA, but this

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[12]See Timberlake (1975) and Sands & Campbell (2001) for accounts of Finnish nominative object case, and Aavik (1982) and Erelt et al. (1993) on Estonian.

is not a challenge if the RRG approach is taken. It merely serves as a reminder that the term 'subject' has a limited usefulness, and other types of grammatical relations operate felicitously alongside the canonical PSA.

Locative PSA

Estonian marks experiencers in many prototypical experiencer constructions in the adessive case (2.24a), as well as using the allative case for verbs like *meeldima* 'please' (2.24b).

(2.24)   a.   lapsel   on   külm
                child.ADE.SG be.PRS.3SG cold.NOM.SG
                the child is cold

         b.   meile   meeldivad   herned
                1PL.ALL please.PRS.3PL pea.NOM.PL
                we like peas

Note that in (2.24b), the verb agrees with the non-experiencer nominal. This operates as the controller of verb agreement, as well as acting as pivot in control constructions such as that shown in (2.25a). In Estonian only (2.25a) can function as a control construction. The reverse construction, *she wants to like her father-in-law*, requires two separate clauses with overt arguments in Estonian, while in English it makes use of subject control, as shown in (2.25b).

(2.25)   a.   Piret   tahab   oma äiale   meeldida
                P.NOM want.PRS.3SG own father-in-law.ALL please.INF
                Piret wants her father-in-law to like her

         b.   Piret   tahab,   et   ta   äi   meeldiks   talle
                P.NOM want.PRS.3SG that 3SG.GEN f-i-l.NOM.SG please.CND 3SG.ALL
                Piret wants to like her father-in-law (lit: wants that he would please her)

The nominative argument of *meeldima* 'please', then, appears to function more or less like a normal subject, acting as pivot in inter-clausal syntax and controlling verb agreement. The adessive NPs take canonical subject and topic argument referents, but these arguments do not behave as subjects in these constructions. Note, however, that neither can they be accurately labelled objects, as they exhibit no object behavior, such as taking partitive case under negation. These are simply non-canonically case-marked arguments, neither subjects nor objects, but

locative experiencer/possessor NPs. The constructions in which they occur are of high frequency in the language, and so form one standard clause type.

Partitive PSA

The main group of non-canonically marked arguments are the partitive PSAs in existential and possessive constructions. Estonian linguistics has proposed various solutions to these nominals. The primary controversy surrounds the question of whether they really are subjects (Nemvalts 1996:26–27), or whether it is more apt to refer to them as either objects (Erelt 1978, Vilkuna 1989, on the same distinction in Finnish) or something between subject and object (Erelt et al. 1993:42–45, Karlsson 1982:109). One proposed solution is the label 'partial subject', based on the partitive 'partial object'. They are PSAs, but are neither subjects nor objects. In the RRG framework, no such categorisation is required.

In existential clauses with partitive arguments the verb does not agree with the NP and is marked with 3SG inflection. The partitive NP often occurs postverbally, typically with a preverbal locative expression, as in (2.26).

(2.26)   a.   tänaval   oli   palju rahvast
              street.ADE.SG be.PST.3SG much folk.PAR.SG
              there were lots of people on the street
         b.   kõikjal   vedeles   pabereid
              everywhere.ADE lie-around.PST.3SG paper.PAR.PL
              there were papers lying everywhere

Sands & Campbell (2001) list a number of properties of the Finnish existential construction, which behaves much like the Estonian existential. The two primary conditions under which partitive subjects are said to be possible are the 'Existence' constraint (the clause must "primarily express existence," Ikola 1971), and the monovalence constraint (there must not be a direct object or predicate complement). Sands & Campbell (2001) call this last constraint into question, and this is looked at below. Beyond these, the partitive NP refers to an unspecified amount of the referent (2.27).

(2.27)   laual   on   toitu
         table.ADE.SG be.PRS.3SG food.PAR.SG
         there's some food on the table

Some of the existential constructions can also take a nominative NP, particularly when the referent whose existence is predicated is a whole and definite quantity, as shown in (2.28a). This is nevertheless classified as an existential because of its word order and its presentational semantic content. If the clause expresses negation, or encodes a question with an anticipated negative response, then the NP is marked with partitive case. In this sense, it behaves like any non-subject, and also like any object, taking partitive case under negation (as in 2.28b). These are clearly differentiated from ordinary subjects.

(2.28) a. laual   on   terve   söök
            table.ADE.SG be.PRS.3SG whole.NOM.SG meal.NOM.SG
            there's a whole meal on the table
        b. laual   ei   ole tervet   sööki
            table.ADE.SG NEG be whole.PAR.SG meal.PAR.SG
            there isn't a whole meal on the table

Existential clauses use intransitive verbs and are generally low in transitivity (à la Hopper & Thompson 1980), merely expressing the existence of something in a particular locative or temporal space, and representing a state, not an action (Sands & Campbell 2001:263).

The option presented by the RRG framework of bypassing the traditional grammatical relation labels seems to be particularly successful in cases like this. The partitive NP is the only possible pivot in the clause, although these clauses, being presentational, usually stand on their own. The partitive NP is the PSA, but it is not necessarily a subject, as it exhibits non-canonical case-marking and word order as well as not being accessible to syntactic constructions requiring a subject pivot.

If the PSA in this construction is not labelled a subject, then a generalisation can be made that nominative non-subjects alternate with partitive case. Existential NPs, even when marked with nominative case, take partitive case under negation, and so are notably less stable than canonical subjects. In addition, it is clear that, as in Finnish, "the partitive argument (whether it be subject or object) reflects reduced transitivity, though it is possibly becoming more widespread and used for indefinite, inexhaustible quantity" (Sands & Campbell 2001:268).

However, Sands & Campbell (2001) note that existential constructions can actually sometimes occur with bivalent verbs as well. Usually "these objects

are... not specific or referential, but are cognate objects (of the 'to dream a dream' type) or are redundant or predictable from the discourse context. That is, in these instances, no difficulty arises in distinguishing the subject NP from the object NP" (Sands & Campbell 2001:264). They follow this with some examples with full, transitive direct objects. In Estonian, low-transitivity objects are occasionally attested in existential constructions, such as that in (2.29), from the *Postimees* daily newspaper. This example, however, is not accepted as grammatical by most native speakers I have consulted.

(2.29) ?inimesi   viga   ei   saanud
        people.PAR.PL harm.PAR.SG NEG get.1PTC
        no people were hurt

The construction here has low transitivity, it is negative, and the NP referent is indefinite and unspecified. In addition, the object forms part of an idiomatic expression 'get hurt'. Nevertheless, this is an uncommon usage of partitive case-marking, frowned upon by most native speakers, and so it is probably safe to say that the monovalence constraint generally holds in Estonian.

It is the features of indefinite quantity and partial affectedness which explain the use of the partitive case for both existential PSAs and partial objects. The unquantified sense of the NP whose existence is asserted is crucial to the meaning of the clause: the existential construction does not assert the location of a *particular* NP referent, but rather asserts the existence within the location of some as yet indefinite NP referent. The existential/presentational construction alternates with a nominative clause, expressing a more definite or already accessible referent. Partial objects and partitive existential NPs are lower in all of Hopper & Thompson's (1980) factors affecting transitivity which can be applied to nominals: low affectedness, low individuation, and in fact, these NPs do not always fill a macrorole position, as discussed in Chapter 4.

Finally, possessives form a special sub-type of existential (Nemvalts 1996:25). Possessed nouns in possessive constructions can alternate between nominative and partitive case, signalling a distinction in definiteness, the nominative case indicating a definite NP, and the partitive case, an indefinite one (2.30a–b).

(2.30) a. mul   on   veini   kaasas
            1SG.ADE be.PRS.3SG wine.PAR.SG along
            I have some wine with me

b. mul   on   vein   kaasas
    1SG.ADE be.PRS.3SG wine.NOM.SG along
    I have the wine with me

Possessive clauses can be described along the same lines as existentials. They more often have definite and nominative NPs, and the information structure within the clause is often different from canonical existentials, but the basic syntax is the same.

Although possessor clauses can have a nominative NP (in addition to the locative NP) which behaves like a PSA in many ways, this possessed NP is not a stable subject either. It takes partitive marking under negation, as shown in (2.31), with both a negative question and a negative statement.

(2.31) a. ega sul   tikku   ei ole?
            NEG 2SG.ADE match.PAR.SG NEG be
            you don't have a match, do you?
        b. mul   ei ole ühtegi   tikku
            2SG.ADE NEG be one.PAR.FOC match.PAR.SG
            I don't even have a single match

Sands & Campbell (2001) argue that partitive NP-marking with intransitive verbs is not non-canonical marking in Finnish.

> [To bracket this pattern as non-canonical] seems to ignore essential aspects of Finnish case marking. First, the partitive case also reflects reduced transitivity when used on objects... and thus there is a clear link between subject and object partitive case marking patterns. Second, the behavior of the argument in question is similar to an object in many ways, and so there may be good reason to accept the view that perhaps Finnish has a split system of marking its intransitive verbs, with subject-like marking for verbs or clauses with high agentivity/transitivity and object-like marking for verbs or clauses with low agentivity/transitivity. (Sands & Campbell 2001:269)

However, Sands & Campbell (2001) also use the binary categorisation of grammatical categories, claiming that "the partitive subject of the transitive sentences... is certainly a subject (one cannot argue that it is an object)... " (2001:268). Role and Reference Grammar provides a third alternative for categorising this

NP, namely that although it is not an object, it is also clearly not a canonical subject. It does not operate as a controller of verb agreement, and it participates in certain syntactic constructions in similar ways to object behavior. It functions as a PSA for certain purposes, but is not a subject.

I conclude the background sketch of Estonian grammar with a summary of the basic properties of Estonian. The grammatical nominal cases are nominative, genitive, and partitive, and the primary distinction in object marking is that between partial (partitive) and total (genitive/nominative) object (as represented in Table 2.3). Pronouns follow a slightly different set of rules than full nouns.

Verbs signal tense, mood, voice, and negation, whereas aspect is a feature of the whole predicate. Estonian exhibits strong V2 tendencies, although constituent order is fairly free and dictated to a large extent by information structure. There is no requirement in Estonian for every clause to have a subject. Existential and possessive clauses can have either partitive or nominative PSAs, which are neither subjects nor objects. The voice constructions other than the active are marked. The category of voice is examined in the following chapter.

3

Voice Constructions

The category of voice in Estonian includes passivisation, impersonalisation, and lexical changes such as causativisation and anticausativisation. This thesis concentrates on this domain because it includes a variety of construction types and linking operations in Estonian. The various voice constructions divide the labor of lexical, syntactic, and pragmatic information in particular ways, which bear on the analysis of the valency-changing operations involved as well as the linking between semantics and syntax more generally.

Focussing only on the constructions which reduce rather than increase valency allows a comparison between the different semantic and pragmatic properties of these constructions, all of which appear to have similar basic effects on the argument structure of a predicate: that of "removing" the actor argument and possibly promoting the undergoer. This chapter introduces the morphosyntactic and semantic characteristics of these constructions. Later chapters look at the various implications of the analysis of these constructions for semantic representation, valency change, and the actual status of the arguments.

3.1   Impersonals

Cross-linguistically, the impersonal construction has been shown to have two primary characteristics. It lacks a specified overt subject, and the implied impersonal agent appears to "display a strong predilection for human agents" (Siewierska 1984:96). Languages vary with respect to whether this construction uses (a) a subject—either a dummy subject (Dutch) or one with an indefinite human referent (French *on*, German *man*)—or (b) no subject (Turkish, Russian,

Finnish); and with regard to whether the construction uses verbal morphology distinct from that used in the active voice. Linguistic theories vary with regard to how many of these forms are considered to be impersonals and to what extent the impersonals are classified as a sub-type of passive.

The Estonian impersonal is of the "most common" type of impersonal passive listed in Siewierska (1984:93), namely the Turkish type, with no overt subject and with distinct non-active verbal morphology.

The Estonian impersonal construction has been given a number of labels, from 'passive' (Ahrens 1853, Kont 1963, Aavik 1982) and 'impersonal' (Rajandi 1999), to 'subjectless passive' (Erelt et al. 1993, Erelt, Erelt & Ross 1997) and the unique 'ambipersonal suppressive' (Pihlak 1993, Tommola 1993), as well as 'indefinite' (Shore 1988), on analogy with the Finnish construction, and the frequent 'impersonal passive' (Aavik 1936, Siewierska 1984). While not wishing to enter into a debate on terminology, I nevertheless consider it important to distinguish the impersonal from the 'true' passive. I therefore use the common term 'impersonal' and avoid the theoretically contentious 'impersonal passive'. In fact, I place the impersonal as much in the active as the passive voice category, as it can be argued to possess at least as many active as passive traits (see section 3.1.2).

3.1.1 Morphosyntax

Simple impersonal clauses are signalled by a verbal affix which does not agree with any overt NP and which encodes an impersonal actor. The basic impersonal marker is -Ta-,[1] from the Balto-Finnic marker of impersonal voice, -t(t)A. Tense and mood markers follow the impersonal marker. The indicative present and imperfect suffix has been reconstructed as *-s/zen, which has been preserved best in Estonian among Balto-Finnic languages (e.g. *loe.ta.k.se* [read.IMP.PRS.IND] 'one reads') (Laanest 1975, Viitso 1998). The impersonal has a full conjugational paradigm in Estonian, including indicative, conditional, and jussive forms, as well as inflecting for tense. This is shown in Table 3.1.

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[1]As mentioned in the last chapter, the archiphoneme 'T' is used in allomorphs whose realisation as orthographic 't' or 'd' (long or short voiceless stop) depends on the phonological environment. The vowel in the impersonal affix can also be deleted, or assimilated, in certain phonological conditions. This thesis generally employs the traditional forms for naming affixes which vary according to phonological conditions, not specifying the phoneme as an archiphoneme.

PRESENT	*rääqi-ta-kse*	'one talks'
PAST	*rääqi-t-i*	'one talked'
PRES. CONDITIONAL	*rääqi-ta-ks*	'one would talk'
PAST CONDITIONAL	*rääqi-ta-nu-ks*	'one would have talked'
JUSSIVE	*rääqi-ta-gu*	'let them talk'
PRES. PERFECT	*on rääqi-tud*	'people have talked'
PAST PERFECT	*oli rääqi-tud*	'people had talked'

Table 3.1: **Impersonal Verb Paradigm**

The construction is understood to have an implied generalised, exophoric, human actor (Shore 1988). A typical use of the impersonal is given in examples (3.1a–b), from an ethnographic description of religious customs.

(3.1) a. laupäeva   õhtul   **oldi**   saunas
           Saturday.GEN evening.ADE.SG **be.IMP.PST** sauna.INE.SG
           people spent Saturday evenings in the sauna

       b. …ja **tõmmati**   puhas   särk   selga
           …and **pull.IMP.PST** clean.NOM.SG shirt.NOM.SG back.ILL
           and they put on a clean shirt[2]

The impersonal is semantically similar to a fourth person (something like an obviative and generalised third person), and has indeed been likened to a fourth person (Harms 1962:129–30), but Rajandi (1999) argues that this analysis "stands on weak legs," and does not prove to be very useful. Rajandi (1999) presents his argument against the notion of "fourth person" in the following passage:

> Person and number categories (other than the "fourth person") always appear together in the finite verb. The impersonal "as fourth person" would be an exceptional "person" which appears without a number category. Second, interpreting the impersonal as a "fourth person" would mean making the object case depend on the person of the verb… and this would be a serious departure from the system as a whole… Thirdly, person is primarily a nominal category and it is relevant to the verb only as a matter of agreement. There are first, second, and third person nominals, but no fourth person nominals. Harms's (1962) solution would attribute to the verb a person which

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[2]Both examples from Oskar Loorits *Liivi Rahva Usund, IV-V [Livonian Folk Religion]* (2000) available at www.folklore.ee/pubte/eraamat

would have no nominal parallel, and therefore would be a specifi-
cally verbal person. Again, the difference from the general system
is suspiciously sharp. Finally, the "fourth person" principle becomes
especially dubious in constructions with an impersonal verb and an
agentive adverbial. . . [where] the verb is in the "fourth person", the
agent itself is in the first–third person and so the "actor" must be in
two persons simultaneously. (Rajandi 1999:68, fn 40)

Whereas in some languages there is a morphosyntactic justification for the use of
the term 'fourth person', Rajandi claims that Estonian lacks any such evidence.
He agrees with Harms insofar as there are similar discourse effects, but maintains
that this is not enough to sustain the use of the fourth person analysis. It is also
worth noting that in the periphrastic perfect tenses the impersonal is marked on
the passive participle and the auxiliary verb has a third person singular inflec-
tion, not agreeing with any overt NP, but also not marked for any specific per-
son. As Table 3.1 shows, the impersonal is expressed through inflectional means
in the simple tenses, while the perfect tenses are formed with an auxiliary *olema*
'be' (default-marked as third person singular) and the past passive participle of
the lexical verb.

An unusually broad range of verb types are allowed to undergo impersonali-
sation in Estonian, including not only transitive and intransitive, but also both
predicative and copular 'be' (3.2a), modal verbs (3.2b), and unaccusative verbs
(3.2c–d).[3] Impersonals can also be reflexivised; but this is discussed in Chapter
7.

(3.2) a. **ollakse**   veel osa   jumalast
           be.IMP.PRS still part.NOM.SG god.ELA.SG
           one is still a part of god[4]

       b. Saku Õlletehas   **võidakse** reostuse   eest sulgeda
           Saku brewery.NOM.SG **can.IMP.PRS** pollution.GEN.SG from close.INF
           the Saku Brewery may be closed because of pollution.[5]

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[3]The ability of unaccusative verbs to impersonalise has been noted for Finnish (Nelson 2000)
and Estonian (Torn 2002, Blevins 2003). Note that one diagnostic that has been proposed for
syntactic unaccusativity is disallowing passivisation (Perlmutter 1978, Belletti & Rizzi 1988,
Grimshaw 1990). The Finnic data thus shows up an important difference between the imper-
sonal passives of Dutch and German and the true impersonals. Unaccusative impersonals in
Estonian are discussed in the next chapter.

[4]http://www.estpak.ee/ ok003a/buddhism/meditats.html

[5]*Äripäev*, 09.03.01

c. tihti **pettutakse** illusioonide ja tegelikkuse

   often **be.let.down.IMP.PRS** illusions.GEN and reality.GEN

   erinevuse tõttu

   difference.GEN because

   one is often disappointed because of the difference between illusions and
   reality[6]

d. **vajatakse** kaineid politseinikke

   need.IMP.PRS sober.PAR.PL policemen.PAR.PL

   sober police officers are needed[7]

As briefly mentioned in the previous chapter, argument coding in impersonal constructions deviates from canonical active personal clauses. Monovalent verbs have no overt nominal argument in impersonal constructions. Bivalent verbs have one overt nominal argument, the semantic undergoer. If this argument is a partial object it receives partitive case-marking in impersonals, as in other contexts. A total object, however, is in nominative case, as in imperatives and certain other subjectless constructions. Example (3.2d) has a partial object, as the same construction would have in a personal clause. Examples (3.1b) and (3.2b) above have nominative total objects, as does (3.3b) below.

A final note on the morphosyntax of impersonals concerns non-finite impersonal forms. Many verbs can take an impersonal form of the infinitive, with the morpheme *ta* signalling impersonalisation. This is used with *pidama* 'must', for instance, which is a defective modal without an impersonal form. The example in (3.3b) comes from an attested dialogue, as a sarcastic response to (3.3a).

(3.3) a. A: üks hallitustäpp oli ilmunud

   one mold.spot.NOM.SG be.PST.3SG appear.1PTC

   A: one dot of mold had appeared

b. B: ja kogu leib pidi ära visa-ta-ma siis!

   and whole bread.NOM must.PST.3SG away throw.IMP.INF then

   B: so the entire loaf had to be thrown away!

In (3.3b), the impersonal operates more as a politeness, or face-saving strategy, than as an indefinite actor. The clause contains an accusation of sorts, but this is softened by the use of the impersonal, which allows the actor of a condemned deed to remain unspecified (on the same strategy in Finnish, see Hakulinen

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[6]*Õpetajate Leht*, 01.11.02

[7]www.vabaeuroopa.org/artiklid/2001/07/eesti.20010727061714.asp

1985). This example provides an appropriate segue into the semantics of impersonals.

3.1.2 Semantics

The implicit impersonal argument is taken to satisfy a verbal argument, and it is usually associated with the highest semantic role (the argument closest to the actor end of the actor-undergoer hierarchy). Because of the typical association of the impersonal affix with the actor argument, the impersonal is interpreted as having implications of both agentivity and humanness. The impersonal use of a verb does not reduce the dynamicity or transitivity (effectiveness of transfer of force, etc.) of the verbal semantics. This construction is involved in voice distinctions only to the extent that it de-specifies the agent. It implies a generalised actor, but does not in fact remove the actor argument. For this reason, many authors classify the impersonal as an active, rather than a passive construction (Rajandi 1999, Torn 2002, Pihlak 1993, Blevins 2003).

Rajandi (1999) places importance on the two orthogonal parameters of active/ passive and personal/ impersonal voice, and calls this construction the 'active impersonal'. Frajzyngier (1982) concludes his cross-linguistic examination of "the category which Comrie (1977) and Perlmutter (1978) describe as impersonal passive" with the view that it is "passive only in form. While its function is active, it differs from other active sentences [only] in having an indefinite human subject" (1982:288–89).

The implied feature [+human] is intrinsic to the implicit impersonal argument, while [+agentive] is a feature associated with it, due to both the typical usage of the impersonal and the typical association of agentivity with human referents. The feature of humanness can be overridden either through anthropomorphisation of a non-human referent, as in example (3.4a), or by using a metaphorical extension of the impersonal verbal semantics normally applied to humans (3.4b).[8]

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[8]There are many other examples of animal verbs which can be applied to humans metaphorically, including *hauduma* 'brood (of hens)', *klähvima* 'yelp', *mõmisema* 'grunt, mutter', *siristama* 'twitter'. These are usually derogatory when used of humans, involving the opposite of anthropomorphisation, bestialisation (Peegel 1958:490).

(3.4)   a.   frakk   näriti   koidest   auklikuks
                tail-coat.NOM.SG chew.IMP.PST moth.ELA.PL full-of-holes.TRL
                the tail coat was chewed to bits by moths[9]

          b.   Eurovisiooni   kallal haugutakse   küll,
                Eurovision.GEN upon bark.IMP.PRS sure
                (aga igal aastal on ometi kõik tõsisemad tegijad platsis)[10]
                people sure 'bark' at the Eurovision, (but every year the more serious
                players are all there)

The impersonalised verb *haugutakse* (as in example 3.4b) could either be used to
anthropomorphise a dog barking or to de-humanise a person yelling at someone,
but it could not be used as a *neutral* description of a dog (as also illustrated in
Torn 2002:95).

As a side-note, the anthropomorphisation of non-human referents also allows
other forms that certain verbs normally lack. The examples in (3.5) contain verbs
which normally take nothing other than 3SG forms, referring to natural phenom-
ena. Given the right context, however, as in these examples, they can be used
with first and second person endings.

(3.5)   a.   "ma   sajan   suvel,   sina aga talvel,"
                1SG   precipitate.PRS.1SG summer.ADE 2SG but winter.ADE
                ütles   vihm   lumele
                say.PST.3SG rain.NOM   snow.ALL
                "I rain in the summer, you, in the winter," said the rain to the snow

          b.   "ära   looju nii ruttu," ütles   laps   päikesele
                NEG.IMV.2SG set   so fast   say.PST.3SG child.NOM sun.ALL
                "don't set so quickly," said the child to the sun[11]

The implication of agentivity can be more successfully overridden than that of
a human referent. Agentivity can be overridden if the verbal semantics are
non-agentive—example (3.6a) shows a canonical nonvolitional verb taking the
impersonal—or with an exonerating adverb showing unintentional behavior
(3.6b).

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[9]Rajandi (1999:68), fn40
[10]*Postimees*, 18.01.98
[11]Both examples from Peegel (1958:490)

(3.6)   a.   Venemaal   surrakse   pidevalt
              Russia.ADE die.IMP.PRS constantly
              in Russia, people are always dying[12]

        b.   tehakse   kogemata   haiget
              do.IMP.PRS by-accident hurt.PAR
              people hurt one another by mistake[13]

Both of these semantic features can be overridden, but the more its canonical implications are overridden by the pragmatic context, the more the burden of justification for using the impersonal construction is increased. The pragmatics involved are discussed in greater depth in Chapter 4.

The scope of the impersonal actor referent is as general as the context allows for. Most uses of the impersonal therefore indicate a plural actor and trigger plural agreement with any adjective or noun referring to the implicit impersonal argument referent (as shown in example 3.7a). However, uses of the impersonal with singular agreement are also found, when the context is appropriate (see also Vihman 2001). In Finnish, fewer examples of the impersonal with singular agreement are accepted, but in Estonian it is common enough. Example (3.7b) is a proverb in the impersonal voice with singular adjectival agreement; example (3.7c), also with singular adjectival marking, is taken from the Internet.

(3.7)   a.   ollakse   rõõmsad,   kui lapsed ja lapselapsed
              be.IMP.PRS joyful.NOM.PL when children and grandchildren.NOM.PL
              külla   tulevad
              visit.ILL come.PRS.3PL
              people are happy when their children and grandchildren come to visit[14]

        b.   väljas   ollakse   hea,   kodus   paha
              outside.INE be.IMP.PRS good.NOM.SG home.INE bad.NOM.SG
              when one's out, one's good, when home, one is horrid[15]

        c.   ollakse   väliselt   tõsine   või murelik,
              be.IMP.PRS outwardly serious.NOM.SG or worried.NOM.SG
              (... sisimas aga pulbitseb kahjurõõm)
              outwardly, one is serious or concerned, (while 'Schadenfreude' is bubbling up inside)[16]

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[12]*Postimees*, 15.01.01, p.8

[13]www.tutvus.live.ee

[14]www.kirikuleht.ee

[15]from a collection at http://haldjas.folklore.ee/cgi-bin/vanas1?item=E:EJ:357

[16]www.cl.ut.ee/corpusb/1980ndad.html

3.2 Passives

The cross-linguistic characteristics of personal passives like the English passive
are established syntactically and pragmatically, in contrast to those of the imper-
sonal, which is more often defined on semantic grounds. The passive subject is
different from the subject of its corresponding active. The subject of the passive
is the patient of the event, and the agent of the event is not the passive subject.
Along with these subject-centered properties of the construction, the passive also
has distinct verbal morphology from the active. An example of the Estonian per-
sonal passive is given in (3.8).[17]

(3.8)   esimesed   viljasaagid   **on koristatud**
         first.NOM.PL harvest-fruit.NOM.PL **be.PRS.3 clean-up.2PTC**
         the first harvest has been cleared away

There is some debate over the distinction between verbal and adjectival passives.
The Estonian personal passives are quite resultative and stative, and so relatively
adjectival in nature, but nevertheless are considered to be verbal constructions.
The syntactic behavior of the participle is adjectival in some respects, such as the
ability to take a negative prefix, but verbal in others, such as the acceptability of
agentive phrases co-occurring with it. It is not a central concern here, however,
to distinguish verbal and adjectival forms. Indeed, RRG represents verbs and
adjectives in similar predicate argument structures, making a more serious dis-
tinction between inherent and incidental adjectives than between stative verbs
and adjectives. In that sense, the issue of "how adjectival" these personal pas-
sives are is itself theoretically irrelevant.

From the point of view of description of the Finnic language family, however, the
question bears some weight. Finnish allows the formation of a very adjectival
passive in the same way Estonian does. However, Finnish does not allow the
more verbal passive constructions like their Estonian counterparts. The Finnish
constructions, for instance, do not accept agentive phrases, and the more verbal
passives are disallowed in Finnish. Estonian is said to be the only language in
its family to have developed a personal passive of its kind, and this is relevant
for the effects of language contact on Estonian as well as for the classification of
the impersonal constructions found elsewhere in Finnic. With the emergence of

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[17]The 3SG and 3PL forms of the present tense copula are syncretic. In this example, the syn-
cretism is shown in the gloss under *on*, with person marked but not number. Usually it is possible
to reestablish the number of the verb from the context.

a personal passive, the functional domain of the impersonal may be seen to shift, or narrow, or else might not overlap semantically at all with the passive.

For present purposes, the question of adjectivalisation can be left unanswered. It is more useful, however, to focus on the less adjectival forms of the personal passive. Those verbs which are most idiomatically used in participial form, such as *huvitatud* 'interested' and *lepitud* 'agreed', seem to have the most adjectival behavior and semantics, and so I exclude these from the study of personal passivisation. The personal passive is both a valency-modifying *and* transitivity-decreasing construction. As it focusses on the undergoer argument, and on the result state of the event, it necessarily reduces the dynamic force of the construction as well as reducing the number of participants and creating a construction that represents a non-action, atelic and non-punctual.

Shore claims that "to refer to the Finnish indefinite as a passive can create confusion or misunderstanding" (1988:154). She argues that the function of the Finnish 'indefinite', or impersonal, is distinct from the cross-linguistic passive functions. This is easier to see in Estonian than in Finnish. The existence of a distinct personal passive construction makes Estonian a clearer case than Finnish for the claim that the impersonal is not a passive. Labelling both constructions 'passive' is unhelpful; the previous section shows that the impersonal has more affinities with the active voice than the passive. The following sections examine the form and function of the personal passive.

3.2.1 *Morphosyntax*

The Estonian personal passive is formed periphrastically, as are passives in English, with an auxiliary *olema* 'be' inflected for person and number agreement and tense, and the past passive participle, which is formed with the *tud*-affix and does not inflect. The personal passive is promotional, meaning that its patient argument is coded as a clear subject and also behaves as such. A simple example is given in (3.9a–b).

(3.9) a. laud   oli   juba   kaetud
           table.NOM.SG be.PST.3SG already set.2PTC
           the table was already set
       b. lauad   olid   juba   kaetud
           table.NOM.PL be.PST.3PL already set.2PTC
           the tables were already set

There are two alternative variants of this canonical personal passive. First of all, the auxiliary can be replaced by a slightly more dynamic auxiliary, *saama*. This verb has a translative meaning of 'become' as well as 'get', and indeed its use has a similar effect as the English 'get' passive. The *saama* auxiliary can function to increase the dynamics of the construction (Arce-Arenales, Axelrod & Fox 1994). The phrase *ta sai maha lastud* 'he got shot' focusses more on the act which resulted in his dying, whereas *ta oli maha lastud* 'he was shot' focusses on the result. However, the use of *saama* as a marker of future-oriented meaning (discussed in the previous chapter) also comes into play here, and the *saama* auxiliary is often used as a marker of both passivisation and future tense, indicating that the undergoer will enter the state denoted by the participle (Erelt, Erelt & Ross 1997:393).[18] The 'get' passive counterpart to (3.9a) above, with future orientation, is in (3.10).

(3.10) laud   saab   varsti kaetud
        table.NOM.SG get.PRS.3SG soon   set.2PTC
        the table will be set soon

The other subtype of personal passive is one which diverges more from the formal structure of the two passives illustrated above. It is composed of the auxiliary *saama* and a lexical verb in the *da*-infinitive, and is limited to verbs with affective or adversative semantics. Two examples of this are given in (3.11).

(3.11) a. sa   said   õpetaja   käest noomida
            2SG.NOM get.PST.2SG teacher.GEN.SG from scold.INF
            you got scolded by the teacher
        b. nad   saavad   nõgese   käest kõrvetada
            3PL.NOM get.PRS.3PL nettle.GEN.SG from burn.INF
            they'll be stung by the nettles

This construction is considered to be the true dynamic passive in Estonian (Erelt et al. 1993, Pihlak 1993:37, Torn 2002:100), but it is semantically quite limited. Pihlak (1993:30-32) notes that this construction, though always affective,[19] is flexible in its selection of auxiliary verbs. For instance, he gives examples with the

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[18]It should be noted that the perfect impersonal forms, which use an auxiliary, are also attested with the *saama* auxiliary. In this case, the auxiliary tends to operate as a mechanism for avoiding personal reference, and so the construction refers to an event whose agent is the speaker. The use of *saama* is a means of avoiding the explicit mention of oneself (Erelt, Erelt & Ross 1997:392).

[19]As already noted, adversative verbs should be added to the affective class here, as shown by example (3.11b).

verbs *tahtma* 'want' and *kõlbama* 'suit' used as auxiliaries, and he shows that number agreement with the undergoer subject is optional (3.12a–b).[20] These constructions could be interpreted as control constructions except for the fact that the ordinary actor pivot is replaced with an undergoer pivot interpretation, cf. example (3.12c).

(3.12)   a.   lamp   tahab   puhastada
               lamp.NOM.SG want.PRS.3SG clean.INF
               the lamp should be cleaned

         b.   lambid   tahab/tahavad   puhastada
               lamp.NOM.PL want.PRS.3SG/3PL clean.INF
               the lamps should be cleaned

         c.   ma tahan   lampi   puhastada
               1SG want.PRS.1SG lamp.PAR.SG clean.INF
               I want to clean the lamp

Pihlak (1993) also points out that the form of the infinitive can affect the pivot controlled by the matrix verb, as demonstrated in (3.13), where (3.13b) has an active clause and actor orientation, whereas (a) has a passive, undergoer orientation. Pihlak cites Rätsep (1955), who claims that "the basic function of the *da*-infinitive has become that of pointing to the object" (1955:161). However, clauses like (3.12c) above, which have a *da*-infinitive but actor orientation even with a monovalent verb, demonstrate that this has only limited application.

(3.13)   a.   põld   kõlbab   künda
               field.NOM.SG is-suitable.PRS.3SG plow.*da*-INF
               the field is fit to be plowed

         b.   poiss   kõlbab   kündma
               boy.NOM.SG is-suitable.PRS.3SG plow.*ma*-INF
               the boy is fit to plow the field[21]

Although it is formally distinct from the personal passive, I consider the *da*-infinitive passive construction to be a subtype of the personal passive, along with the 'get'-passive described above. I generally treat these all under the same classification and representation as the personal passive. The primary difference is

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[20]It should be mentioned, however, that some native speakers consulted consider (3.12b) grammatical only with verb concord.
[21]Pihlak (1993:30)

	ACTIVE	**PASSIVE**
NON-PAST	lugev (tüdruk)	loetav (raamat)
	the girl reading	*the book being read / the readable book*
PAST	lugenud (tüdruk)	loetud (raamat)
	the girl who has read	*the read book*

Table 3.2: **Participle System**

that stative semantics do not apply here, though resultativity is included in the affective passive as in the regular personal passive.

Estonian has an unusually symmetrical system of participles, with active and passive forms in both past and non-past tenses, as shown in Table 3.2. Note that the active participles are agent-oriented and the passive participles, formed with *-T-*, are patient-oriented.

Haspelmath (1994) points out that the resultative meaning of past passive participles (e.g. the scolded child) and past unaccusative participles (e.g. the rotten apple, which would receive active *-nud* morphology in Estonian) has something to do with the fact that they are adjectives, or bear adjectival properties. "Adjectives are generally more time-stable than verbs and therefore more likely to refer to (more time-stable) states than to (less time-stable) events" (Haspelmath 1994:159).

The passive undergoer PSA is in nominative case, and triggers auxiliary verb agreement. It exhibits subject-like syntactic behavior, such as remaining nominative under negation, unlike the impersonal undergoer. It also passes other tests for subjecthood such as coordination and reflexivisation. Tests for subjecthood are not straightforward in Estonian (as previously discussed), often being just as sensitive to case-marking as to grammatical relations. Some classical subject tests can also be passed by objects in Estonian, but subjects pass these tests more robustly. Example (3.14) shows a passive subject omitted when coordinated with an active subject.

(3.14)   need olid   võiga   praetud ja lõhnasid   isuäratavalt
          these be.PST.3PL butter.COM fry.2PTC and smell.PST.3PL appetisingly
          these were fried in butter and smelled delicious[22]

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[22]Vihman & Hiietam (2002)

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In addition, the typically clause-initial position of the passive undergoer PSA can also be appealed to as evidence for its subjecthood. Here, however, one must tread carefully. As the passive is a common topicalising construction, there are significant pragmatic motivations for placing the PSA at the beginning of the clause. As information structure can easily affect word order in Estonian, this is not only weak evidence, but in fact circular logic for an argument that the topicalised PSA is a subject. However, both coding and behavioral properties indicate that the passive undergoer is a subject. Subjecthood is further discussed in Chapter 5.

Negation

Negation of the personal passive constitutes an important difference from the impersonal. The undergoer is a stable subject in the personal passive, as it remains nominative under negation, unlike the impersonal undergoer. Negation can be effected through various means, including simple negation of the auxiliary verb or negating the lexical verb alone by means of the abessive negative affix *-mata*. This difference is crucial in distinguishing between the impersonal and the personal passive, as there are constructions which are ambiguous between them. The impersonal perfect tenses, when the construction has a total object, can be identical to the personal passive simple tenses in the affirmative, as shown in example (3.15a). However, passive negation and impersonal negation operate quite distinctly, as demonstrated in (3.15b–d), the three options for negating the ambiguous clause in (3.15a).

(3.15)   a.   AFFIRMATIVE (ambiguous between passive and impersonal)

saar   oli   mandriga   ühendatud

island.NOM.SG be.PST.3SG mainland.COM.SG connect.2PTC

the island was connected to the mainland[23]

PASSIVE NEGATION

    b.   saar   ei   olnud   mandriga   ühendatud

island.NOM.SG NEG be.1PTC mainland.COM.SG connect.2PTC

the island was not connected to the mainland

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[23]Rajandi (1999:69–70)

    c.   saar   oli   mandriga   ühendamata

island.NOM.SG be.PST.3SG mainland.COM.SG connect.INF.ABE

the island was unconnected to the mainland

    d.   IMPERSONAL NEGATION

saart   ei   olnud   mandriga   ühendatud

island.PAR.SG NEG be.1PTC mainland.COM.SG connect.2PTC

they hadn't connected the island to the mainland[24]

Finally, a third auxiliary, *jääma* 'stay' is used in the passive, especially in a negative construction, expressing the state of remaining unchanged, as in (3.16).

(3.16)   saar   jäi   mandriga   ühendamata

island.NOM.SG stay.PST.3SG mainland.COM.SG connect.INF.ABE

the island remained unconnected to the mainland

3.2.2 Semantics

The Estonian passive, rarer in usage than the impersonal, almost always expresses a resultative state rather than a dynamic event with the topicalised patient. The restricted semantics of the personal passive are very close to the semantics of the perfect tenses. As the morphosyntax of the personal passive, too, is closely related to the impersonal perfect, it is a reasonable hypothesis that the passive developed from the perfect impersonal. Although to my knowledge this particular historical development has not been argued in the literature, it has been plentifully recorded that the morphological impersonal form is common to Finnic languages, other than Livonian (Erelt 2003, Viitso 1998, Laakso 2001). The influence of German syntax is a plausible outside factor, and is in accord with the fact that it is precisely in Estonian that a personal passive is attested alongside the impersonal, while in other Finnic languages this development has not occurred, or is much less developed.

Resultativity

The semantic feature common to both the impersonal perfect and the personal passive is that of resultativity, which suggests a cognitive foundation for the development of the passive from the impersonal. Semantically, this development does not change much from what is encoded in the impersonal perfect.

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[24]Rajandi (1999:69–70)

The perfect is most often used to express a completed action, associated with the endpoint (and result) of a process. It is therefore intimately linked to the notion of resultativity. The Estonian passive, more than the English passive, is highly stative and most often interpreted as expressing a result-state. The high dynamicity of the impersonal (with dynamic verbs), on the other hand, is reduced by the association of completedness in the perfect tense. The impersonal is usually oriented toward an ongoing process, whereas the perfect points to a completed process.

Nedjalkov (1988) admits that "it is not always easy to distinguish between statives and resultatives" (Nedjalkov 1988:7). He delineates the difference between the two, not unlike the distinction between the passive and the impersonal perfect in Estonian: "the stative expresses a state of a thing without any implication of its origin, while the resultative expresses both a state and the preceding action it has resulted from" (Nedjalkov 1988:6). He also makes explicit the cognitive closeness between resultative and passive, which is precisely the relationship in question in the development of the passive from the impersonal perfect: "The resultative from transitive verbs typically expresses a state of the patient of the latter which usually surfaces as a subject in a resultative construction, and therefore the agent has to be deleted. This results in an intersection of the properties of resultative and passive" (Nedjalkov 1988:17). The impersonal agent is already morphosyntactically reduced to a verbal inflection, and so the step from an impersonal perfect to a personal passive is a very small one.

That small step involves a construction expressing a result state, with only a nonspecific agent, developing into a stative-resultative construction with no agent present at all and no reference to the process resulting in the state. "It is probably no coincidence that of the ambipersonal [impersonal] forms, the perfect—and especially the perfect of result—is most naturally interpreted as a prototypical passive, and the object, which was the patient of the action,... as a subject" (Tommola 1993:78–79).

The development of a full personal passive "proper" can be attributed to the influence of Indo-European languages, especially German. The use of the *saama* passive is also directly attributed to German influence. Although it is grammatical with an agentive phrase, it is often rejected as un-Estonian when used with an expressed agent. It is much more common to simply use an active phrase when both the actor and undergoer are to be expressed.

Agent demotion

The agent of the event is not syntactically specified or even semantically present in passive clauses; it is deleted. Passives do allow, however, for agentive adverbials,[25] both as *by*-phrases and as other adjuncts. One distinction which can be drawn between fully adjectival clauses with participles and the standard Estonian passives is that the passives allow the reintroduction of the agent, and therefore can be taken to retain verbal characteristics. According to Erelt, Erelt & Ross (1997), "while [impersonals] always express an activity, leaving the actor indefinite or backgrounded, [personal passives] express the state into which the object of activity has entered as a result of the activity" (Erelt, Erelt & Ross 1997:392).

Agents can be expressed with the personal passive in *by*-phrases, as in (3.17a), as well as with oblique NPs in the adessive (3.17b) or elative (3.17c), and even genitives in certain contexts (3.17d).[26] The genitive agentive in (3.17d) gives the same reading as an agentive *by*-phrase.

(3.17) a. tamm   on   minu   isa   poolt istutatud
            oak.NOM.SG be.PRS.3SG 1SG.GEN   father.GEN.SG by   plant.2PTC
            the oak tree was planted by my father

        b. tal   on   hekk   pügatud
            3SG.ADE   be.PRS.3SG hedge.NOM.SG shear.2PTC
            s/he has pruned the hedge (lit: s/he has the hedge pruned)

        c. puud   on   külmast   kahjustatud
            tree.NOM.PL be.PRS.3PL cold.ELA   harm.2PTC
            the trees have been damaged by the cold[27]

        d. õunapuu   oli   Tiina   istutatud
            apple-tree.NOM.SG be.PST.3SG Tiina.GEN   plant.2PTC
            the apple tree was planted by Tiina

Instrumental and locative agent phrases are common, while the genitive phrase above differs from the cross-linguistically frequent agent phrases. It forms part of

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[25]Keenan (1985) notes that "the term 'agent phrase' is misleading in that its thematic role (Agent, Experiencer, etc.) is whatever is required by the verb of which it is the understood subject, and need not be specifically Agent, as in the example *Money is needed by the church*" (1985:261). Like Keenan, I nevertheless use the term 'agent' for these phrases alongside *by*-phrase, following convention and avoiding unnecessary proliferation of new jargon.

[26]Holvoet (2001) discusses the similarity between the genitive agent passives and a Latvian construction, though he concludes that these are not true passives. He also notes that the genitive agent cannot be used in the *saama* counterpart to the *be*-passive.

[27]Rajandi (1999:108)

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the verbal constituent, as a possessor of the activity. As such, it is similar to those agent phrases noted by Keenan (1985) to be "incorporated into the passive verb," illustrated even in English by a small number of examples such as *This project is State-controlled* (Keenan 1985:264). In Estonian as well, the genitive agent occurs most naturally with verbs of creation and, more rarely, destruction.

3.2.3   *Distinguishing the Impersonal and Passive*

The Estonian impersonal is the more basic of the two voice constructions described so far, and the personal passive has been derived from it. There are good reasons for saying that the impersonal is older, and hence primary in a diachronic sense, and there are good reasons for taking it to be primary from a synchronic point of view as well. That the impersonal is more 'basic' synchronically can be seen from its morphology and the far greater frequency of use: the impersonal has inflectional forms for two tenses and three moods (as shown in table 3.1); it is very common in both spoken and written Estonian; and the semantics of the impersonal can be either extended metaphorically or narrowed through discourse context. The personal passive is much more constrained in discourse. Compound verbal forms in Finnic tend to be newer developments, and the entire personal passive paradigm is periphrastic. The impersonal has also acquired a number of additional functions throughout Finnic (Laakso 2001, Pihlak 1993, Vihman 2002*a*).

In addition, the personal passive assumed to have once existed in Uralic is a synthetic one, from which the Finnic *u/ü* suffix is derived, "now used in lexical verb derivation to express reflexive, passive or related functions" (Laakso 2001:195). In standard Estonian, this has developed into an essentially middle-marking suffix, but has nothing to do with the current personal passive.

The history of Finnic is riddled with the difficulty of distinguishing areal versus genetic features in related languages, as well as heavy influences from Indo-European. Cross-linguistically, the analytic (auxiliary + participle) passive is rare outside IE (Haspelmath 1990). The inflectional impersonal is quite clearly Finnic (Finno-Ugric), whereas the Estonian personal passive is likely to have developed from the impersonal perfect. No Finnic languages other than Estonian are reported to have a personal passive construction (Viitso 1998), and there is certainly no consensus on how to treat the construction described here as the personal passive (Erelt et al. 1993, Holvoet 2001).

	IMPERSONAL	**PASSIVE**
PRES	*lehed loe-takse*	*lehed on loe-tud*
	papers read.IMP.PRS	paper.NOM.PL be.PRS.3PL read.2PTC
PAST	*lehed loe-ti*	*lehed olid loe-tud*
	papers read.IMP.PST	paper.NOM.PL be.PST.3PL read.2PTC
PRS.PERF.	*lehed on loe-tud*	*lehed on olnud loe-tud*
	papers be.PRS.3SG read.2PTC	papers be.PRS.3PL be.1PTC read.2PTC
PST.PERF.	*lehed oli loe-tud*	*lehed olid olnud loe-tud*
	papers be.PST.3SG read.2PTC	papers be.PRS.3PL be.1PTC read.2PTC

Table 3.3: **Inflectional Paradigms: Impersonal and Passive**

An additional element of confusion comes from the fact that the inflectional paradigms of the impersonal and personal passive still contain syncretism. A question which needs to be resolved is how the two constructions can be definitively distinguished in light of this occasional structural syncretism. The formal points briefly outlined in the following sections are drawn from Rajandi (1999).

Inflectional paradigms

First and foremost, the inflectional paradigms of the two constructions differ. The periphrastic perfect tenses of the impersonal are identical to the simple passive tenses, as illustrated by the bold text in Table 3.3. However, a difference can still be drawn, in that the auxiliary takes a default third person singular form in the impersonal, and never agrees with a noun phrase, whereas in the passive, a plural NP triggers plural auxiliary verb agreement.

Hence, although some ambiguity arises in certain tenses for aspectual verbs with totally affected patients, it is nevertheless clear that there are two distinct constructions with distinct paradigms.

Negation

As discussed above, the passive subject remains nominative and is unaffected by negation, whereas the same NP in an impersonal (whose perfect is identical to the simple passive in the affirmative) takes the partitive in a negated clause (as in 3.15d). The impersonal patient is not a promoted subject; rather, it remains closer to an object, and takes nominative case only if totally affected. A negative impersonal clause always takes a partitive (i.e. partial, or not wholly affected) NP. Negation does not affect the case of the passive nominal argument, which

behaves more or less like a stable, prototypical subject. Only in the passive can the participle take a negation affix, showing the more adjectival nature of the past participle. In order to have the negative participle predicated of it, the NP must be a nominative subject.

Agentive adverbials

Genitive and adessive agentive adverbials are only possible in personal passives, not in the impersonal. The example of a genitive agentive from (3.17) above is given as an impersonal in (3.18a). This construction is ungrammatical with the impersonal, under the relevant reading where the pronoun referent is the same as the agent. As (3.18b–c) show, however, the agentive is not barred from appearing with the impersonal in certain forms.

(3.18)   a.   (*tal)   tööd   (*ta)   tehakse
              3SG.ADE work.PAR.SG 3SG.GEN do.IMP.PRS
              *the work is being done (*by him/her)*[28]
         b.   Kristust   kiusati   kuradist
              Christ.PAR.SG tease.IMP.PST devil.ELA.SG
              Christ was tempted by the devil[29]
         c.   spetsialistide   poolt anti   projektile   eitav   hinnang
              specialist.GEN.PL by   give.IMP.PST project.ALL negative assessment
              the project was given a negative assessment by the specialists[30]

3.2.4   Functional Properties

Passives have a detransitivising function which impersonals, for the most part, lack. Passivisation creates a derived intransitive predicate from a bivalent verb, whereas impersonals apply to predicates of any valency. In addition, passives both topicalise the patient and suppress the agent. The agent may be obliquely expressed, though it most commonly is not.

In Estonian, word order can be used to focus and topicalise elements in a clause, and so there is a relationship between word order effects and voice effects. In English, the passive is often considered a topicalising construction, but in Estonian this is insufficient to explain the effects of valency changes in impersonals and

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[28]Rajandi (1999:70)
[29]Alvre (1993:406)
[30]Erelt et al. (1993:61)

passives. Givón (1982) gives three functional domains of the cross-linguistic passive: topicalisation, impersonalisation, and detransitivisation. De-emphasising the actor may be involved in most uses of these constructions, but detransitivisation is the domain in which the personal passive (in particular) is clearly differentiated from both the impersonal and an active clause with non-canonical word order. I return to the question of impersonalisation and the status of the arguments of a passive verb in Chapter 5.

3.3 Anticausatives

The Estonian middle is formed with a derivational affix which produces denominal, deadjectival, or detransitivised verbs. Kasik (1997) claims that "deverbal verb formation has a syntactic character. This changes the subject-object relations of the underlying verb and thus both in Finnish and Estonian it can turn an intransitive verb into a transitive causative and a transitive verb into an intransitive passive or reflexive verb" (Kasik 1997:53). Rather than discussing the broad domain of the middle (Vihman 2002*b*), which is difficult to demarcate clearly and does not always involve the same change in argument structure or valency, I narrow this discussion to anticausatives, which have causative counterparts.

Haspelmath (1993) gives a general definition of inchoative verbs. His inchoatives cover anticausatives (derived from a causative verb), basic inchoatives (from which a causative is derived) and equipollent alternations (where both verbs are derivations of a common stem, 1993:91).

> An **inchoative/causative verb pair** is defined semantically: it is a pair of verbs which express the same basic situation (generally a change of state, more rarely a going-on) and differ only in that the **causative** verb meaning includes an agent participant who causes the situation, whereas the **inchoative** verb meaning excludes a causing agent and presents the situation as occurring spontaneously. (Haspelmath 1993:90, original emphasis)

This section focusses on the anticausatives, which form a subgroup of the inchoatives. The difference between causatives and anticausatives is similar to active/passive voice distinctions, in both the valency change from one to the other as well as the change of perspective, typically from an actor-oriented perspective in the active to an undergoer orientation in the anticausative. In the Estonian

verbs looked at here, they are defined both morphologically, marked with the middle verb forming affix, and semantically, as above.

Although anticausativisation is a derivational means of forming lexical verbs in Estonian, it functions as part of the voice system, and provides one of the options for a speaker to choose from in presenting an event from a particular perspective. Haspelmath (1993) also notes that this alternation has strong semantic conditions on it. "Given these heavy restrictions, it is not surprising that anticausatives and causatives are generally derivational rather than inflectional categories (inflectional expression requires high lexical generality, cf. Bybee (1985:16–17))" (1993:94). The fact that anticausativisation forms lexical verbs rather than predicates is taken into account here, but it does not pose an obstacle for comparing the construction with the other valency modifying operations in this thesis.

3.3.1   Morphosyntax

The derivational affixes focussed on here, *-u-* and *-ne-*, have not found uniform explanations in Estonian linguistics (see (Vihman 2002*b*) for an analysis of these affixes as middle verbs). The *u*-affix is quite common and productive, often appearing on intransitive counterparts to transitive verbs. Verbs marked with the *ne*-affix form a subset of the semantic domain of *-u*. The *ne*-affix is less productive and more lexicalised than *-u,* and it is always intransitive. Thus, the two affixes have both been analysed as signalling detransitivisation, from pairs such as those in (3.19a–b), and reflexivisation, from examples such as (3.19c–d):

(3.19)   a.   *kohtama* 'meet (s.o.),' v.t. → *koht-u-ma* 'meet,' v.i.

   b.   *vabastama* 'free,' v.t. → *vaba-ne-ma* 'become free'

   c.   *riietama* 'clothe' → *riiet-u-ma* 'get dressed'

   d.   *pühendama* 'dedicate' → *pühend-u-ma* 'dedicate o.s.'

These examples all derive anticausative middle verbs from transitive verbs with causative affixes. However, middles can also be derived from unmarked transitive verbs and from intransitive verbs, as well as standing on their own, without any counterpart transitive or causative. As the interest of this thesis is limited to those constructions which are used as valency-reducing devices, the discussion here is limited to the anticausative subset of the broader middle domain. The verbs in example (3.19) all fall into this category.

Middle verbs have traditionally been seen as literally 'between' the active and passive voice. "In a middle construction, the viewpoint is active in that the action notionally devolves from the standpoint of the most dynamic (or Agent-like) participant in the depicted situation. But the same participant has Patient-like characteristics as well, in that it sustains the action's principal effects" (Klaiman 1991:3).

Haspelmath (1993) notes that "the inchoative member of an inchoative/causative verb pair is semantically similar to the passive of the causative (*the stick was broken*), but it crucially differs from it in that the agent is not just unexpressed; rather, the situation is conceived of as occurring without an agent, spontaneously" (1993:90). Estonian anticausatives are often translated into English as passives, where an anticausative lexeme does not exist, as in example (3.20).

(3.20)   tegevussubjekt   ei   realiseeru   alusena
          action-subject.NOM.SG NEG realise.ANTC subject.ESS
          the agent is not realized as the subject[31]

There is a sense in which the passive is inadequate as a translation of the anticausative, however. This concerns the presence or absence of an actor, and the spontaneous event sense encoded in the anticausative verbs. There is also an iconic element to the difference between the periphrastic passive voice and the derivationally formed anticausative (Haiman 1983). The passive confers a more complex character on the event, indicating the absence of an actor argument more directly connected to the verb. The actor retains a semantic presence in the construction. The anticausative, on the other hand, builds the reverse perspective into the synthetic verb, thus indicating a closer connection between the subject and the event, and conceptualising the event as taking place in and because of the undergoer, rather than leaving any conceptual or syntactic space for the actor. The argument structure ceases to include an actor argument slot.

3.3.2   Semantics

Aavik describes the *u*-marker as "forming reflexive verbs and changing transitive verbs into intransitive verbs" (Aavik 1982:lxxvi). Erelt, Erelt & Ross (1997) primarily describe the *u*-affix as a reflexivising suffix, though *u* also appears in their frequentative and Estonianised loans categories. Kasik classifies the *u*-verbs

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[31]As translated in Blevins (2003:483)

in three semantic categories: 'frequentative', 'reflexive and automative', and 'denominal translative' (Kasik 1996:41, 53–57, 73–76).

Pihlak (1992*a*) provides a thorough study of the *u*-affix. In addition to an extensive inventory of *u*-verb types, he contributes the observation that "the semantic characteristic of 'occurring within the subject' dominates" with these verbs, and that this encompasses such divergent categories as inchoative, continuative, passive, and reflexive (Pihlak 1992*a*, 40). This notion of "occurring within the subject" relates these verbs to cross-linguistic middle voice, or the anticausative paradigm. Pihlak also notes that there is a sense in which *u*-verbs present the actor as undergoer, which is the crucial step in uniting the semantics of these verbs. He does not present a unified account, but his description of the semantics of these verbs is entirely compatible with the middle reading. Recognising that these verbs have middle voice is the key to a simple, coherent view which pulls together the various strands of the semantic domain of *u*-verbs, also including *ne*-verbs.

Kasik (1996) describes the semantics of *ne*-verbs as having an additional element of "bit-by-bit, or incremental" change (1996:71). The *ne*-verbs tend to be older, more lexicalised, and often do display this incremental change difference, in contrast to the more holistic change denoted by *u*-verbs. However, many verbs have lexically specific semantics in these derivations. The verb *mustenema* 'become dirty' has an incremental meaning in contrast to the similar *mustuma*, which also means 'become dirty', but not in a gradual fashion. However, *vabanema* 'become free', for instance, has nothing incremental in its semantics. In general, the semantic domain of the *ne*-verbs forms a subset of the *u*-verbs.

Vihman (2002*b*) uses Kemmer's (1993) cross-linguistic analysis of the semantics of the middle domain for drawing a semantic map of the Estonian middle (see also Croft, Shyldkrot & Kemmer 1987, Croft 1994). The Estonian anticausative verbs considered here fit quite neatly into the cross-linguistic picture given by Kemmer (1993) of middle-marking. The reflexive marker (RM) and the middle marker (MM) are not cognate. The MMs, both *-u-* and *-ne-*, are derivational affixes forming verbal lexical items. On the whole, "Kemmer's account is specific enough to be useful, and broad enough to include the disparate senses in which the middle occurs across languages, although certain weaknesses in her analysis are brought out by the Estonian data." (Vihman 2002*b*, 135) Spontaneous events, for instance, seem to be much more central than Kemmer allows for. However, Klaiman's (1992) analysis, for instance, is still less satisfactory; it distinguishes

between middle verbs homophonous with their corresponding transitives, middle reflexives, and the conjugational middle voice, leaving no space for the Estonian or Finnish *derivational* middles.

In Estonian, the middle does not contrast primarily with reflexive marking, but with both transitive and unmarked intransitive verbs. Kemmer (1993) defines the semantic field drawn by the middle through the use of two basic semantic parameters, (1) the INITIATOR of the event perceived as the ENDPOINT, and (2) a "low degree of ELABORATION OF EVENTS," meaning that the different parts of an event described by the predicate are viewed as conceptually close together or undifferentiated (Kemmer 1993:238). The middle also marks both a greater 'distinguishability of participants' than the prototypical intransitive and a lesser 'distinguishability of participants' than the prototypical transitive.

Anticausative marking on verbs in Estonian is very productive, attesting to the semantic salience of the middle voice. Indeed, over the course of the last century, Estonian grammarians have repeatedly claimed that these *u*-marked verbs are over-used. Kasik notes that "of the derived verb types, the *u*-reflexives have been discussed the most... and there has repeatedly been reason to brake [their] all-too-stormy spread" (Kasik 1996:32).

Some examples of innovative middles include (3.21a), on a Cuban festival in the town of Pärnu, and (3.21b), an anticausative of a newly borrowed word. The English *release* has become transitive *reliisima* in Estonian (though even the transitive verb is still only marginally accepted, or perhaps only in music circles); here, a music critic makes an *ad hoc* anticausative out of this new loan word. If the transitive verb were used, the participle would be passive *reliisitud*, as in English 'the released album', but instead the example uses an active participle with the *u*-formation, with the approximate interpretation of the 'having-released-itself album'. It should be noted that no one I have shown this example to has accepted it, and hence this should not be taken as a new Estonian verb. I include it merely to demonstrate the productivity of the affix. Although the verb in this example may not be quickly accepted, its meaning is clear from the anticausative affix.

(3.21)   a.   Pärnu   kuubastub!
                 Pärnu.NOM cubanise.ANTC.PRS.3SG
                 Pärnu is becoming Cubanised/ is Cubanising itself[32]

           b.   (Carthy kolmas album on tunduvalt erinev tema eelmisest,)
                 kolm aastat tagasi **reliisunud**   plaadist
                 three years ago   release.ANTC.1PTC record.ELA.SG
                 *(Carthy's third album is markedly different from his previous) "three-
                 years-ago-released" record*[33]

Crucially, the unmarked intransitive and the anticausative are morphologically
distinguishable, though the formal expression of the two is parallel: a single par-
ticipant is encoded as nominative subject triggering verb agreement. The single
anticausative argument thus looks like an intransitive argument, but semanti-
cally it falls between the intransitive actor and transitive patient.

With regard to Hopper & Thompson's (1980) scale of transitivity, the anti-
causative seems to have a contrastive function precisely in relation to the fac-
tors affecting nominals, whereas the impersonal and passive show differences
primarily on the verbal parameters. The middle argument shows low individ-
uation of the object (undergoer expressed as the subject), lower agentivity and
volitionality, one participant, and the affectedness of the object is replaced by af-
fectedness of the subject (Vihman 2002*b*, 137). The impersonal and passive also
affect the nominal properties (such as volitionality and affectedness), but they
affect the verbal properties such as kinesis, aspect, and punctuality at least as
much.

3.4   Generic Apersonals

Erelt et al. (1993:227) describe three types of 'defective clauses', those without
a subject. These fall into the categories of general person, impersonal, and per-
sonless. This section introduces the first of these, although at times it can be
difficult to delineate a clear distinction between general person and imperson-
als. Impersonals are discussed in section 3.1. True 'personless' clauses refer to
natural phenomena, the classic weather predicates, or physiological expressions
which have no subject. These can also be expressed with an experiencer NP in

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[32]From a headline in the *Postimees*, 07.01
[33]*Eesti Ekspress* (*Areen*, 13.03.03, B-12)

an oblique case, but the core of the clause is considered personless. I return to these briefly in connection with the analysis of generic apersonals later.

3.4.1   Morphosyntax

'General person' constructions (which I call 'generic apersonals', or apersonals) have a null-subject which is taken to mean 'anyone' (as in example 3.22), typically a *more* generalised exophoric referent than that of the impersonal.

(3.22)   pühapäeviti **saab**   sisse magada
         on-Sundays **can.PRS.3SG** in.ILL sleep.INF
         on Sundays you/one can sleep in[34]

Generic clauses are always in the non-past tense, and the verb is marked with a non-agreeing (default) third person singular inflection. Non-past indicates both present and future, which is precisely the reading effected by these constructions, a present state evoking a potential future activity or event. Apersonals are often associated with a modal potential verb, but can take a range of other verbs, as in example (3.23a–b).

(3.23)   a.   nooruses **omandab**   kõike hõlpsasti
              youth.INE **acquire.PRS.3SG** all.PAR easily
              when one is young, one can learn everything easily
         b.   hommikul **jõuab**   kesklinna   tunni   ajaga
              morning.ADE **arrive.PRS.3SG** downtown.ILL hour.GEN time.COM
              in the morning you can get downtown in an hour[35]

3.4.2   Semantics

The default-marked bare 3SG apersonal verbs are semantically related to impersonals, in that the reading is that of a maximally generic and generalised actor. However, in the case of the generic apersonal verbs, they always express states. The single unexpressed argument always corresponds to an undergoer rather than an actor. In addition, the potentiality which can be expressed lexically by a modal, as in (3.22), forms part of the core meaning of this construction. Erelt et al. (1993) defines these 'general person' clauses as clauses "whose null-marking of the subject marks the fact that the potential actor is any person whatsoever"

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[34]Translated from an example in Shore (1988:156)
[35]Both examples from Erelt et al. (1993:227)

(1993:227). The two key semantic elements here are the potentiality alluded to in "potential actor," and the actor referring to anyone. Both of these are well exemplified in (3.24a).

(3.24) a. torni   tipust   näeb   tervet   vanalinna
            tower.GEN.SG top.ELA.SG see.PRS.3SG whole.PAR.SG old-town.PAR
            you can see the whole Old Town from the top of the tower[36]
        b. noh, kas koputab,   või?
            well INT knock.PRS.3SG or
            should we knock, or what?

Example (3.24b) calls up an image of people in front of a door, hesitating as to what action to take. Before doing anything, a suggestion is made, using the apersonal given in the example. It refers directly to the present state of affairs of possibility *and* the potential action, as well as evading the question of precisely who will do the knocking.

Third person generic clauses tend to take stative predicates—active verbs typically co-occur in this construction in conjunction with a modal, again stativising the situation. The construction itself, however, gives a reading of possibility, which is a stativising semantic modality, and hence even dynamic verbs with no modal receive a non-dynamic interpretation. With a dynamic verb like *jõuab* 'arrives', in (3.23b) above, the construction itself lends the predicate an interpretation of potentiality: not the actual dynamic event of arriving but the potential to arrive. Again, in (3.24b), the activity is more imminent and the context is likely to refer to a smaller group of people, but the construction refers to the potential to knock, and constitutes a suggestion of one possible form of action, but not a description of action. The present tense indicates the stative potential before an action takes place, but refers to a future action (Mourelatos 1981).

The state of affairs is described as a potential, or a habitual, rather than an active or dynamic event. The actor is thus taken out of the formula—the state of affairs is described in such a way as to exclude any doer, left open to an 'anyone' interpretation. This contrasts markedly with the impersonal, which can usually be paraphrased as 'someone'. Compare the examples in (3.25, translated from Pihlak 1993:10): the generic 3SG is given in (3.25a), and (3.25b) is in impersonal form.

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[36]From a tourism brochure

(3.25) a. ei   seda   tea
            NEG that.PAR.SG know
            you never know

        b. seda   ei   teata
            that.PAR.SG NEG know.IMP.PRS
            that's not known / one doesn't know

The first example gives a 'potential' reading of it not being within the realm of potential knowledge—no one knows. The impersonal, however, has a reading of actuality, implying only that in the circumstances, one does not know or certain people do not know, but says nothing about the knowability of the question.

This thesis examines the general person, or generic apersonal construction, but the analysis is extendable to include the other uses of default third person singular verbs with no subject. In Estonian these include experiencer predicates like (3.26a), and weather predicates like (3.26b), where the focus is on a state of affairs. Even active phenomena such as thunder receive the static description of a background situation, rather than a foregrounded event. The construction asserts the fact of the state of affairs rather than a change of state.

(3.26) a. mul   tuikab   kõhus
            1SG.ADE throb.PRS.3SG stomach.INE.SG
            my stomach's throbbing / there's a throbbing in my stomach

        b. sajab   / müristab
            rain.PRS.3SG / thunder.PRS.3SG
            it's raining / it's thundering

The predicate is thetic, and any arguments tend to be quite unfocussed, or subordinated to the predicate. The clause tends to be "about" the event rather than any relation between a participant and the event.

3.5   Summary

This chapter has introduced the basic morphosyntactic and semantic properties of the constructions examined in the rest of the thesis. As these are referred to throughout the thesis, I conclude the chapter with a summary of these characteristics. These points are referred to throughout as the basic and defining properties of each construction, in conjunction with cross-linguistic characterisations of the constructions.

- **Impersonal**
    1. Inflectional affix on the verb, no verb agreement with any argument
    2. Bivalent verbs have PAR or NOM undergoer argument NP
    3. Actor referent is exophoric, generalised, and human
    4. Retains the argument structure and *Aktionsart* inherent to verb
    5. Forms a predicate from verbs with at least one argument
- **Passive**
    1. Undergoer argument NP promoted to NOM subject
    2. *Olema* 'be' + past passive participle, auxiliary verb agrees with promoted subject argument
    3. Stative, resultative
    4. Affective subtype of passive: *saama* 'get, become' + *da*-infinitive
    5. Forms an intransitive predicate from bivalent and trivalent verbs

- **Anticausative**
    1. Derivational affix *-u-* or *-ne-*
    2. Undergoer NP functions as NOM subject, verb agreement
    3. Middle semantics, event presented as spontaneously occurring in and on the undergoer
    4. No actor present semantically or syntactically
    5. Forms a lexical monovalent verb from a bivalent verb
- **Generic Apersonal**
    1. Verb marked with a default 3SG inflectional affix, non-past
    2. No overt actor argument NP, no agreement, undergoer argument remains as in active
    3. Stative, potential, oriented toward possible future action/event
    4. Actor referent is human, interpreted as 'anyone'
    5. Forms a clause, interpretation is pragmatic, not overtly marked

4

Verbal Semantics

The constructions described in the previous chapter all involve a mismatch on
some level between the number of arguments associated with the semantics of a
verb and the arguments expressed in a particular clause. This chapter focusses
on the logical structure and semantic classification of Estonian verbs and the
valency operations, from a Role and Reference Grammar perspective (Van Valin
& LaPolla 1997).

A notorious difficulty for theories of valency is establishing the status of par-
ticular constituents as arguments or adjuncts, as discussed in Chapter 1. Esto-
nian typically codes one of the arguments in a two-place predicate as a nomina-
tive subject and one as a partial or total object. Exceptions include experiencer
clauses, for instance. The adessive experiencer NP is included as a core argu-
ment in the valency of the verb, despite its locative case-marking. The construc-
tion may be bivalent, but the transitivity of the construction is low; the oblique
argument marking reflects this, and experiencer clauses score low transitivity on
several of Hopper & Thompson's (1980) semantic transitivity parameters (e.g.
affectedness of the O, kinesis, volitionality), validating this judgment. As dis-
cussed in Chapter 1, the distinction between arguments and adjuncts is not al-
ways easy to make, and not all analyses place a high premium on making this
distinction. Vater (1978) claims that there might not be such a sharp division as
is sometimes assumed, but instead "different grades of verbal dependents," or-
dered "in a hierarchy ranging in German from those that are required by almost
every verb, i.e. subject-NPs, up to those that are required by very small groups

of verbs" (1978:39). I nevertheless follow the RRG proposal of including core arguments in the logical structure associated with verbs in the lexicon, and make a distinction between the obligatory and optional elements.

I limit my examination of core arguments to the clearly marked arguments. Adjuncts may be relevant for the transitivity of a construction (e.g. by adding a bounding phrase, thereby making a telic clause from an atelic predicate), but not the valency. It is the core arguments of a verb which affect the valency and which are affected by valency changing operations. Syntactic valency is not affected by object case, but it is affected by voice. A passive reduces the number of core arguments by one. A passive with an agentive phrase is monovalent, despite having more than one semantic argument expressed in the clause, as the agentive phrase is not expressed as a core syntactic argument of the verb. Syntactic valency, then, depends on the number of core semantic arguments of a verb expressed as core predicate arguments in a particular construction. This chapter examines this notion of valency and how the logical structure of predicates in Estonian is affected by voice and valency modification. First, an outline of the RRG system of predicate classification is given. A logical structure representation is then formulated for each Estonian voice construction, based on the mechanisms proposed in Van Valin & LaPolla (1997).

4.1   A Semantic Classification of Predicates

As *Aktionsart* classes are crucial for analysis of the behavior of verbs in various contexts, a simple classification of Estonian verbs is presented here. A few sample verbs from each major aspectual class are run through the standard tests for *Aktionsart* classification in order to determine a set of tests which work for Estonian.

The four basic *Aktionsart* classes, originally proposed by Vendler (1957 [1967]), and developed in Dowty (1979), constitute a classification of verbs by their inherent temporal properties. *Aktionsart* refers to properties of linguistic expressions, but it corresponds to properties of States of Affairs (Van Valin & LaPolla 1997:92), a concept which refers to phenomena in the world, the states and events to which linguistic expressions refer. The *Aktionsart* of a clause often depends on the coding of verbal arguments and can vary with the co-occurrence of a verb with particular adjuncts. Nevertheless, verbs are seen to have a basic, inherent lexical *Aktionsart* class, sometimes amenable to contextual modification.

Situational States of Affairs are expressed by STATIVE verbs. Processes are expressed by ACTIVITY verbs. These first two predicate types are both inherently unbounded, but differ according to dynamicity: states are non-dynamic and activities are dynamic. These are supplemented by two bounded predicate types, which represent changes of state. Instantaneous changes of state are expressed by ACHIEVEMENTS, while changes taking place over time, but leading up to an endpoint, are expressed by the predicates classed as ACCOMPLISHMENTS. Van Valin & LaPolla (1997) define the four classes by means of three semantic features, [±static], [±punctual], and [±telic].

The most fundamental distinction here is that of stativity, expressed by the [±static] feature, static verbs coding "non-happenings" and non-static (dynamic) verbs coding "happenings" (potential answers to the questions *What happened?* or *What's happening?*). Core verbs in these respective classes are, for instance, *believe*, [+static], and *dance*, [–static]. The question *What's happening?* could be answered by the statement *People are dancing*, but not by *John's believing in leprechauns*, at least not without a marked and unusual interpretation of the verb *believe*.

The punctuality feature refers to the duration of the inherent temporal semantics of a verb or predicate: either instantaneous or extended in time. Core examples of this difference are represented by *melt*, which is usually understood to occur over a time interval, and is therefore [–punctual], versus *pop*, which is most commonly perceived and expressed as instantaneous, and is therefore [+punctual].

Telicity refers to an inherent terminal point. If a verb has as part of its inherent semantics an endpoint (telos), then it is [+telic], while unbounded verbs are [–telic]. This property is the most liable to change depending on the predicate a verb occurs in, as both argument coding and adverbials affect verbal telicity. Core verbs can be given for telicity as well, such as *run*, [–telic] versus *dry*, [+telic]. These inherent semantics are, however, susceptible to bounding phrases, such as *run to the park*, a [+telic] phrase formed from the [–telic] verb *run*.

These semantic classes generally refer to predicates, rather than verbs. But it is usually possible to determine a default semantic class to which a verb belongs in unmarked situations. Table 4.1 sums up the basic *Aktionsart* predicate types, using the semantic features which have been discussed.

State	[+static]	[–telic]	[–punctual]
Activity	[–static]	[–telic]	[–punctual]
Accomplishment	[–static]	[+telic]	[–punctual]
Achievement	[–static]	[+telic]	[+punctual]

Table 4.1: **Semantic Classification of Predicates** (Van Valin & LaPolla 1997:93)

Sections 4.1.1–4.1.6 look at the standard tests for classifying verbs and predicates into these *Aktionsart* classes, as applied to Estonian. A few additional predicate classes are introduced which extend the options for semantic classification, and which are relevant to the syntactic behavior to be examined. The causative class in 4.1.6 is not only defined by temporal properties, but is nevertheless a basic verb class. The *Aktionsart* classification is so successful and has such broad implications for the syntactic behavior of predicates and their interpretation that it is difficult to tease apart the pure aspectual properties from other related phenomena, such as agentivity. It is interesting to note the correlations, but *Aktionsart* class would ideally be tested for on temporal properties alone, which could then be examined for other, related semantic traits. Nevertheless, the fuzzy edges of language suit its communicative purpose, and relational words like verbs are particularly fuzzy. It is the intention in this chapter to ignore these fuzzy edges and to define the classes through core examples.

4.1.1 States

States are defined as [+static], [–telic], and [–punctual]. The feature [±static] distinguishes states from all other predicate types. States are temporally unbounded and non-dynamic (stative). States may come about as a result of a change-of-state event, but they themselves do not encode changes. They "cannot be qualified as actions at all" (Vendler 1957 [1967]:106). It has often been noted (Mourelatos 1981, Jackendoff 1990, *inter alia*) that stative verbs are similar to mass nouns, in that they are 'homoeomerous', or like-parted, meaning that parts of the referent can still be referred to with the same name as the whole. Jackendoff (1990), among others, notes the parallels between the verbal bounded/unbounded and nominal mass/count distinctions. Unbounded verbs include activities as well as states, although states are the verbal equivalents, par excellence, of mass nouns. "Any part of *John ran toward the house* (process) can itself be described as *John ran toward the house* (unless the part gets smaller than

a single stride)" (Jackendoff 1990:29). With states, it is difficult in ordinary experience (and, after all, language is born of ordinary experience) to identify any sub-interval which is not describable with the same predicate. Any sub-part of *John is sleeping* can certainly also be described as *John is sleeping*. The distinction between activities and states might be described as akin to the distinction between mass nouns referring to grainy substances (e.g. *rice*) versus liquids (e.g. *water*).

Many experiencer predicates are states, but I do not examine verbs with inverse argument structure here. It is often intuitively easy to distinguish states from other classes, but difficult to find objective tests for it. In Estonian it is difficult to create tests which would make this distinction even as straightforwardly as the progressive test in English, for instance, which in itself is not flawless. Dowty (1979) notes that the English stative verbs cannot occur in the progressive aspect *with the exception of sit, stand,* and other stage predicates, denoting the spatial orientation of an object in a location.

A progressive construction exists in Estonian, using the auxiliary 'be' and the inessive form of the *ma*-infinitive (as in example 4.1), but it is not a prototypical progressive.[1] It typically denotes a dynamic event, and is usually used to underscore the performance of an activity at the moment of being interrupted (Tommola 2000:671). This construction, which has not been fully grammaticalised, tends to have an "imminential meaning" with accomplishment and achievement verbs, such as *pomm on plahvatamas* 'the bomb is exploding [about to explode]' (Tommola 2000:657). Nevertheless, these properties make this test appropriate for detecting predicates that cannot be used at all in the progressive form, which can be classified as clear states.

(4.1) a. ??ma   olin   sind   armastamas
            1SG.NOM be.PST.1SG 2SG.PAR love.INF.INE
            I was loving you

        b. ??poiss oli   oma koera   nägemas
            boy.NOM.SG be.PST.3SG own dog.PAR.SG see.INF.INE
            the boy was seeing his dog

        c. *Mari   oli   eile olemas pikk
            M.NOM.SG be.PST.3SG today be.INF.INE tall
            Mary was being tall yesterday

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[1]See Tommola (2000) for more detail on the differences in the progressive form between Balto-Finnic and other European languages.

The progressive does, however, allow states with some degree of volitionality, and so is not merely a filter for temporal unboundedness and non-stativity (as in 4.1a-b, in contrast to 4.1c). As in English (where there are exceptions to the maxim that stative verbs do not allow the progressive), volitionality interferes with the progressive test in Estonian as well. Many alternative tests for stativity seem to also rely on notions of agentivity and volitionality. These concepts should be irrelevant for the aspectual class of the verbs, but they are difficult to fully separate from any of the classic stativity tests.

A test that has been proposed for distinguishing stative verbs in Finnish is how easily the verb can act as a complement to control verbs like *force* and *persuade* (Weist, Wysocka & Lyytinen 1991). Example (4.2) shows the unacceptability of state verbs, in contrast to [–static] verbs in control constructions with the verb *sundima* 'force'. However, verbs like *armastama* 'love' and *nägema* 'see' seem to be possible with the control construction, though they are usually classified as states.

(4.2)   a.   *Jüri ema   sundis   teda   pikk   olema
             J.GEN mother.NOM force.PST.3SG 3SG.PAR tall.NOM.SG be.INF
             Jüri's mother forced him to be tall

         b.   Jüri ema   sundis   teda   klaverit   mängima
             J.GEN mother.NOM force.PST.3SG 3SG.PAR piano.PAR.SG play.INF
             Jüri's mother forced him to play the piano

The RRG representation of the logical structure of states is the simplest predicate representation of **pred'** (x) or **pred'** (x, y). Attributive (*Gertrude is short*) and identificational (*Jeb is a farmer*) constructions are represented as **be'** $(x, [\textbf{pred'}])$. The sample state verbs can be represented as in (4.3).

(4.3)
nägema	'see'	**see'** (x, y)
pikk olema	'be tall'	**be'** $(x, [\textbf{tall'}])$
armastama	'love'	**love'** (x, y)

There is, hence, "no special formal indicator that a predicate is stative" (Van Valin & LaPolla 1997:102). As stative predicates normally contain the least semantic implication regarding thematic roles or macroroles, this representation reflects the status of states. The only special encoding in the logical structure of states represents the difference between inherent and non-inherent states. Inherent states have the additional **be'** predicate, and a two-place argument structure

with the second argument filled by an attribute or identificational NP. The difference is exemplified by Van Valin & LaPolla (1997:103) with the inherent example of *coal is black* (**be′** (coal, [**black′**])) and the non-inherent *the fire blackened the wood* (…BECOME **black′** (wood)). **Feel′** is also used as an operator for stative verbs expressing "internal sensations and transient emotional states" (Van Valin & LaPolla 1997:103).

4.1.2 Activities

Activities are defined by the features [–static], [–telic], and [–punctual]. These are dynamic events with temporal duration and no marked bound or inherent telos. Activity predicates can be distinguished first by the test for dynamicity. Activity predicates can occur with adverbs such as *hooga* 'vigorously' or *aktiivselt* 'actively'. However, the adverbs chosen for this test must be those which have no requirement for a controlling subject, because the issue of agency is, again, irrelevant for the *Aktionsart* class. And when this is taken into account, this test alone leaves some open questions regarding certain verbs, such as *plahvatama* 'explode' (achievement) or *raamatut valmis kirjutama* 'write a book (to completion)' (accomplishment).

In order to definitively separate the activity predicates, the duration tests are invaluable. These test compatibility with the phrases corresponding to the time frame adverbial *tunni ajaga* 'in an hour' and the durative adverbial *tund aega* 'for an hour'. These tests are important (though not definitive on their own) for distinguishing the three [–stative] predicate types. Achievements are not compatible with either adverbial; accomplishments are compatible with both; and activities are compatible precisely with the durative adverbial, but not the time frame adverbial. Examples (4.4-4.6) illustrate each of these tests with two activity predicates, *marssima* 'march' and *klaverit mängima* 'play piano'.

(4.4)   a.   sõdurid   marssisid   hoogsalt
             soldier.NOM.PL march.PST.3PL energetically
             the soldiers marched energetically

        b.   naaber   mängis   aktiivselt klaverit
             neighbor.NOM.SG play.PST.3SG actively   piano.PAR.SG
             the neighbor played piano actively

(4.5)   a.   sõdurid   marssisid   tund aega
             soldier.NOM.PL march.PST.3PL for-an-hour
             the soldiers marched for an hour

        b.   naaber   mängis   tund aega   klaverit
             neighbor.NOM.SG play.PST.3SG for-an-hour piano.PAR.SG
             the neighbor played piano for an hour

(4.6)   a.   *sõdurid   marssisid   tunni ajaga
             soldier.NOM.PL march.PST.3PL in-an-hour
             the soldiers marched in an hour

        b.   *naaber   mängis   klaverit   tunni ajaga
             neighbor.NOM.SG play.PST.3SG piano.PAR.SG in an hour
             the neighbor played piano in an hour

With these tests, then, we can identify activity predicates. Following the RRG
notation, we represent the predicates as in (4.7).

	marssima	'march'	**do'** $(x,\ [\mathbf{march'}\ (x)])$
(4.7)	*nutma*	'cry'	**do'** $(x,\ [\mathbf{cry'}\ (x)])$
	klaverit mängima	'play piano'	**do'** $(x,\ [\mathbf{play'}\ (x, \text{piano})])$

The generalised activity predicate **do'** marks membership in the activity seman-
tic class. Activity and state predicates both appear as elements in the following
two (temporally bounded) classes. With intransitive verbs, the presence of **do'**
in the semantic representation of a predicate encodes the fact that the single ar-
gument bears an actor macrorole rather than an undergoer macrorole, a similar
distinction to the unaccusative-unergative distinction, which is discussed later in
this chapter.

4.1.3   Achievements

Achievement predicates are [–static], [+telic], and [+punctual]. They are instan-
taneous. This class typically contains quite a number of inchoative, spontaneous
event verbs, many of which are unaccusative. Achievements have no duration,
and so are ungrammatical with both of the duration tests. In addition, a test of
punctuality clearly distinguishes achievement predicates from the others. This
involves co-occurrence with a pace adverb, such as *kiiresti* 'quickly' or *aeglaselt*
'slowly'. The pace test distinguishes [±punctual] among [–static] predicates. Dy-
namic verbs which are ungrammatical with the pace adverbs are achievements.

Examples (4.8-4.10) illustrate these tests with achievement verbs *saabuma* 'arrive', *plahvatama* 'explode', and *märkama* 'notice'. With example (4.8a), care must be taken to avoid getting a grammatical judgment by virtue of an iterative interpretation (e.g. 'the letters arrived for a month', meaning that bit by bit various letters arrived), which is why the subject in this example must be a singular NP.

(4.8)   a.   *kiri   saabus   kuu aega
             letter.NOM.SG arrive.PST.3SG for-a-month
             the letter arrived for a month

        b.   *õhupall   plahvatas   minut aega
             balloon.NOM.SG explode.PST.3SG for-a-minute
             the balloon exploded for a minute

        c.   *lammas   märkas   hunti   minut aega
             sheep.NOM.SG notice.PST.3SG wolf.PAR.SG for-a-minute
             the sheep noticed a wolf for a minute

(4.9)   a.   ?kiri   saabus   kuu ajaga
             letter.NOM.SG arrive.PST.3SG in-a-month
             the letter arrived in a month[2]

        b.   ??õhupall   plahvatas   sekundiga
             balloon.NOM.SG explode.PST.3SG in-a-second
             the balloon exploded in a second

        c.   *lammas   märkas   hunti   tunni ajaga
             sheep.NOM.SG notice.PST.3SG wolf.PAR.SG in-an-hour
             the sheep noticed the wolf in an hour

(4.10) a.   kiri   saabus   aeglaselt
             letter.NOM.SG arrive.PST.3SG slowly
             the letter arrived slowly

        b.   *õhupall   plahvatas   aeglaselt / kiiresti
             balloon.NOM.SG explode.PST.3SG slowly   / fast
             the balloon exploded slowly / fast[3]

        c.   *lammas   märkas   hunti   aeglaselt / kiiresti
             sheep.NOM.SG notice.PST.3SG wolf.PAR.SG slowly   / fast
             the sheep slowly/quickly noticed a wolf

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[2]This can receive a grammatical reading, but it gives an accomplishment sense to the verb, ceasing to refer to the moment of arrival.

[3]The adverb 'fast' is marginally acceptable with this verb, again changing the intended reading to an accomplishment: this would be in the context of, e.g. a flame causing the balloon to explode fast. It is not the exploding event which is fast, but rather the time from the cause of explosion to the explosion.

Example (4.9a) is questionable, and (4.10a) is acceptable, and so the verb *saabuma* 'arrive' is a borderline case between achievements and accomplishments. It can be used to refer merely to the punctual event of arrival or to the activity leading up to the arrival, but it is the achievement reading which is primary.

The issue which arises in English of the relevant reading of the time frame adverbial—not intending the reading of 'time until onset of an event', but rather the temporal duration of the event—is not a significant issue in Estonian, as a different adverbial (*tunni aja pärast* 'after an hour') is used for the meaning of time until onset of the event. With the balloon bursting, for instance, the time adverbial must be very short to be acceptable at all, and even (4.9b) is questionable. Clear achievement predicates, therefore, can be recognised by their distinct aversion to duration adjuncts, particularly longer-time ones.

Achievement predicates are represented as in (4.11), with the label INGR (ingressive) pointing to their inchoative aspect. The predicate upon which INGR operates can be either a state or an activity. As has been mentioned, the presence of **do′** marks the predicate as an activity, and the higher argument as an actor.

(4.11)

saabuma	'arrive'	INGR **arrive′** (x)
plahvatama	'explode'	INGR **exploded′** (x)
märkama	'notice'	INGR **do′** $(x, [\textbf{see′} \ (x, y)])$

If an intransitive verb does not have **do′** in its semantic representation, then its single argument is not an actor. Achievement verbs have a predilection for undergoer arguments, but as the logical structures above show, actors are also possible.

4.1.4   Accomplishments

Accomplishment predicates are semantically situated between activities and achievements, in that they have telicity in common with achievements, and non-punctuality in common with activities. The features associated with accomplishments are [–static], [+telic], and [–punctual].

Many activity verbs can easily become accomplishments with the addition of a bounding phrase, such as 'to the park'. In the case of Estonian, merely changing the object case (sometimes paired with the use of an aspect particle) changes an activity (*kirjutas raamatut* 'was writing a book') into an accomplishment (*kirjutas*

raamatu 'wrote a book'). These class-alternating predicates, when used as accomplishments, are classified as active accomplishments (section 4.1.5). This is a subtype of accomplishment, and has a slightly different semantic representation.

Accomplishments and achievements are often derivationally marked in Estonian with inchoative or anticausative marking, particularly the affixes *-u* and *-ne*. In fact, the basic verbs in these classes are likely to express the semantics associated with middle voice (see Vihman 2002*b*), especially when they take an undergoer as their single macrorole argument. Nothing, however, excludes transitive verbs from these classes. In order to handle transitive verbs, the semantic representation must be changed, typically adding a **do**′ predicate into the representation, signifying the presence of an actor, as for the achievement *märkama* 'notice' above.

The primary tests which distinguish accomplishments are again the duration tests: accomplishments are usually grammatical with both 'for' and 'in' adverbials, although the durative adverbials only show that accomplishments have duration, and so are irrelevant. The time frame test, e.g. using 'in an hour', is the most useful for distinguishing accomplishments, the only predicates which are broadly accepting of these (not narrowly accepting, in the way of some achievement predicates which accept short time intervals like 'in a second'). Examples (4.12a–b) show the grammaticality of two accomplishment predicates with both duration adverbial phrases[4]; the clauses in example (4.6) above show the ungrammaticality of activity predicates with time frame adverbials.

(4.12)   a.   riided   kuivasid   tunni ajaga / tund aega
             clothes.NOM.PL dry.PST.3PL in-an-hour / for-an-hour
             the clothes dried in/for an hour
         b.   lilled   närtsisid   kuu ajaga   / kuu aega
             flower.NOM.PL wilt.PST.3PL in-a-month / for-a-month
             the flowers wilted in/for a month

The category of accomplishment predicates depends quite strongly on the full clause, rather than simply on the logical structure of a particular verb and the arguments it selects for. Transitive verbs in Estonian tend to reflect the difference between the duration tests in object-marking ('in X time' conferring total

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[4]While it is also possible to reinforce the telic reading here with a bounding aspect particle, it is not required. The vast majority of my informants accept 4.12a-b as either telic or atelic (i.e. with both adverbials). The verbs have an inherent duration and an inherent telos, making the particle unnecessary, though acceptable.

object status, and 'for X time' conferring partial object status), and so most transitive accomplishments are active accomplishments, as discussed below. The RRG representation for the logical structure of accomplishments is as in (4.13). The 'BECOME' operator signals that accomplishments have both duration over time and telicity.

(4.13)   *kuivama*   'dry'   BECOME **dry'** (x)
           närtsima   'wilt'   BECOME **wilted'** (x)

4.1.5 Active Accomplishments

As mentioned above, activities and accomplishments are closely related: it is often merely a matter of whether or not a verb takes a direct object or a goal phrase to turn a predicate from one into the other. Active accomplishments usually have direct objects, but they can also have other measure phrases which delineate a bound to the activity underlying them.

In Estonian, a key encoding of this difference is the case-marking of the direct object. A partial object may give a progressive meaning to the predicate, and hence an activity event representation, while a total object gives a telic reading of completion, resulting in an active accomplishment semantic structure. An example of an active accomplishment is given in (4.14a). Example (4.14b) gives the activity version of (4.14a). The partial object makes an activity of the accomplishment predicate, and makes the clause unacceptable with the time frame adverbial 'in a month'.

(4.14)   a.   ta   kirjutas   raamatu   valmis kuu ajaga
              3SG.NOM write.PST.3SG book.GEN.SG ready   in-a-month
              s/he wrote the book (finished writing the book) in a month
         b.   *ta   kirjutas   raamatut   (valmis) kuu ajaga
              3SG.NOM write.PST.3SG book.PAR.SG ready   in-a-month
              s/he was writing the book in a month

Note that in example (4.14b), even the clause with a partial (incompletely affected) object can take the aspect particle *valmis* 'ready', giving the clause a telic goal, but leaving it with a reading of not having achieved the goal, implying some interruption on the way to finishing the book. In this incomplete clause, however, the time frame adverbial is unacceptable.

The RRG representation for active accomplishments is given in (4.15), where the first part is an activity predicate, followed by '&' (interpreted as *and then*) and an accomplishment predicate, in this case the coming into existence of the object of activity.

(4.15)   **do**′ $(x,$ [**write**′ $(x,$ book)]) & BECOME **exist**′ (book)

4.1.6   Causatives

The semantic classification discussed so far cross-cuts the notion of valency. All the *Aktionsart* classes include both monovalent and bivalent verbs, and are unaffected by the number of arguments *per se*. The addition of an argument can change the classification of a particular verb, but the basic classification itself is independent of this. RRG adds the semantic class of causatives to those already listed. Causativisation is defined entirely by valency and valency relations.

Causativisation is an operation which increases the valency of a verb by one, adding a causer argument. Therefore, causatives have a minimum of two arguments, causer and causee, and are always at least bivalent. Holvoet (1991) sees "causative predicates as the core of the complex of phenomena subsumed under the notion of transitivity" (1991:53)—the prototype, as it were, of transitivity.

The initial predicate from which the causative is formed can have one, two, or three arguments, though the morphologically derived causative is productive only on one-place predicates. Kasik (2001) divides Estonian causatives into "syntactic (analytic), morphological, and lexical causatives on the basis of the formal relationship between the causative predicate and its non-causative equivalent" (2001:82).

Lexical causatives (suppletive causatives such as *tapma* 'kill') lack any morphological relationship to their corresponding intransitive (e.g. *surema* 'die'); they are, hence, lexical and unproductive. Morphological causatives are formed with the productive causative affix *-(s)ta*. For forming analytic (periphrastic) causatives, Estonian contains a few different causative verbs, such as *ajama* 'drive/impel', *panema* 'put' and *sundima* 'force'. In this section, I address only morphological causatives, because of the transparency of the derivational relationship. However, the same analysis applies to analytic causatives, except that

analytic causatives are more productive and can even be formed from three-place predicates, for instance, and already causativised verbs, as in example (4.16c).[5]

(4.16) a. Maarika   nägi   pilte
            Maarika.NOM see.PST.3SG picture.PAR.PL
            Maarika saw the pictures

        b. Pille   näi-ta-s   Maarikale   pilte
            Pille.NOM show.CST.PST.3SG Maarika.ALL picture.PAR.PL
            Pille showed Maarika the pictures

        c. Tõnis laskis   Pillel Maarikale pilte   näidata
            T.NOM let.PST.3SG P.ADE M.ALL   picture.PAR.PL show.INF
            Tõnis had Pille show Maarika the pictures

Each of the *Aktionsart* types discussed can include both spontaneous or induced predicates. The induced predicates are expressed as either synthetic or analytic causatives. Causative derivations are quite common in Estonian, and the causative system is well-behaved in that each of the basic verb classes can be causativised, as shown by the (b) clauses in examples (4.17-4.20).[6] The most common causativiser is the transitive/causative affix *-ta-*, though its meaning is not always as transparent as these examples might suggest, as the *ta*-affix bears many functions (Kasik 1996:49). The *ta*-affix is quite productive, and is often used for denominal and de-adjectival verbal derivation. The semantic structure of (4.17a) is not affected by the fact that the attributive predicate is expressed with a copula and locative NP rather than a stative verb, and so this relationship is parallel to the deverbal causatives in the subsequent examples. In example (4.17), the *-ta*-affix functions as a denominal causativiser rather than deverbal, as in the other examples.

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[5]This example is unusual in that a morphological causative is formed from a two-place predicate. This is an old lexicalised verb, but usually morphological causatives are only formed from one-place verbs.

[6]The glosses in these examples include a CST ('causative') label. Elsewhere it is assumed that the derivational *-ta* is part of the derived verbal meaning, and this is not included in the gloss unless it is necessary for distinguishing semantics that are not reflected in the English translation.

(4.17) a. poiss   oli   hirmul
            boy.NOM.SG be.PST.3SG fear.ADE
            the boy was scared

        b. CAUSATIVE STATE
            koer   hirmutas   poissi
            dog.NOM.SG frighten.CST.PST.3SG boy.PAR.SG
            the dog scared the boy

(4.18) a. pall   veeres   tee   ääres
            ball.NOM.SG roll.PST.3SG road.GEN.SG side.INE.SG
            the ball rolled along the side of the road

        b. CAUSATIVE ACTIVITY
            tüdruk   veeretas   palli
            girl.NOM.SG roll.CST.PST.3SG ball.PAR.SG
            the girl rolled the ball

(4.19) a. laps   ärkas   üles
            child.NOM.SG awake.PST.3SG up
            the child woke up

        b. CAUSATIVE ACHIEVEMENT
            kass   äratas   lapse   üles
            cat.NOM.SG awake.CST.PST.3SG child.PAR.SG up
            the cat woke the child up

(4.20) a. jää   sulas
            ice.NOM.SG melt.PST.3SG
            the ice melted

        b. CAUSATIVE ACCOMPLISHMENT
            kevadilm   sulatas   jääd
            spring-weather.NOM.SG melt.CST.PST.3SG ice.PAR.SG
            the spring weather melted the ice

The logical structure of causatives contains a CAUSE element followed by a second argument which corresponds to the logical structure of the basic non-causative verb, as given in (4.21), corresponding to the examples above.

(4.21) a. [**do′** (dog, ∅)] CAUSE [**feel′** (boy, [**afraid′**])]
        b. [**do′** (girl, ∅)] CAUSE [**do′** (ball, [**roll′** (ball)])]
        c. [**do′** (cat, ∅)] CAUSE [INGR **awake′** (girl)]

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d.   [**do**′ (spring-weather, ∅)] CAUSE [BECOME **melted**′ (ice)]

When no specific causative event is expressed, then the pre-CAUSE expression remains unspecified, as shown. If a specific causative event is expressed (as in *the phone ringing woke me up at midnight*) then the pre-CAUSE element can contain a more detailed logical structure.

4.2   Macroroles and M-Transitivity

Syntactic valency, as has been said above, refers to the number of morphosyntactically coded arguments occurring in a predicate with a verb. Semantic valency refers to the number of semantic arguments a verb *can* take.

The RRG notion of transitivity reflects the number of macrorole arguments a verb takes, as briefly discussed in Chapter 1. Not all core arguments have macrorole functions. The maximum number of macroroles (MRs) a predicate can have is two, namely the generalised actor macrorole and the generalised undergoer macrorole. The number of macroroles is given in a verb's M-TRANSITIVITY. A zero-place predicate (such as *rain*) is M-atransitive (has zero macroroles). Even in English, where the syntactic valency of *rain* is one, the verb is still M-atransitive, as the single argument does not have a macrorole function. One-place predicates are M-intransitive, but the single MR can represent either an actor or an undergoer MR. RRG specifies that the single macrorole argument is an actor if the verb has an activity predicate in its logical structure, and undergoer elsewhere. An M-transitive verb has two macrorole arguments, of which one is always actor and the other is always undergoer. It is usually possible to read the M-transitivity of a verb directly from its logical structure; when this is not the case, the number of MR arguments is specified in its logical structure. No verbs can have more than two macroroles, and M-ditransitivity does not exist.

A key concept in the determination of predicate structure in RRG is that the number of macroroles a verb has is always less than or equal to the number of arguments in its logical structure. Just as there are verbs which take one syntactic argument which is not a macrorole (e.g. *rain*), so are there also verbs which have two core arguments, both syntactic and semantic, yet only one macrorole argument.

An example of this relation between logical structure and the number of macro-roles is a verb like *sööma* 'eat', which can take either one or two core arguments, and its second core argument also exhibits case alternation. Importantly, the object argument has been claimed not to always fill a macrorole. This verb has both variable transitivity and variable *Aktionsart*, as has been shown in several languages. The two-argument form of *eat* in many languages can be either an activity or an active accomplishment. In other words, the transitive form of *eat* can align itself either with transitive or intransitive predicates in terms of syntactic behavior, and this is crucial for the representation of the semantics of the predicate as well as for macrorole allocation and valency operations. This deserves a closer look.

Van Valin & LaPolla (1997) claim that "if transitivity is simply a function of the number of syntactic arguments that a verb takes, then it is to be expected that the two-argument form of *eat* should manifest consistent syntactic behavior" (Van Valin & LaPolla 1997:148) They test this prediction with Italian, and find that in fact the reverse is true: transitivity is not a function of the number of syntactic arguments, as the syntactic behavior of the two-argument form of *eat* is not consistent. The same holds for Estonian.

The two aspectual variants of *sööma* 'eat' are shown in (4.22). Note that *eat* can be an activity with either its monovalent form or one of its two-argument forms, as in (4.22a).

(4.22) a. Indrek sõi   (leiba)   viis minutit/ *viie minutiga
            I.NOM eat.PST.3SG bread.PAR.SG for-5-minutes in-5-minutes
            Indrek ate (bread) for (*in) five minutes
        b. Indrek sõi   leiva   ära *viis minutit/ viie minutiga
            I.NOM eat.PST.3SG bread.GEN.SG up for-5-minutes in-5-minutes
            Indrek ate the bread (up) in (*for) five minutes

If the two forms of bivalent *sööma* behaved alike, then they could be said to have the same transitivity, based on the number of arguments. However, the same tests that are applied to Italian in Van Valin & LaPolla (1997:148–49) show that in fact the behavior of the two is strikingly different.

(4.23) a. leib   oli   *viis minutit/ viie minutiga söödud
            bread.NOM.SG be.PST.3SG for-5-minutes in-5-minutes eat.2PTC
            *the bread was eaten in/*for five minutes*[7]

        b. *viis minutit/ viie minutiga oli   leib   söödud
            for-5-minutes in-5-minutes be.PST.3SG bread.NOM.SG eat.2PTC
            *the bread was eaten in/*for five minutes*

The personal passive form in (4.23a-b) cannot take the durative adverbial, suggesting that it is not a passive of the activity predicate in (4.22a), and indeed that the activity predicate does not have a passive form. Only the active accomplishment can form a passive, as shown in (4.23a). Changing the word order does not help, as shown in (4.23b). Both clauses can form impersonals (4.24a-b), but so can the intransitive form of *eat*; impersonalisation is clearly not sensitive to transitivity or argument structure, and it also does not change the status of the object of the verb, leaving it intact as an object, whether wholly or partially affected.

(4.24) a. (leiba)   söödi   viis minutit
            bread.PAR.SG eat.IMP.PST for-5-minutes
            bread was eaten for five minutes

        b. leib   söödi   viie minutiga/ *viis minutit ära
            bread.NOM.SG eat.IMP.PST in-5-minutes   for-5-minutes up
            *the bread was eaten up in five minutes (*for five minutes)*

Van Valin & LaPolla claim that "the majority of activity verbs, regardless of how many arguments they have, take no more than one macrorole" (1997:153). The Estonian data fits this generalisation, tying in with partitive object marking.

Van Valin & LaPolla (1997) conclude that in the Italian data, the activity form of bivalent 'eat' behaves similarly to the intransitive form, rather than the other bivalent form. Estonian operates similarly to Italian. The second argument of the activity predicate, then, is an inherent argument: it "serves to characterize the action rather than pick out any of the participants...If it does not refer to any specific participant in a state of affairs, it cannot be an undergoer, because undergoer arguments refer to the participants which are viewed as primarily affected in the state of affairs" (1997:149). The partitive object is lower in transitivity and

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[7]The durative adverbial can be given a grammatical reading with the interpretation of 'five minutes *since* the act of eating', i.e. 'we had been out of bread for five minutes; five minutes ago, it had all been eaten up'. This only shows how resultative the reading of the passive is: 'five minutes' cannot refer to the duration of the activity of eating here.

sometimes does not fill a macrorole function, serving merely to characterise the activity rather than denoting an independent object affected by the activity.

Hence, the activity form of *sööma* has only one macrorole, even when it has two syntactically encoded participants. The RRG concept of M-transitivity refers to the number of macrorole arguments. An object with undergoer MR status is licensed for more syntactic object-related operations than one without MR status. Personal passivisation in Estonian is one of the syntactic operations that requires an undergoer MR object.

Additionally, a separate bit of evidence for the division of Os (objects of bivalent verbs) into macrorole and non-macrorole-bearing elements comes from case-marking in impersonals. In Estonian, only macrorole arguments can take nominative case.[8] In the absence of a nominative A (actor argument), in constructions like the impersonal and the imperative, the undergoer is assigned nominative case. But it is only the total O which undergoes this change in case-marking. Partial Os remain partitive. The explanation for this is that partitive Os are more like inherent arguments, often serving more to characterise the action denoted by the predicate than to describe an effect on the object referent. The partitive O can realise an undergoer MR, but it is not guaranteed to. Partitive case-marking indicates that the object is less affected, and less likely to denote an undergoer argument.

4.3   Event-Based Semantics

One additional theoretical perspective must be introduced, to use in the translation of the Estonian valency-modulating constructions into a formal semantic representation. On the whole, the formalism presented so far, that of the RRG classification of predicates, is sufficient for the analysis of voice constructions. There are two issues which arise, however, in the next section, which are given a straightforward analysis if events are conceptualised as entities to which linguistic expressions can refer. For this, the representation is extended to include event variables. Neo-Davidsonian event-based semantics (Parsons 1990) consists of a formal semantic representation which is distinct from that presented so far, but by no means incompatible with RRG. For the purposes of this thesis, I borrow

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[8]This is not an unusual linguistic property. Van Valin & LaPolla (1997:355–56) mention this as a principle of case-marking in German, and several important facts about German case-marking fall out of this with no further stipulation.

a few basic notions from event-based semantics. This section provides a brief overview of the theory and the metalanguage used.

The question directly addressed by event-based semantics concerns "whether events play a role as grammatical entities in grammatical constructions" (Rothstein 1998:1). This question was first raised by Davidson (1980, originally 1967), who attempts to resolve the problem of expressing in logical form the relation between an action and the (potentially infinite) adverbial expressions which modify it. Polyadic accounts attempt to give the basic predicate (e.g. *Jones buttered the toast*) a different analysis from the same predicate modified by a number of adverbs, assigning the predicate as many places as there are adverbs, and amounting to a huge amount of redundancy. Davidson argues that "there is, of course, no polyadicity. The problem is solved in the natural way, by introducing events as entities about which an indefinite number of things can be said," thereby placing adverbs outside the essential logical form (1980:116–17). His solution, however, extends far beyond the issue of adverbials and optionality.

Davidson's (1980) solution posits events as entities which can be referred to both in the syntax of natural language and in the semantic representation of predicates. He argues that a bivalent predicate (*Jones buttered the toast*) introduces a three-place relation, between an event and two individuals, in contrast to the traditional representation (and that used in RRG) of a two-place verb, e.g. **butter$'$** (x, y). This is replaced with the notation given in (4.25).

(4.25) $\exists e \, [butter \, (e, Jones, toast)]$

Davidson's (1980) insight inspired the development of neo-Davidsonian event-based semantics, in which "verbs are taken as one-place predicates of events denoting sets of events, and thematic roles are partial functions from events to individuals" (Rothstein 1998:2). The representation of *the choir sang the Marseillaise*, with the thematic roles of Agent and Theme added to that in (4.25) above, is given in (4.26). Nothing in the analysis, however, hinges on the particular assignment of thematic roles, and this is an aspect of the theory which is not used here.

(4.26) $\exists e [sing(e) \wedge Ag(e) = the \; choir \wedge Th(e) = the \; Marseillaise]$

I use the RRG representation of basic predicates, but these can be interpreted as being equivalent to the neo-Davidsonian semantic representation. For future reference, the representation in (4.27) is to be interpreted as containing information equivalent to the representation in (4.26) above, with agent and theme translated into the RRG macroroles of actor and undergoer.

(4.27) e : **do′** (the choir, [**sing′** (the choir, the Marseillaise)])

Much of the evidence appealed to in the literature for the existence of an event argument, despite it never surfacing as a syntactic argument, comes from adverbial constructions with empty objects (e.g. *he knocked [too gently [for us to hear (e)]]*, where the implicit object of *hear* must be the event of knocking, and not the 3SG actor of the event) and unexpressed subjects (e.g. *Car A collided with Car B, (e) killing both drivers*) (Rothstein 1998:4). The adverbials are analysed as predicates of events, which accounts for entailment patterns and captures the optionality of adverbial modification (Herburger 2000:6). There is also evidence from anaphoric reference to events (Davidson 1980), but Rothstein observes that this is "not in itself evidence that the verb introduces an event argument, since pronouns can be dependent on discourse entities which are…introduced pragmatically" (1998:5). The subatomic semantics allows the analysis of the inherent semantics of the verb to refer to properties of the event, in addition to its participants.

I follow Parsons (1990) in using e to refer to events, and s to refer to states. The event variable is useful in the following analysis of valency operations. In the analysis of both passive agents and the interpretation of generic apersonals, it becomes necessary to refer to the event as an entity in the logical structure of a predicate, as demonstrated in section 4.4. This is made possible by assigning the event or state a variable. Labelling the predicate with an event variable does not constitute a serious departure from the RRG system and does not entail any fundamental changes to the logical form assigned to verb classes or valency-modulating predicates. As Parsons (1990) expresses the event variable as a default, attached to any predicate expressing an 'eventuality', I do not explicitly include the event variable anywhere other than where I need to refer to it in the semantic representation, but its presence as a default is assumed. I make no further theoretical claims than that the event functions as a grammatical entity and ought to be available for reference in the logical form of predicates.

4.4   Valency Changing Operations

Chapter 3 gives a basic description of several constructions which involve valency-reducing operations. All of these operations involve both syntactic and semantic considerations, as well as pragmatic discourse-level motivations for their usage. As argument structure in RRG is represented as lexical information, the valency changes involved in modulations of argument structure may be represented on that same level, which then has effects on the mapping from the semantic lexical information to its syntactic expression.

Van Valin & LaPolla (1997) take note of the fact that passivisation typically involves two operations, promotion and demotion. Two logically independent features of voice alternation are identified. First, the Privileged Syntactic Argument (PSA) modulation voice "deals with allowing a non-default argument to function as syntactic pivot or controller" (Van Valin & LaPolla 1997:294). Second, the argument modulation voice "involves the non-canonical status of a macrorole argument" (Van Valin & LaPolla 1997:294–95). Each of these can occur separately, or they can occur together, as in the English passive.

Van Valin & LaPolla (1997) state explicitly that they consider some of the voice operations to be lexical phenomena, contrasting the Japanese adversative passive, for instance, to the true passive, which is seen to be syntactic.

> . . . those argument modulation constructions which function primarily to suppress the actor or to derive an activity interpretation from a telic verb are really lexical in nature; that is, they involve an operation on the logical structure of the verb (Such as changing its *Aktionsart* type). . . or a change from the canonical linking of semantic arguments to macroroles (e.g. suppressing the semantic argument which would otherwise be linked to actor or undergoer). (Van Valin & LaPolla 1997:391)

Syntactic phenomena, on the other hand, are concerned with the morphosyntactic realisation of macroroles and other core arguments. In this section, the voice constructions introduced in the previous chapter are given logical structure representations and interpretations, implemented with the analysis of Van Valin & LaPolla (1997), modified to account for the facts in Estonian.

Impersonals are only noted in passing in Van Valin & LaPolla (1997), in the comment that in "passives of intransitive verbs" the argument modulation feature can occur alone: "since the verbs in these constructions have only one argument, they are by definition argument modulation only, since there is no second argument to function as the privileged syntactic argument" (1997:295). In Estonian, however, the same is true of transitive verbs, though in this case it is not logically necessary. Yet the suppressed argument, as noted in Chapter 3, is not fully demoted, and the undergoer argument in bivalent predicates, though it exists, does not function as a new PSA.

The analysis of Estonian impersonals is relatively straightforward. As set forth in Chapter 3, I take the impersonal argument to be realised by an unspecified but nonetheless syntactically present actor. Although analyses have been suggested in which the impersonal actor is demoted (Manninen & Nelson 2002, Comrie 1977, Keenan 1985), the Estonian impersonal has also inspired treatment in parallel with active clauses rather than passives (Rajandi 1999, Pihlak 1993, *inter alia*). The extent of the demotion of the actor is discussed in the following chapter, but for now, the logical structure in (4.28) is proposed to represent a standard impersonal clause.

(4.28)   a.   **pred'** (A)
          b.   **pred'** (A, y)

The inherent logical structure of the verb is intact, with the impersonal argument acting as an indefinite pronominal argument, satisfying the highest argument with a generalised referent. The capital A in the argument structure given here is an arbitrary term which is assumed to carry the properties of a generalised, indefinite, human actor in the highest-ranking argument position. Note that verbs of any aspectual class can be impersonalised (as discussed in 3.1.1), and so the A argument may be found in various contexts. It typically denotes an actor referent (hence 'A'), but can also represent undergoers. Only if there is more than one impersonal argument in a logical structure is a different arbitrary term used (see, e.g. section 7.1).

The impersonal construction assigns information to the verbal inflection. The verbal inflection usually functions in Estonian merely as an agreement and tense marker, although Estonian can also support pro-drop of subject pronouns when

the discourse context assures the salience of their referent. The information to be encoded by an impersonal affix is that the argument referent is a generalised, exophoric, human participant. This information is represented by the arbitrary term A.

4.4.2 Passives

The Privileged Syntactic Argument (PSA) is a construction-specific function, and that is the way in which it differs from the notion of subject (Van Valin & LaPolla 1997:278). It covers both controllers and pivots. "Each grammatical phenomenon may define one controller and/or one pivot" (Van Valin & LaPolla 1997:275). In impersonals, the implicit impersonal argument can act as controller for certain phenomena, such as reflexivisation, while elsewhere the impersonal undergoer can act as controller (see the next chapter for more on this phenomenon). In passives, the PSA is the undergoer. In personal passives, the actor is demoted and cannot function as controller or pivot. The undergoer takes all relevant PSA functions. The personal passives are clearly demotional, and involve both PSA modulation (the undergoer takes the role of PSA) and argument modulation (the actor is suppressed or encoded as an oblique).

Van Valin & LaPolla (1997) propose the logical structure in (4.29b–c) as representations of the Icelandic passive constructions given in (4.29a). Example (4.29b) gives the semantic representation for the construction in (a) without any expressed actor; (4.29c) is the proposed logical structure for the passive *with* an expressed actor (*af Ólafi*) (1997:327).

(4.29) a. Sigg-a   va-r   séð   (af Ólafi)
            Sigga.FSG.NOM be.PST.3SG see.PTC.FSG.NOM of Olaf.MSG.DAT
            Sigga was seen (by Olaf)
        b. **see′** (∅, Sigg-)
        c. **see′** (Ólaf, Sigg-)

This representation is problematic for a few reasons. First of all, the "short passive" and the "long passive" are given entirely different representations, depending on whether the actor is expressed; but when expressed, the actor appears as an adverbial adjunct. The presence in the logical structure of an unexpressed actor argument is important for the interpretation of the passive, but so is the fact that this is not encoded as a core argument. If the core of this construction is

represented as $(\emptyset, \ y)$, then this ought to remain even with the reintroduction of the actor NP in a *by*-phrase.

Secondly, the status of the actor expressed as an adjunct is problematic. Van Valin & LaPolla (1997) specify that "the only instance of an oblique macrorole is the actor in a passive construction, which may appear as a peripheral oblique element in some languages; *in this case, however, it is not a core argument*" (1997:147, my emphasis). In other words, a crucial difference is made between semantic and syntactic arguments. In the example above, however, the semantic representation of the passive with an actor is the same as an active, rather than being fundamentally the same as an agentless passive. This is not faithful to the semantics of the construction.

The semantic representation should make it clear that this construction is both PSA and argument-modulating. The $\emptyset$ denotes unspecificity, which is part of the interpretation of a passive. Even with an overt oblique actor, the implication of its reduced relevance, importance, or salience is a key element in the communicative content of the utterance. Indeed, it seems to go against the very principles of RRG, those of taking surface-level syntax as primary and as mapped directly from the semantics, to ignore such a prominent difference. Hence, the logical structure in (4.29b) above ought to be taken as primary, and the passive with a *by*-phrase should be derived from that. The bivalent event of seeing is necessarily interpreted as having an experiencer, but the passive construction presents the experiencer as outside the primary focus of the clause. When that argument referent is expressed, it is identified with the defocussed argument position, but remains outside the core structure. Example (4.30) gives an example of the demoted actor represented with $\emptyset$, and then identified outside the core logical structure with the actor argument.

(4.30)   **pred**$'$ $(\emptyset, \ y); (\emptyset = x)$

However, this too has a problem. Namely, identifying $\emptyset$ with anything is formally incoherent. The $\emptyset$ could be replaced with a variable, but then the encoded unspecificity would be lost; whereas it is in fact desirable, as it forms part of the basic semantics and interpretation of the passive construction. The $\emptyset$ is meant to mark the argument's demotion: the actor is unexpressed but there is an actor associated with the semantics of the verb. This is part of the interpretation of the passive.

I bring in the option of referring to the event from neo-Davidsonian event-based semantics to resolve this quandary. If the above logical structure of the core passive construction is assigned an event variable, then the agent can be identified as pertaining *to that event*, rather than identifying an empty argument position. Example (4.31a) is a representation of an agentless (short) passive, and (b) is an agentive passive. The thematic roles used are RRG's macroroles, which do not affect the logic behind this representation. I assume existential closure of the widest scope for all event variables.

(4.31)   a. $e : \mathbf{pred'}\ (\emptyset,\ y)$
         b. $e : \mathbf{pred'}\ (\emptyset,\ y) \wedge Actor(e) = \alpha$

Now the identification of this actor argument within the scope of the selected event is non-problematic. The predicate is the only expression that can introduce a macrorole. A process of inferencing bridges the reintroduction of the actor as an adverbial adjunct and its semantic interpretation as a core argument of the logical semantics of the verb. This does not need to be separately specified. It is a part of the semantic and pragmatic content of the *by*-phrase adverbial. As Landman (2000) points out, "*by*-phrases are adverbials and get the semantics of adverbials" (2000:68). Landman specifies that this particular adverbial "can only modify passive VPs, and passive VPs can have only one such modifier" (2000:67). My analysis is unrelated to his, but for the fact that identifying the event as an argument allows the association of the actor referent with that event without losing the pragmatic effect of passivisation, and without losing the entailment relationship between agentless passives and passives with agents. Example (4.31a) contains only the information shown in (4.32), identifying the event and the undergoer of the event, but not the actor.

(4.32) $\exists e.\ \mathbf{pred'}(e) \wedge Undergoer(e) = y$

Example (b) above entails (a), and this can be directly read from the semantic representation. The addition of an actor phrase is non-problematic. The logical structure of the verb contains an actor argument, so interpretation of the element introduced by the *by*-phrase is straightforward, but the construction leaves that actor argument unassigned and contains no information regarding the actor, and hence there are no restrictions on the actor argument.

As the Estonian personal passive tends to include a stativising and resultative meaning, this is to be read from the time relationship to the event. A fully adjectivalised passive would be marked as a state s, but this verbal passive, whose actor argument can be reintroduced with an agentive adverbial, retains the eventive character of the predicate and is stativised in the interpretive stage, from the focus on the affected undergoer and the time of the event in relation to the time of utterance.

Finally, the *saama* passive is given the same analysis as the personal passive. The effect on both core arguments is the same, as well as the possibility of reintroducing the actor with an agentive adverbial. Example (4.33) demonstrates this, with a prototypical affective passive.

(4.33) a. sa   saad   noomida
            2SG.NOM get.PRS.2SG scold.INF
            you'll get scolded
        b. e : **scold′** $(\emptyset,\ 2\text{SG})$
        c. sa   saad   naabri   käest noomida
            2SG.NOM get.PRS.2SG neighbor.GEN.SG from scold.INF
            you'll get scolded by the neighbor
        d. e : **scold′** $(\emptyset,\ 2\text{SG}) \wedge Actor(e) =$ neighbor

The agentless affective passive is given in (4.33a–b) and the passive with an agentive adverbial is in (4.33c–d). The short passive is interpreted as the expression in (4.34).

(4.34) $\exists e.scold(e) \wedge Undergoer(e) = 2\text{SG}$

The information contributed by the *by*-phrase, that the actor of the event is a specified element, is compatible with the information in the short passive. As no information is overtly associated with the actor argument, the actor of the event (whose logical structure includes an actor) can be identified as any specified element. The long passive simply assigns the actor a value, $Actor(e) = \alpha$, and so is interpretable within the context of the short passive. If the α term is an indefinite pronoun (e.g. 'someone'), then the long passive is truth-conditionally equivalent to the active, but the difference in information status is captured in the semantic representation.

It is much rarer to express agentive adverbials with impersonals than passives, and this follows from the semantic representation. The impersonal arbitrary term carries information of its own, and hence restricts the potential actors in *by*-phrases to those which are compatible with the semantics associated with the implicit impersonal argument. I return in Chapter 5 to the agentive adverbials allowed by impersonals, and demonstrate that the adverbials which are clearly grammatical are precisely those which entail the semantic properties associated with the impersonal A. Where $Actor(e) = A$ and $Actor(e) = \alpha$ allow an entailment relation, the agentive phrase is allowed. With passives, the agentive adverbial is less restricted, as $\emptyset$ carries no information, and the actor argument is not identified with any semantic content whatsoever.

4.4.3 Anticausatives

Of the various constructions discussed here, the anticausative and other derivational verb forms are the most lexical in nature. Van Valin & LaPolla (1997) discuss the distinction between lexical and syntactic phenomena, those which affect the logical structure of a predicate and macrorole assignment versus those which affect the morphosyntactic realisation of macroroles. In a sense, those lexical items whose argument structure is modified by the derivational process which produces them have their voice established previous to either of the above cases, more on a par with *Aktionsart*, an inherent property of a verb.

Nevertheless, I treat anticausatives as a voice phenomenon in that the choice of using an anticausative verb is governed by similar semantic-pragmatic conditions as that of using a passive (e.g. topicality of the NP, affectedness of the referent, and aspectual considerations). Also, the anticausatives have a linking pattern distinct from the counterpart causatives, which constitutes a voice phenomenon. The anticausative verbs are unlike the middles discussed in Van Valin & LaPolla (1997:416–17): they are not necessarily stative—indeed, more often inchoative achievements, or accomplishments—and they do not have any obligatory adverb as the English middle constructions do.

For instance, the causative-anticausative pair in (4.35) is related in its core predicate logical structure, and differs in the presence or absence of a CAUSE operator and pre-CAUSE element.

(4.35) a. Mari   üllatas   Peetrit
            M.NOM.SG surprise.PST.3SG P.PAR.SG
            Mary surprised Peter
            [do′ (Mari, ∅)] CAUSE [INGR **surprised′** (Peeter)]

        b. Peeter   üllatus
            P.NOM.SG surprise.ANTC.PST.3SG
            Peter was/got surprised
            INGR **surprised′** (Peeter)

The anticausative marker *-u-* gives as a minimum the information that the single argument is an undergoer. The absence of a **do′** element in the logical structure ensures that this argument is linked to an undergoer macrorole.

Van Valin & LaPolla's (1997) treatment of clitic reflexives ought to correspond to anticausative derivations, in that the semantics of both represent the core of the middle category as it is attested cross-linguistically (Kemmer 1993). Van Valin & LaPolla (1997) gives the following contrast to represent the Italian causative/ anticausative pair *aprire/aprirsi*:

(4.36) a. *aprire* 'open, trans.': [**do′** $(x, ∅)$] CAUSE [BECOME **open′** (y)]
        b. *aprirsi* 'open, intr.': [**do′** $(∅, ∅)$] CAUSE [BECOME **open′** (y)][9]

However, the corresponding constructions in Estonian are used precisely to express the absence of an external actor—not merely the unspecificity of the actor. The logical structure given in (4.36b) seems closest in meaning to a personal passive construction, not an anticausative, and indeed, this is close to the representation established so far for the passive, as the only difference between (a) and (b) is that the Actor argument x is demoted to $∅$ in (b). As Haspelmath (1993) observes regarding cross-linguistic data, "the most important semantic condition on inchoative/causative verb pairs is the absence of **agent-oriented meaning components**…Since the inchoative member implies the absence of an agent, it cannot contain agent-oriented semantic elements" (Haspelmath 1993:93, original emphasis).

Likewise, Davidson notes that "'The *Bismarck* was sunk' and 'The *Bismarck* sank' are not equivalent, for the second does not entail the first…[but] the first entails the second" (1980:125). Regarding the actor argument in the passive, Davidson notes that although the passive *the Bismarck was sunk* "has a logically intransitive

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[9]Van Valin & LaPolla (1997:417)

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verb, the passivity of the subject remains a feature of this verb distinguishing it from the verb of 'The *Bismarck* sank"' (1980:126). The concept of the actor argument is part of the interpretation of the passive construction, while the actor argument is entirely removed from the anticausative construction. This is crucial to the difference between the two constructions, and must be represented in the logical structure.

For the anticausative, the logical structure must do away with the actor element entirely, representing both spontaneous events and caused events as transpiring in, on, and because of the undergoer. Hence, only the last part of the logical structure above is necessary, as shown in (4.37).

(4.37)   BECOME **open**$'$ (y)

An anticausative verb, where the actual argument structure is reduced to a single argument, is clearly distinct from the semantically similar reflexive (where two arguments are identified with each other) or personal passive (where the actor argument is deleted or removed for discourse purposes, but understood to be part of the logical structure of the predicate). These distinctions are dealt with in greater detail in Chapter 5.

4.4.4   Generic Apersonals

The generic apersonals are on the peripheries of voice phenomena, but they are of interest regarding the question of demoted actor arguments. Two primary traits of the apersonal construction should be captured in the semantic representation. First, the unspecified actor has generic reference, and second, the predicate has a stative, modal potential nature. The interpretation of the actor referent as a generalised 'anyone' is most likely to be a pragmatic effect of the combination of a generic actor and modality. The modality expressed by generics does not always have to be that of possibility. Example (4.38) shows an apersonal with a modal of obligation or necessity, which stativises the predicate in a similar fashion to the modal of possibility.

(4.38)   oma   tööd   peab   armastama
          REF.GEN work.PAR.SG must.PRS.3SG love.INF
          one has to love one's work[10]

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[10]Erelt et al. (1993:40)

So, for this construction, I borrow the proposed logical structure put forth in Van Valin & LaPolla (1997) for middles of the English type, which applies to Estonian apersonal constructions better than the Estonian middle equivalent. Namely, the stativising predicate comes from a matrix state verb, either **be′** or a modal verb. This construction can also take a small number of more contentful verbs, such as *nägema* 'see', and these are then read to contain a modal element.[11] Even with examples of agentive verbs such as *koputama* 'knock', or *pöörama* 'turn' (4.39), the apersonal construction turns the actor argument into a *potential* actor, which could be read, then, as an undergoer of the modal, and the construction itself adds a semantic reading of modal possibility. Note, however, that verbs expressing high agentivity cannot easily occur in this construction.

(4.39) ajalooratast   tagasi ei   pööra
        history-wheel.PAR.SG back   NEG turn
        one can't (='no one can') turn back the wheel of time[12]

The potentiality and undergoer macrorole interpretation is arrived at through a pragmatic process of clause-level interpretation. The potential stative actor is in fact an undergoer of the modal clause, even when it functions as an actor of an active clause. In the absence of an explicit modal verb like *pidama* 'must' *võima* 'can', the default interpretation of apersonals is that of possibility and potentiality.

Additionally, the obligatory adjunct which has often been noted to occur in English middles is also present in Estonian generic apersonals. However, this can be explained by means of pragmatic interpretation, along the same lines as that given for the occurrence of obligatory adjuncts in Goldberg & Ackerman (2001). The apersonal predicates themselves (without a location or time adverbial) contain little or no informational value unless associated with a particular time or place, as in example (4.40), repeated from Chapter 3.

(4.40) torni   tipust   näeb   tervet   vanalinna
        tower.GEN.SG top.ELA.SG see.PRS.3SG whole.PAR.SG old-town.PAR
        you can see the whole Old Town from the top of the tower[13]

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[11]The common English expression *I can't see it* as opposed to *I don't see it* is not expressed in Estonian with a modal verb, suggesting that *nägema* 'see' itself can contain a modal meaning.
[12]Erelt et al. (1993:227)
[13]From a tourism brochure

It is for making a communicatively relevant contribution, then, that the adjunct is obligatory, and not for syntactic reasons. Because the pragmatic explanation is so compelling, the adjunct is left out of the logical structure here. The logical structure refers to the clause itself. In order to contribute a pragmatically relevant and suitable utterance, some sort of contextual information is added. Note that in example (4.41), also repeated from Chapter 3, no adjunct is given, as the context is provided by the deictic situation of the utterance.

(4.41)   noh, kas koputab,   või?
         well INT knock.PRS.3SG or
         should we knock, or what?

I begin with the logical structure proposed for middles in Van Valin & LaPolla (1997:416–17).

(4.42)   **be′** [(([**do′** (∅, ∅)] CAUSE [BECOME **open′** (y)]), **possible′**]

This representation, however, is problematic for argument linking. For middles, the undergoer argument is linked to the PSA, which is achieved by the logical structure in (4.42). In apersonals, the indefinite, unspecific actor represented by ∅ is not morphosyntactically coded, but it does not leave the argument slot empty, and it does not abdicate the PSA position to the undergoer. It is non-overt, but receives its interpretation through pragmatic interpretation of the clause and its location adverbials or deictic context. The undergoer is mapped to object encoding and does not become the PSA. The actor, although generic, is encoded by the non-informational default third person singular verb inflection.

The logical structure must therefore represent the unexpressed (but undemoted) actor by some other means than ∅, in order to avoid the undergoer being mapped to PSA. I assign the potential actor an actor variable, **a**, which designates that the argument is filled. Now the event variables come into play again. The 'anyone' interpretation of the arbitrary term **a** refers to an actor of the verb in question, and in the case of a bivalent verb, there can only be one undergoer and one actor. However, I have mentioned that the interpretation of the clause connotes a modal undergoer referent. I propose that where the apersonal expresses an event, this should be embedded in a state, with the modal interpretation taken from the construction as a whole (as in 4.43).

(4.43) s : **be′**([e : **pred′** (a, y)], **possible′**)

The actor of the predicate designated by the verb is associated with the under-goer of the state, a clause-level construction. This actor can only get its interpre-tation from a discourse or real-world context, rather than any anaphoric read-ing. This actor, with no phonological content, is then supplied with a reading of 'anyone within the specified scope of the utterance'. Like the impersonal actor argument, the apersonal a is exophoric. Unlike the impersonal A, the apersonal a contributes no semantic information, even receiving its interpretation as human from context and pragmatic inference.

The important contribution made here by neo-Davidsonian semantics is the abil-ity to refer to the event within the logical structure. The state is given its inter-pretation through reference to the event, but the undergoer interpretation of the actor of the event comes from its embedding in a state. The notation in (4.43) is reduced to the RRG semantic representation with the addition of an event label. This is derived from the representation in (4.44a). The representation in (4.44a) is equivalent to that in (4.44b) with the event representation inserted into the logical structure of the state.

(4.44)   a. $s : \mathbf{be}'(e, \mathbf{possible}')$
              $e : \mathbf{do}' \ (a, \ [\mathbf{pred}' \ (a, \ y)])$
          b. $s : \ \mathbf{be}'([e : \mathbf{do}' \ (a, \ [\mathbf{pred}' \ (a, \ y)])], \ \mathbf{possible}')$

It is also possible to analyse other personless constructions with default third person singular verb inflection along these same lines. Both weather predicates (which never take an overt nominative argument) and experiencer predicates express activities experienced as background states. These true zero subjects in-clude physiological predicates with adessives experiencers (e.g. *iiveldama* 'nau-seate', *tuikama* 'throb') and various verbs with modal semantics, also often occur-ring with adessives (e.g. *tulema* 'must (lit. come)', *tarvis olema* 'be necessary').

I do not go into detail about the potential analysis of these default 3SG predi-cates but note that the analysis above has application beyond just the apersonal reading of 3SG verb forms. The fact that the analysis blocks the mapping of the undergoer or second argument to a PSA position is important for the extension of this analysis to other 3SG constructions, such as the weather predicates, which often take a non-MR inherent object, as shown in (4.45). This non-MR object re-mains an object, although there is no nominative subject to impede promotion. The analysis above can be used to explain these facts.

(4.45) sajab   vihma/ lund
        rain.PRS.3SG rain.PAR/ snow.PAR
        it's raining/ it's snowing

It is also relevant that the interpretation of the apersonal referent as 'anyone' (and as a generic human referent) only occurs at the clausal level and as an inferential process. This then also allows the *non*-interpretation of the referent as generic and human, with weather and physiological predicates.

4.5   Classes of Restrictions

The restrictions on which verbs are amenable to a particular valency-modifying construction can be important clues for the analysis of that construction. This section looks at patterns of restrictions and what these restrictions tell us about the voice system.

4.5.1   Lexical Restrictions

The most general and consistent restriction on impersonalised verbs is a semantic one. Verbs which disallow a human referent for their highest argument (be it actor or undergoer) cannot be impersonalised, and this restriction covers a wide range of verbs such as *käänduma* 'decline (grammatical), intr.', *helisema* 'ring, intr.', *koitma* 'dawn' and *aeguma* 'expire' (Löflund 1998). Certain verbs can be borderline in that although they are not typically associated with human actors, they can participate in an impersonal construction through either metaphor or personification of the actor referent. This presupposes a more basic restriction, namely that the verb must take at least one argument.

An interesting case for both of these restrictions is the verb *sadama* 'rain', a zero-place predicate with no semantic actor, let alone a human actor, nor any syntactic argument place-holder. Nevertheless, a metaphorical usage of this verb allows both, borrowing the meaning of the basic verb but adopting a logical structure with an argument, as well as adapting the semantics of the verb. The impersonal given in example (4.46) is entirely grammatical.

(4.46) ja siis sajatakse   niimoodi ootamatult   sisse
        and then rain.IMP.PRS thus   unexpectedly in.ILL
        and then people start raining in on us, unexpectedly like this

The logical structure for such an example is not complicated, simply adding an argument to an otherwise zero-place predicate, as shown in (4.47). As the acceptability of this metaphorical use of zero-place predicates is fairly restricted,

(4.47)   *sadama:* **rain′** $\longrightarrow$ **rain′** (*A*)

The other grammatical restriction is that the impersonal can only fill an argument slot which would be assigned nominative case. This can be described as a lexical phenomenon, namely that it must be the highest macrorole argument, as only NPs realising macroroles can take nominative case in Estonian.

Inverse semantic relations make the impersonal less available, sometimes requiring adjuncts adding context to aid in a grammatical reading, and sometimes resulting in outright ungrammaticality. However, this seems to be closely associated with the requirement for a human referent on the one hand, and the strong preference for the impersonal referent to fill the highest argument slot on the other hand. When the nominative argument, or the syntactic pivot, is not the same as the highest semantic role, then the impersonal semantics often conflict with what would seem to be the natural reading.

Rajandi (1999) notes that *huvitama* 'interest', a verb with inverse semantic relations, is ungrammatical with the impersonal (1999:70).

(4.48)   *teda   huvitati
          3SG.PAR interest.IMP.PST
          'one'/people interested him/her

However, another verb with inverse semantic relations, which at first sight seems ungrammatical with a contextless impersonal, is *meelditakse* 'one pleases'. Yet this verb is generally accepted in a context such as that given in (4.49).

(4.49)   üksteisele   meelditakse
          each-other.ALL please.IMP.PST
          one liked one another

Many verbs whose semantics might seem to be at odds with the impersonal do accept it. Non-volitional, non-active verbs often readily impersonalise, giving the clause an emphasised reading of plurality, for instance. The restriction

against psych verbs with inverse semantics, however, must be lexical and not syntactic, as various psych predicates can easily be impersonalised.

The example of the inverse-relation pair *kartma* 'fear' and *hirmutama* 'scare' shows that this restriction is not a syntactic one. Although the undergoer argument of the transitive *hirmutama* is ensured to be human (or animate) more often than the actor argument, nevertheless both these verbs are unproblematic with the impersonal. The use of the impersonal assures that the reading of the verb is of an intentional action with a human actor. This is a reading which is not easily accessible with the stative verbs *meeldima* 'please' and *huvitama* 'interest'.

If the impersonal is used with a predicate or in a context in which some usual aspect of its meaning is ruled out, then the other elements of impersonal semantics must be all the more strongly asserted. The assumption of relevance requires that the impersonal verb forms be justifiably used for some contextual effect. If volitionality is overridden, then a plural and general actor is strongly implied. Frajzyngier (1982) notes that the use of Polish forms ending in *-no* and *-to* "implies a non-stative meaning, a willed action, even when used with inherently stative verbs" (1982:274). The same observation tends to hold with Estonian impersonals.

An example of a non-volitional verb used with a general impersonal meaning is (4.50a). The same verb, again impersonalised, is given an almost volitional connotation in (4.50b), a piece of advice to novice skiers.

(4.50) a. kõige harvemini **kukutakse** juunis,   13–15 korda vähem kui
            most seldom   fall.IMP.PRS June.INE 13–15 times less   than
            talvekuudel
            winter-month.ADE.PL
            people fall least in June, 13–15 times less than in winter months[14]
        b. mida   rohkem alguses   **kukutakse**, seda   oskuslikumalt
            what.PAR more   beginning.INE fall.IMP.PRS that.PAR more-skilled
            suudetakse   hiljem seda   vältida
            succeed.IMP.PRS later   it.PAR avoid.INF
            the more one falls in the beginning, the more skilfully one will be able to
            avoid it later on[15]

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[14]www.cl.ut.ee (newspaper0024)
[15]www.inrekopress.ee/ST/St2_99/kajak.htm

As Sperber & Wilson's (1995) second communicative Principle of Relevance states, "Every act of ostensive communication communicates a presumption of its own optimal relevance" (Sperber & Wilson 1995:260). The Relevance Theoretic notion of minimum necessary effort plus adequate effect accounts nicely for the contextual effects of non-prototypical impersonal usage. Hearers "automatically process each new item of information in the context in which it yields a maximum contextual effect for the minimum cost in processing" (Blakemore 1987:59).

If humanness is only metaphorically implied, then agentivity or volitionality is inferred as being emphasised. In contexts where the impersonal is used to refer to a specific group of known individuals, for instance, then an available interpretation of impersonal usage is that it avoids personal reference in a stylistically marked way, as in example (4.51).

(4.51)   (kuidas see siis nüüd nii on, et)
         kavatsetakse   täis kõhu   ja   kaine peaga   pulmi
         intend.IMP.PRS full stomach.GEN and sober head.COM wedding.PAR.PL
         pidada?
         hold.INF
         (how is this now, that) 'one' is planning to have a wedding with a 'full stomach'
         and a sober head?[16]

Unsurprisingly, the secondary feature of agentivity is easier to override, given appropriate non-agentive verbal semantics, than the primary feature of humanness. The impersonal does not require an actor macrorole, but it does fill the highest-status argument, and there is a preference for that argument to be highest-ranking both syntactically and semantically.

Finally, the requirement that the impersonal argument be nominative is the primary syntactic factor in restrictions on impersonalisation. Grammatically apersonal verbs, those which take default third person singular agreement and do not have a nominative subject, cannot impersonalise. These can be lexically determined, as with *iiveldama* 'feel nauseous' (example 4.52a–b), or constructionally, as with the necessive construction in (4.52c–d), which uses the verb *tulema* 'come' with a grammaticalised necessive meaning.

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[16]From an email (personal communication), written as a response to an announcement of both pregnancy and an imminent wedding.

(4.52) a. mul   iiveldab
            1SG.ADE feel-nauseous.PRS.3SG
            I feel nauseous (lit: 'at-me' [it] is nauseous)

        b. *iiveldatakse
            feel-nauseous.IMP.PRS
            people feel nauseous

        c. mul   tuleb   minna
            1SG.ADE come.PRS.3SG go.INF
            I have to go (it is necessary for me to go)

        d. *tullakse   minna
            come.IMP.PRS go.INF
            people have to go

Although these examples contain a human core argument, it is not a macrorole and it is expressed in the oblique, which blocks it from being accessible to impersonalisation.

Note, however, that although there are syntactic restrictions on the impersonal, they all fall under the rubric of lexical phenomena, as they are concerned with the logical structure of a predicate and actor/undergoer assignment. The issue of nominative arguments is also classified as a lexical restriction, since the oblique arguments are not macroroles. The oblique case is assigned in connection with a core argument not associated with a macrorole. In fact, the analysis of predicates presented thus far predicts the restrictions on impersonalisation to be of a lexical variety, because impersonalisation is a lexical phenomenon, argument-modulating but not PSA-modulating. It follows that the personal passive is likely to have syntactic restrictions regarding linking.

4.5.2 Syntactic Restrictions

In his discussion of the differences between impersonal and personal passives, Rajandi (1999) refers to the different verb types accessible to each construction, noting that "the circumstances of a verb having a personal *tud*-construction do not at all ensure that it also has an impersonal (and vice versa)" (1999:70). He cites the fact that different verbs are amenable to the different constructions as support for distinguishing the two constructions, but he gives no explanation of what linguistic phenomena lie behind the particular examples given, nor any suggestion as to what class these examples represent.

His example of a verb which is ungrammatical with the impersonal is given above in example (4.48). I have noted that personal passives can only take two-place verbs. But even within bivalent verbs, there are groups of verbs which are ungrammatical when passivised. The verb given by Rajandi (1999) which cannot appear in the personal passive construction (but can appear in the impersonal) is given in example (4.53a–b).

(4.53) a. *õnnetus   oli   aimatud
            accident.NOM.SG be.PST.3SG sense.2PTC
            the accident was sensed/guessed at
        b. aimati   õnnetust
            sense.IMP.PST accident.PAR.SG
            people guessed an accident/one imagined there'd been an accident

There is no explanation for why this verb is ungrammatical in the personal passive in Rajandi (1999). However, these facts fall out of the RRG analysis with no further stipulation: the puzzle of bivalent verbs which cannot be passivised is easily explained by the theory of macroroles. *Aimama* is an activity verb that only takes a partitive object—an unaspectual verb. Recall from section 4.2 that most bivalent activity verbs only take one macrorole argument. Note that the verb in question ('sense, divine, guess') has low-transitivity semantics (e.g. no kinesis, volitionality, or affected O). And finally, note that the object can only take partitive case, which has been shown to be associated with low transitivity in Chapter 2. It is safe to say, on analogy with previous examples of similar verbs, that this object is not assigned an undergoer macrorole but is, rather, an inherent argument, characterising the verb rather than any effect on its referent. And so, the seemingly odd sub-classification of bivalent verbs which do not passivise is in fact accounted for by the notion of macroroles. It is not only variable verbs like *sööma* 'eat', examined in section 4.2, but also invariable bivalent verbs with only one MR, which do not allow passivisation.

How can we be sure, however, that the ungrammaticality of the personal passive is not determined by the case-marking of the object with these verbs rather than its macrorole assignment? Take the following two examples, both of which involve simple predicates and verbs which can only take a partitive patient, *nägema* 'see' and *üllatama* 'surprise'. The construction in (4.54b) can be judged grammatical as a predicative adjectival construction. Rajandi (1999) argues that the Estonian personal passive is distinct from an adjectival construction. In its grammatical, adjectival sense, the construction is not truth-conditionally equivalent to

(4.54a), but rather adopts a salient feature of affectedness, implying not merely 'you are seen' but also 'you are caught'. The use of # in this example is meant to signal the infelicity of the construction with the intended meaning.

(4.54) a. ma   nägin   sind
            1SG.NOM see.PST.1SG 2SG.PAR
            I saw you

        b. #sa   olid   nähtud
            2SG.NOM be.PST.2SG see.2PTC
            you were seen

The difference in these readings gives more weight to the macrorole analysis. When passivised, the promoted argument seems to be forced into a macrorole position and hence is given the higher-transitivity role of affected undergoer. *You are seen* may be considered neutral as to the affectedness of the patient, while *sa oled nähtud* has a strong implication of being seen when you would not want to be or despite precautions, as in a game of hide-and-seek: seen *and* affected.

Examples (4.54a-b) show that the verb *nägema*, which can only take a partitive object, cannot be passivised without a change in lexical semantics. Examples (4.55a-b), on the other hand, give evidence that not all partitive verbs have this restriction.

(4.55) a. ma   üllatan   sind
            1SG.NOM surprise.PRS.1SG 2SG.PAR
            I surprise you/ I'll surprise you

        b. sa   oled   üllatatud
            2SG.NOM be.PRS.2SG surprise.2PTC
            you are surprised

The distinction is that 'see' is a state, and its patient argument is not mapped to an undergoer macrorole. 'Surprise' is an achievement, whose patient *is* mapped to undergoer. The verb *üllatama* 'surprise' also takes only a partitive object, but this object nevertheless fills the MR requirement. The undergoer patient, although it is marked with the low-transitivity partitive case, does not resist being promoted to subject in a passive, whereas the partitive patient of 'see' cannot be promoted in this way. It can only take a fully adjectivalised past participle. This difference has semantic underpinnings, in that the personal passive is closely related to resultativity in Estonian. If the O remains unaffected by the verb and no result

state can be expressed, then there are semantic barriers to passivisation. With an achievement verb, the patient typically enters into some result state, fills an undergoer macrorole, and is available for promotion to PSA in a personal passive. One example of Rajandi's (1999) poses a challenge to the macrorole analysis. Rajandi brings up the interesting example repeated here in (4.56, 1999:95).

(4.56) a. hullus   oli   teeseldud
            madness.NOM.SG be.PST.3SG pretend.2PTC
            madness was feigned
        b. *hull   oli   teeseldud
            madman.NOM.SG be.PST.3SG pretend.2PTC
            (a) madman was feigned

Both of these examples are grammatical in an active clause, and it would not be justified to claim that in one, the patient of the verb is an undergoer, whereas in the other, it is not. However, I believe this example owes its peculiar grammaticality to a slightly different parameter, namely that of definiteness. The noun in (4.56a) denotes an abstract referent, one which is most naturally interpreted as indefinite and unspecific. The noun in (4.56b), on the other hand, is an individual count noun, most commonly referring to a specific individual. In a passive construction, the noun is expected to be topicalised and salient, and hence the noun which *can* have a definite interpretation *is expected to* have this interpretation in a passive construction. Here, however, it cannot denote a particular madman, but rather the condition of being a madman, which is simply incompatible with the pragmatic interpretation of the passive construction.

4.6   Unaccusativity

This section looks at the difference in interpretation between impersonals formed from the class of verbs known as unaccusatives, and those formed from verbs known as unergative. The effect of unaccusativity is not a matter of lexical restrictions, but rather of diverse pragmatic effects. The distinction between the effects discussed is not clear-cut, but the data is suggestive and merits some discussion. Intransitive verbs have long been classified into two types: those whose single argument behaves like canonical transitive actors do, and those whose argument behaves like transitive undergoers do. The Unaccusative Hypothesis defines this phenomenon syntactically (see Perlmutter 1978, Burzio 1986, Levin

& Rappaport Hovav 1995). Van Valin (1990) gives a semantic analysis of the same phenomena, using the RRG framework.

The Unaccusative Hypothesis stems from the observation that in many languages, various tests divide intransitive verbs into two classes. These tests include auxiliary selection (e.g. in Italian), nonsubcategorised objects (e.g. *make one's way*), and locative inversion. None of these are successful tests when applied to Estonian (Tamm 1998), as there is no variability in auxiliary selection, no *make one's way* construction, and locative inversion is too generally used to be useful as a diagnostic. Nevertheless, the distinction can be upheld in Estonian as well, on the basis of at least the resultative construction. Tamm (2003) provides an analysis of unaccusativity in Estonian, and demonstrates that the resultative construction, and its ability to take various types of objects not encoded in the verb's logical structure, distinguishes between an unaccusative and an unergative verb class (examples are given below). She also examines the question of whether this distinction might account for the set of monovalent verbs which allow partitive PSAs, forming the existential construction. Those verbs, however, are a much smaller set (though they probably all come under the unaccusative umbrella), and can be defined on semantic grounds (Nemvalts 1996). However, Tamm gives the warning that "perhaps the nature of the phenomena the Estonian tests are sensitive to is different from what has been understood under unaccusativity" (2003:9). Although data from the resultative construction has been analysed as supporting the so-called Direct Object Restriction (D.O.R., Levin & Rappaport Hovav 1995), the D.O.R. has also been shown to be a red herring, a syntactic explanation for an inherently semantic phenomenon. Rappaport Hovav & Levin (2001) later give an event structure account of the same behavior which the D.O.R. is meant to account for, and present a case for both why the syntactic D.O.R. is so appealing, and why it fails.

Unaccusative verbs, such as *fall, freeze, exist,* have been syntactically defined as having a subject which is an underlying direct object, and unergative verbs, like *work, speak, cough,* are those whose surface subject is not derived from object position, but is a true ('deep') subject. In fact, this distinction does not need to rely on transformational syntactic structure, but can also be characterised by the twin semantic notions which underlie RRG, namely the aspectual class of verbs and macroroles. Semantic accounts have failed because they tend to only look at the question of whether the semantic role of the intransitive argument can provide a uniform explanation for the behavior of these verbs. Van Valin

(1990) demonstrates that these two parameters, taken together, do in fact provide a powerful explanation for much of the unaccusativity phenomena, or the split intransitive verb behavior, as well as its cross-linguistic variation.

The basic data in which Estonian exhibits split intransitivity are given in example (4.57a–b), taken from Tamm (2003). The resultative constructions which cannot take any kind of direct object are shown with the unaccusative *kukkuma* 'fall' (4.57a). The unergative, with a pleonastic reflexive as direct object, is given with *köhima* 'cough', in example (4.57b). These judgments are robust.

(4.57) a. raamat   kukkus   (*end)   laua   alla
            book.NOM.SG fall.PST.3SG (self.PAR.SG) table.GEN.SG under.ALL
            *the book fell (*itself) under the table*
        b. tudeng   köhis   *(end)   hingetuks
            student.NOM.SG cough.PST.3SG self.PAR.SG breathless.TRL
            the student coughed him/herself breathless

In (4.57b), the resultative phrase is predicated of the fake reflexive, and cannot appear without it. In (4.57a), the resultative phrase is predicated directly of the subject argument, and the construction does not allow a fake reflexive.

Van Valin observes that "the constructions allowing resultative phrases are either accomplishments [*wiped the table clean, talked himself hoarse*] or achievements [*froze solid*], all of which code a result state as part of their inherent meaning. Activity verbs, which are inherently atelic and therefore cannot in principle code a result state or have an undergoer argument, do not take resultative phrases" (1990:255). The resultative phrase is predicated of an undergoer argument in each case, which is why the fake reflexive is unnecessary and ungrammatical with unaccusatives, as in (4.57a) above, and (4.58b) below.

Other resultative phrase objects in addition to the fake reflexives also occur, as in English, as shown in (4.58a). Unaccusatives, again, do not allow these objects (4.58b).

(4.58) a. tudeng   köhis   oma   hääle   kähedaks
            student.NOM.SG cough.PST.3SG self.GEN voice.GEN.SG hoarse.TRL
            the student "coughed his voice hoarse"

b. inimesed külmusid (*oma käed) jääpurikaks
people.NOM.PL freeze.PST.3PL self.GEN hand.NOM.PL icicle.TRL.SG
*people froze (*their hands) into icicles*[17]

Once a class of unaccusative verbs can be established in Estonian, there is an interesting interaction between unaccusativity and impersonalisation.[18] Torn (2002) demonstrates that "the Estonian impersonal is, unlike passives, insensitive to the contrast between unaccusatives and unergatives" (2002:97). Blevins (2003) also discusses impersonal forms of unaccusatives as evidence that the Estonian impersonal is not a type of passive.

Although the impersonal construction can apply to both unaccusative and unergative intransitive predicates, impersonals formed from canonical agentive verbs and canonical unaccusative verbs show some interesting differences in interpretation.

(4.59) a. lahinguväljal külmuti ja surdi
battlefield.ADE freeze.IMP.PST and die.IMP.PST
all/(?some) people on the battlefield froze and died

b. baaris lauldi ja köhiti
bar.INE sing.IMP.PST and cough.IMP.PST
all/some people sang and coughed in the bar

Impersonals formed from canonical unaccusatives (4.59a) carry a strong implication of "everyone" within the scope of the predicate associated with the implicit argument, whereas with impersonalised unergative, or agentive, verbs (4.59b), the interpretation of a single actor, or a subset of the possible scope of the impersonal referent, is easily available as an interpretation. Why should this be?

The argument of an unaccusative verb is an undergoer, while that of an unergative or agentive verb is an actor. Impersonals are most naturally used, and are least marked, with agentive verbal semantics. As shown in section 4.5.1, when an impersonal is used with a verb which bars agentivity, the other aspects of impersonal semantics come more to the fore. A hearer assumes, as per Relevance Theory (Sperber & Wilson 1995), that there must be a reason for the speaker to use the impersonal, and so the various aspects of impersonal semantics are tested

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[17]Examples (4.57) and (4.58) all from Tamm (2003:9–10)
[18]I owe this observation to Diane Nelson (p.c. 2002), who pointed out to me the same phenomenon in Finnish.

with the logical structure and the context of utterance. If agentivity is overridden, then plurality and generality become more important in the interpretation. Impersonal verbs are intrinsically associated with agentivity. Estonian allows impersonals to be used with a much broader range of verbs than merely agentive ones, but relevance constraints come into play. The unaccusative impersonals receive a strong interpretation of plurality and mass reference precisely because of the markedness of using an unaccusative verb in an impersonal construction: the usage must carry something of the impersonal semantics, and so the human referent is given a forced broad scope interpretation.

4.7   Conclusion

The concept of valency connects the semantic argument requirements of a verb and the syntactically expressed arguments. Semantic valency refers to the number of core arguments specified in a verb's logical structure, while syntactic valency is the mapping of the logical structure to a particular predicate expressing some or all of the arguments associated with the verb, and their morphosyntactic realisation.

The analysis of valency changing operations presented in this chapter implicitly contains two semantic levels of representation. One can be described as that belonging to the lexicon, representing the abstract valency slots associated with the lexical semantics of a verb. This is the argument structure of a verb which must be acquired along with the verb itself in language acquisition.

The other level of semantic representation is a construction-specific representation, which can contain modulations of the inherent valency of the verb, as well as containing fully specified arguments. This is the semantic representation of the verb in use, interacting with the information structure and various macrorole-assigning rules of the language. The information expressed here is not syntactically formed, but it provides the basic semantic representation which is then linked to a syntactic expression through linking rules. The linking rules can apply automatically if the semantic representation is assumed to contain such a rich structure. After syntactic template selection, information structural rules apply, and pragmatic clause-level ordering occurs at this stage.

Van Valin & LaPolla (1997) do not explicitly refer to two levels of semantic representation, but they appear to be necessary in order to represent the structure

of voice operations in a logical form. As the syntactic structure of RRG merely mirrors the surface expression, the logical structure of the particular constructions must be stored somewhere. It seems to be consistent with the assumptions and mechanisms of RRG to store it in a rich semantic level of information. These various levels could be described as the abstract lexical information, the semantic representation of a construction, the syntactic expression of the construction, and the pragmatic inferential level of information. The following chapter takes the various voice constructions of Estonian up on these various levels of information, investigating in what way and to what extent the implicit argument in each is demoted. This provides more motivation to view linguistic structure as a layered phenomenon.

5

Status of Arguments

Chapter 4 presents a representation of the logical structure of four valency-modifying constructions in Estonian. These structures already expand upon the RRG notion of what the semantic representation is meant to contain, which is limited to representing "the event-structural properties of predicates, along with their arguments," and does not include, for instance, "the semantic differences associated with presuppositions at all."[1] I adopt the view, however, that if one is to discuss such processes as passivisation, then the discussion has to include some pragmatic issues, including inferences and discourse-level effects. Indeed, interpretations of some of the voice constructions examined here are distinguished primarily on a pragmatic level, and the choice between various constructions crucially involves syntactic, semantic and pragmatic considerations. As the concepts of voice and passivisation are included in Van Valin & LaPolla (1997), there seems to be no reason not to include the other constructions under investigation. But in order to analyse and represent the distinctions between constructions, syntactic, semantic, and pragmatic evidence must be considered and must be allowed in the representation of the constructions (cf. Dynamic Syntax, Kempson, Meyer-Viol & Gabbay 2001, for similar arguments).

While Chapter 4 focusses on the verb as the nucleus of a clause, and as the central element in voice operations, the current chapter discusses the arguments affected by valency-modulation. Operations which change the valency of a verb have a direct effect on the status of the arguments in a clause, on morphosyntactic, semantic, and pragmatic levels. This chapter reviews canonical subjecthood

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[1]Robert Van Valin, from discussion on the Role and Reference Grammar Discussion List, 2. May, 2003.

in Estonian, as manifested by case-marking and syntactic behavior. The question of promotion is then raised, comparing the undergoer arguments in various valency-changing operations with each other and with the arguments of transitive verbs in active clauses. The central issue of demotion is then examined, and suppressed arguments are compared across constructions for their syntactic status and psycholinguistic salience. Evidence from discourse behavior such as anaphoric reference is called upon. Finally, a hierarchy of demotion, or hierarchy of implicit arguments, is established; the claim is made that a secondary hierarchy of promoted arguments can be derived from the primary demotion hierarchy, and that both follow from the logical structure representations developed in Chapter 4.

5.1 Subjecthood

This section takes as its premise that the canonical PSA in Estonian is robust and exhibits cross-linguistic subject properties. It is the *canonical* PSA (S, A) which I investigate here, as the question of promotion of an undergoer argument cannot be compared to such peripheral PSAs as existential or experiencer arguments, but rather the canonical active subjects. One question to be asked in this chapter concerns which of the constructions investigated exhibits a derived S, in all of the properties pertinent to the definition of S. This section reviews coding and behavioral properties of subjects.

5.1.1 Coding

As has been noted, nominative case is unmarked in Estonian. Although it is the default subject case, it is also used to mark a number of other relations, particularly for macrorole undergoer arguments in contexts where there is no nominative subject, and so where no ambiguity in grammatical relations results from the use of nominative for non-subjects. Objects of imperatives (5.1a) and objects of some infinitives provide examples of nominative case-marking for object NPs (see Chapter 2 for more on this). The nominative case, used in these affirmative subjectless constructions for marking total objects, alternates with partitive case for marking partial objects and for marking objects in negative clauses (5.1b). These nominative NPs are not subjects, as they do not take nominative case under negation and do not function as PSAs in any way, not triggering verb agreement or any other control relation.

(5.1)   a.   varasta   see   raamat
                steal.IMV this.NOM book.NOM.SG
                steal this book

        b.   ära   varasta seda   raamatut/ (*see   raamat)
                NEG.IMV steal   this.PAR book.PAR.SG this.NOM book.NOM.SG
                don't steal this book

In addition, recall that total objects which are plural in number are always nominative, and so cases do occur where a clause contains two nominative NPs, as shown in (5.2), in this case creating the possibility of a confusion of grammatical relations. With intonation and discourse context, (5.2) could be used to mean either of the sentences given as translations, particularly because the human NP higher on the animacy hierarchy occurs post-verbally.

(5.2)   vankrid   tõid   talumehed   kohale
            wagon.NOM.PL bring.PST.3PL farmer.NOM.PL place.ALL.SG
            the wagons brought the farmers/ the farmers brought the wagons to the spot

Nominative subjects can usually be distinguished from nominative objects by the fact that they trigger verbal concord and only subjects remain nominative under negation. Hence, certain pitfalls must be avoided in determining subjecthood. As nominative case is used systematically in Estonian to mark both subjects and objects, the use of nominative case in voice constructions is particularly problematic. It is not always clear whether these constructions involve promotion of the undergoer argument to subject or if nominative object marking is simply used in the absence of any grammatical nominative subject NP.

Nominative case is thus not sufficient as a test of subjecthood. As to whether it is a necessary condition or not, the answers vary. Sands & Campbell (2001), for instance, regard the partitive NPs of intransitive existential constructions as more object-like than subject-like, but this is a much-debated issue. These are probably the only non-nominative NPs which are contenders for subjecthood in Estonian. I hold that the partitive existential NPs have at least as much in common with objects as with subjects; they do not seem to function as pivots, nor as controllers, although this is probably due to the information structure of existential clauses. However, it is not necessary to resolve the question of partitive existential clauses in order to examine the subjecthood of the arguments in the valency-modifying clauses.

5.1.2 Syntactic Behavior

As noted in Sands & Campbell (2001), "it is notoriously difficult to develop diagnostic tests for subjecthood and objecthood in Finnish, and the sort of syntactic and semantic criteria utilized in work on other languages generally cannot be used as diagnostic in Finnish" (2001:252). Vihman (1999) demonstrates that this is true for Estonian as well, and that many tests which work quite well for subjects are also possible with objects, at least in some circumstances. This applies at least to coordination and reflexivisation.

Coordination

Coordination is most acceptable with subject-subject or object-object coreference. However, coordination and coreference are sensitive to case as well as grammatical relations in Estonian, as example (5.3) demonstrates, with coordination of impersonal undergoer arguments, where two overt NPs with the same grammatical relation are not allowed to coordinate because of a mismatch in case-marking.

(5.3)   a.   #pulma   kutsuti   Peeter   ja meid
                  wedding.ILL.SG invite.IMP.PST Peter.NOM and 1PL.PAR
                  Peter and we were invited to the wedding[2]

        b.   Peeter kutsuti   pulma
                  P.NOM invite.IMP.PST wedding.ILL.SG
                  Peter was invited to the wedding

        c.   meid   kutsuti   pulma
                  1PL.PAR invite.IMP.PST wedding.ILL.SG
                  we were invited to the wedding

        d.   meid   kutsuti   koos   Peetriga pulma
                  1PL.PAR invite.IMP.PST together Peter.COM wedding.ILL.SG
                  we were invited to the wedding along with Peter

        e.   pulma   kutsuti   Peetrit ja meid
                  wedding.ILL.SG invite.IMP.PST Peter.PAR and 1PL.PAR
                  Peter and we were invited to the wedding

The mismatch in case here is caused by the fact that the first and second person pronouns have a different system of case-marking than third person pronouns and full NPs, in that they lack a nominative object case (see section 2.1.3). Hence, an impersonal clause with two coordinated total objects assigns nominative case

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[2]Rajandi (1999:67, fn39)

to the full NP, while assigning partitive case to the first person pronoun. Although the separate impersonal constructions with each undergoer NP are grammatical in their own right, the combined construction is awkward enough that speakers of Estonian avoid using it. Rajandi (1999) considers (5.3a) grammatical but infelicitous, since each construction on its own (5.3b–c) is grammatical, but he claims that "any slightly linguistically style-conscious person will attempt to somehow rephrase the clause, for instance [as (5.3d)]" (1999:67, fn39). An informant of mine went so far as to change the total object to partial object in order to avoid the case mismatch, as in example (e).

As shown in example (5.4), coreferential pronominalisation and deletion are possible with subjects and objects, though deletion is allowed cross-clausally only with subject-subject coreference.

(5.4) a. Mari$_i$ suudles Toivot$_j$ ja siis ta$_{i,j}$ läks minema
     M.NOM kiss.PST.3SG T.PAR and then 3SG.NOM go.PST.3SG go.INF
     Mari kissed Toivo and then s/he went away

    b. Mari$_i$ suudles Toivot$_j$ ja siis $\emptyset_{i,*j}$ läks minema
     M.NOM kiss.PST.3SG T.COM and then $\emptyset$ go.PST.3SG go.INF
     Mari kissed Toivo and then went away

Although both readings of (5.4a) are possible, the preferred reading in the absence of exceptional contextual or intonational clues is that of subject coreference ('she went away').

Reflexivisation

Reflexivisation gives similarly ambiguous results, indicating a preference to subjects but not a categorical resistance to objects, and hence is not a reliable test for subjecthood. Erelt et al. (1993) describe reflexives as being co-indexed with the actor argument referent (1993:201). Objects as well as subjects can sometimes serve as antecedents for reflexive pronouns, although it is much more common with subjects, in part because of topicality and the presuppositions associated with subjects, as well as the fact that reflexive pronouns are most commonly used as objects indicating that the subject argument referent is both actor and undergoer of the event denoted by the verb. Example (5.5a) shows the canonical reflexive pronoun referring to the actor referent. The examples in (5.5b–c) show that a reflexive in a subordinate clause can refer to either the actor of the embedded clause or that of the matrix clause.

(5.5) a. Jüri$_i$ peseb   ennast$_i$
           J.NOM.SG wash.PRS.3SG REF.PAR
           Jüri is washing himself[3]

       b. aastate   koorem$_k$ sunnib   igaühte$_j$ ennast$_j$
           year.GEN.PL burden.NOM.SG force.PRS.3SG everyone.PAR.SG REF.PAR
           sagedamini peeglist   vaatama
           more-often mirror.ELA.SG look.INF
           the burden of time forces everyone to look at him/herself more often in the mirror

       c. televiisor$_l$ toanurgas   kutsub   igaühte$_m$
           TV.NOM.SG room-corner.INE.SG invite.PRS.3SG everyone.PAR.SG
           ennast$_l$ vaatama
           REF.PAR look.INF
           the TV in the corner of the room draws everyone to watch it

The referent of a reflexive must be a controller, but it is not always evident that it is a subject, as shown by the difference between (5.5b) and (c). Nevertheless, Keenan's (1976) claim that these tests apply "at least" to subjects is valid here. In other words, to claim that a particular NP argument is a subject, it must be possible to demonstrate that these tests produce grammatical constructions with the NP in question. Acting as controller in these constructions or a construction with a control verb is evidence in support of subjecthood, though it does not rule out the possibility of objecthood or something else. Hence, the tests are useful in determining how many of the nominative NPs in the constructions under consideration could be considered to be promoted to a PSA position. For more on tests for subjecthood, see Sands & Campbell (2001), Nemvalts (1996), and Vihman (1999).

5.2   Promotion

To establish the status of the arguments of the voice constructions, I first consider whether nominative undergoer arguments are *bona fide* promoted subjects or whether they are given default nominative case-marking in the absence of an overt nominative subject.

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[3]Examples from Erelt et al. (1993:201)

The nominative NP in anticausative middle constructions is a stable subject, not engendering much debate. Most anticausatives are unaccusative. Whereas unaccusatives in general can be argued to encode an 'underlying' object as subject, the anticausatives derived from causatives make that relationship manifest in the derivation. It is quite beyond debate that the single intransitive argument is a subject: it takes nominative case, triggers verb agreement, remains nominative under negation, and passes tests for syntactic subjecthood in a robust way, as demonstrated with coordination and reflexivisation in example (5.6).

(5.6) a. ma   kukkusin   aga ∅ tõusin   kohe   jälle üles
           1SG.NOM fall.PST.1SG but ∅ rise.PST.1SG immediately again up
           I fell but got up again immediately
       b. ta$_i$ pöördus   minu$_j$ poole oma$_i$ küsimusega
           3SG.NOM turn.PST.3SG 1SG.GEN to   REF.GEN question.COM.SG
           s/he turned to me with his/her question

In addition, note that the anticausative undergoer subject NP coordinates with a transitive actor subject in (5.6a), showing that the grammatical relation here is paramount, rather than the semantic role. Finally, in (b), the reflexive pronoun refers unambiguously to the subject rather than the participant highest on the animacy hierarchy, the first person singular pronoun.

The intransitive anticausative construction is often used to topicalise the undergoer argument, much in the same way that passives do. Although the constructions are not equivalent in terms of argument linking and valency, they can often be semantically equated, as pointed out by Rajandi with the pair repeated in example (5.7). The semantic similarity is made obvious by the English translation.

(5.7) a. sa   olid   üllatunud
           2SG.NOM be.PST.2SG surprise.ANTC.1PTC
           you were surprised
       b. sa   olid   üllatatud
           2SG.NOM be.PST.2SG surprise.CST.2PTC
           you were surprised[4]

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[4]Rajandi (1999:93–94)

Both constructions are stative and truth-conditionally equivalent. However, the anticausative perfect is in opposition to the dynamic simple past, as in example (5.8a); the personal passive stands in contrast to the corresponding dynamic active (example 5.8b). Although both constructions "mean" *you were surprised*, there is a difference in connotation. The anticausative places emphasis on the experiencer of emotion, de-emphasising any external cause, whereas the passive keeps an actor argument in the logical structure—albeit syntactically demoted and semantically unspecified.

(5.8)   a.   sa   üllatusid
             2SG.NOM surprise.ANTC.PST.2SG
             you became surprised
        b.   ta   üllatas   sind
             3SG.NOM surprise.CST.PST.3SG 2SG.PAR
             s/he surprised you

This distinction between the anticausative and the passive is reflected in their semantic representation. The anticausative has only the undergoer argument represented (5.9a), and so distinctions made are in the dynamicity, temporal location, and structure of the event of surprise. The passive (5.9b) retains a relation to the active clause, in that the unspecified actor argument implies the existence or possibility of a specified actor.

(5.9)   a.   INGR **surprised′** (2SG)
        b.   [**do′** (∅, ∅)] CAUSE [INGR **surprised′** (2SG)]

5.2.2   Undergoers in Personal Passives and Impersonals

Despite the semantic similarities to the anticausative undergoer, the undergoer argument of a personal passive requires more investigation to determine its syntactic status. First of all, it makes sense to ask whether the ambiguous constructions in (5.10) could not both be classified as passive, as (5.10b) is so similar in form and meaning to the ambiguous (5.10a), despite the different morphosyntactic encoding of its pronominal argument. In other words, it needs to be determined whether personal passives really take only nominative arguments, or whether (5.10b) is a partitive alternative of the same construction, and therefore also a personal passive.

(5.10) a. ta   on   sunnitud vaikima
            3SG.NOM be.PRS.3SG force.2PTC be-silent.INF
            s/he is forced to be silent

        b. teda   on   sunnitud vaikima
            3SG.PAR be.PRS.3SG force.2PTC be-silent.INF
            s/he has been forced to be silent[5]

The impersonal can take both totally and partially affected undergoer arguments, as demonstrated in example (5.11), which is unambiguously impersonal because of the synthetic verb form. The object of the verb alternates between nominative and partitive case-marking, which does not imply a difference in grammatical relations, but rather only a difference in aspectual structure.

(5.11) raamat   loeti   läbi/   loeti   raamatut
        book.NOM.SG read.IMP.PST through/ read.IMP.PST book.PAR.SG
        the book was read all the way through/ the book was being read

In (5.10), however, the perfect impersonal verb form is syncretic with the personal passive, and so (5.10a) is genuinely ambiguous between the two readings. It could be an impersonal verb with a nominative total object and *default* third person singular marking, or it could be a passive construction with a nominative subject and third person subject-verb concord. Is (5.10b), with the same verb form, also ambiguous? The definition of the personal passive used thus far makes it unambiguous, leaving the partitive NP construction to the impersonal domain, and accepting as personal passives only those constructions with nominative NPs. How is this justified?

First of all, evidence from negation demonstrates that the two constructions behave quite differently. Negated impersonals necessarily take partitive objects (5.12a), but the clause in (5.10a) can be negated while keeping the nominative pronominal, as in (5.12b).

(5.12) a. teda   ei   ole sunnitud vaikima
            3SG.PAR NEG be force.2PTC be-silent.INF
            s/he has not been forced to be silent

        b. ta   ei   ole sunnitud vaikima
            3SG.NOM NEG be force.2PTC be-silent.INF
            s/he is not forced to be silent

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[5]Rajandi (1999:65)

If one construction has an argument whose case-marking changes under negation, and the other does not, then it seems likely that the two constructions are different. But the evidence for claiming that these are two distinct constructions goes beyond the case-marking. Semantically, the two constructions show strong differences as well. The above examples are sufficient to demonstrate the semantic differences between the two.

As Rajandi (1999:65) remarks, (5.10a) is felicitous even if the intended interpretation is that 'caution forced him to remain silent' or 'a cramp in his jaw forced him to remain silent.' It could also be interpreted as having an implicit human agent, but this is not a necessary implication of the clause. Example (5.10b), on the other hand, must be interpreted as having an implicit human agent, and it would be pragmatically infelicitous to supplement (5.10b) with the information that the silence was due to a cramp in the jaw. Finally, native speakers' intuitions support the implication of human agency with (5.10b) but not with (5.10a).

It is also important to note that verbs which take *only* partitive objects (unaspectual verbs) do have a nominative argument in passive constructions, but only partitive arguments in the impersonal. It has been observed (section 4.5.2) that not all unaspectual verbs can passivise; with those that do, however, the undergoer is in nominative case in the passive although it is always in the partitive in the active voice. One effect of this is to reduce the possible ambiguous clauses to those with aspectual verbs. Unaspectual verbs only take a partitive argument in impersonal constructions, and therefore make a clear distinction between the passive, with its argument always nominative, and impersonal, with its partitive unaspectual object retained. Another important effect, however, is another piece of evidence that the personal passive undergoer is promoted, while the impersonal undergoer is not.

Once the personal passive construction is limited to the clauses with nominative arguments, then the question can be raised as to whether this nominative argument is a true syntactic subject or whether it retains any of its object characteristics. As case-matching is often crucial for a coordinated construction, it is unrevealing to show that a partitive argument does not coordinate with a nominative argument. Indeed, in a case where the grammatical relations of the coordinated NPs are matched, but there is a conflict in case-marking, the resulting construction can be judged awkward or infelicitous, *even without the deletion of either element*, as demonstrated by example (5.3a), above. It is not only zero-anaphora which requires case-matching, but also coordination of overt elements. Keeping

in mind this word of warning that case must be kept constant in order to test for grammatical relations, I turn to the coordination test.

Examples of the nominative NP in passive constructions coordinated with the clear subjects of active constructions are not difficult to find in Estonian texts. A few examples of this are given in (5.13). Example (5.13a) gives a parallel construction with the NP + copula omitted, and the active (anticausative) and passive participles coordinated. Example (5.13b) has a more straightforward example of zero-anaphora, with the subject of 'smell' referring back to the undergoer of the passive 'were fried'.

(5.13) a. pori   oli   tardunud kõvaks koorikuks ja Ø
      mud.NOM.SG be.PST.3SG congeal.1PTC hard.TRL shell.TRL and Ø
      kaetud   peenikese lumepuruga
      cover.2PTC thin.GEN.SG snow-crumbs.COM.SG
      the mud had frozen into a hard shell and was covered with a thin layer of snow[6]

    b. need   olid   võiga   praetud ja Ø lõhnasid
      these.NOM be.PST.3PL butter.COM fry.2PTC and Ø smell.PST.3PL
      isuäratavalt
      tasty
      these were fried with butter and smelled delicious[7]

Importantly, the same coordination is not (always) grammatical with an impersonal in place of the personal passive, even if the case of the pivot and the controller of the coordinated construction is matched, as shown in (5.14), the impersonalised version of (5.13b, also from Vihman & Hiietam 2002).

(5.14) */??need praeti ära ja Ø lõhnasid   isuäratavalt
    these.NOM fry.IMP.PST away and Ø smell.PST.3PL tasty
    these were fried with butter and smelled delicious

The impersonal undergoer NP is much more difficult to coordinate with a subject than the personal passive NP. This constitutes still more evidence in favor of an analysis of the personal passive undergoer as at least more subject-like than the impersonal undergoer. A strong case is being made for the personal passive being a promotional construction with the undergoer promoted to subject.

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[6]Kivirähk, A. (2000) *Rehepapp ehk november*. Tallinn: Varrak, p.56
[7]Vihman & Hiietam (2002)

Data from reflexive pronoun antecedents point to the same results. It is also quite easy to reflexivise the personal passive NP, whereas with the impersonal NP, for instance, the reference of the reflexive pronoun has two possible antecedents, both the overtly expressed undergoer and the implicit actor. Reflexive anaphoric reference to the implicit impersonal argument anticipates the discussion in section 5.3, and is not considered here. As the anticausative and personal passive are both intransitive constructions, the reflexive pronoun must be found in a non-argument role, referring back to the single argument, as in the following examples. The anticausative reflexive in (5.15) is entirely unproblematic, as only one possible antecedent for the reflexive is entertained, namely the single anticausative argument.

(5.15)   üha enam vanemaid ei   huvitu   oma   lastest
         ever more parents   NEG interest.ANTC.PRS REF.GEN child.ELA.PL
         more and more parents don't take an interest in their children[8]

The examples in (5.16), from Vihman & Hiietam (2002), demonstrate both a personal passive and an impersonal with genitive reflexive pronouns. In (5.16a), the reflexive refers to the undergoer of the passive, whereas in (5.16b), it refers to the implicit impersonal agent.

(5.16)   a.   tema$_i$ on   jäetud   oma$_i$ saatusega üksi
              3SG.NOM be.PRS.3SG leave.2PTC REF.GEN fate.COM alone
              s/he has been left alone with his/her fate[9]

         b.   oma$_j$ kodadele   ehitatakse$_j$ turvamüürid   ümber
              REF.GEN house.ADE.PL build.IMP.PRS safety-wall.NOM.PL around
              one builds security walls around one's own houses[10]

It is actually possible with the impersonal to form both coordinated constructions (5.17a) and reflexivised constructions (5.17b) with the undergoer functioning as PSA. However, it is also possible for reflexive pronouns to refer to peripheral NPs encoded in an oblique case, as in (5.17c), which are clearly non-promoted constituents, and so this is not strong evidence for any sort of grammatical relation.

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[8]http://www.agenda21.ee/EA21/3_14margake.html
[9]www.cl.ut.ee (literature stkt0054)
[10]Vihman & Hiietam (2002)

(5.17) a. (...kui ta$_i$ järgmiseks hommikuks süüdlast$_y$ ei leia,)

...jääb   ta$_i$ ise$_i$ vargaks   ja   ∅$_i$ hukatakse$_x$

remain.PRS.3SG 3SG.NOM EMPH.NOM thief.TRL.SG and ∅ execute.IMP

(if he does not find the guilty person by the next morning,) he will remain as the thief and will be executed[11]

b. meid$_j$ kästi$_x$ võtta   oma$_j$ trikood   kaasa

1PL.PAR order.IMP.PST take.INF REF.GEN swimsuit.NOM.PL along

we were ordered to take our swimming suits along

c. palutakse$_x$ prognoosijatel$_k$ esitada oma$_k$ arvamused

ask.IMP.PRS predictor.ADE.PL offer.INF REF.GEN opinion.NOM.PL

those making a prognosis are asked to put forth their opinions[12]

As discussed earlier, Manninen & Nelson (2002) argue that the Finnish impersonal can be seen to involve promotion. They argue that the impersonal construction is not subjectless, but rather requires that the subject position "be filled by phonetically overt material" (2002:4). Their notion of subject is determined by sentence-initial position. The first question this gives rise to is whether this notion of subjecthood is appropriate for a language with pragmatic constituent order like Finnish (Vilkuna 1998). However, leaving that question aside, the usual pre-verbal material in these constructions (in both Finnish and Estonian) is not the undergoer, but rather locative adverbials functioning as the theme, providing a setting for the focussed verb. This is a very different notion of promotion than that regarding the promotion of the undergoer constituent.

Pragmatic promotion could be said to apply in some of these examples, and topicalisation is often involved in the word order patterns found with the impersonal. Topicalisation is involved to some extent with all of the voice constructions (although in the case of the apersonal generics, detopicalisation would be more accurate). However, this cannot be called syntactic promotion, and often does not even involve NPs in argument positions.

As Rajandi (1999) claims, "it is clear that the impersonal sentences differ from ordinary personal sentences mostly in the lack of a subject and the form of the verb. *The presence and type of object... is not affected by the impersonal form*" (1999:78, my emphasis). In other words, Rajandi sees the impersonal object as no different in grammatical status from the object of ordinary personal active clauses. The use of nominative case with objects in Finnish and Estonian is not "non-canonical,

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[11]From the Brothers Grimm, transl. L. Ronk & S. Tui (1993) *Muinasjutte I,* Tallinn: Odamees

[12]www.my.tele2.ee/bruno/konspektid

but rather the case marking follows the strict rules of the language" (Sands & Campbell 2001:279).

The impersonal, then, retains the object relation inherent in the verb's semantics, linking semantic arguments to morphosyntactic arguments in the same way as in an active clause. Aspectual verbs exhibit either nominative or partitive objects in the impersonal, reflecting the total/partial object distinction as in active clauses, whereas unaspectual verbs take only partial objects. With the personal passive, however, "this difference [between total and partial objects] is neutralised, because only one type of nominative subject corresponds to the personal object, regardless of whether the verb is aspectual or not" (Rajandi 1999:92). Of the voice constructions, the anticausative arguments have emerged as the most subject-like promoted subjects, followed by the syntactically promoted passive arguments, and next by the impersonal objects, which can take nominative case, and in some instances show pivot-like behavior, but cannot be called subjects. The apersonal objects display no differences in object status.

The next question, of course, is what happens to the higher argument in each of these constructions. An operation of demotion takes place in each of them, but assessing whether it is the same process in each case requires a closer examination of the implicit arguments and the operations undergone to become demoted.

5.3   Demotion

There is less consensus on the question of demotion than promotion. Relational Grammar (Perlmutter 1978, Perlmutter & Postal 1983) posits a chômeur relation maintained by the demoted argument, after an 'initial 2' (direct object) nominal takes the '1' (subject) position in the final stratum, in a passive. Grammatical relations are considered to be primitives in Relational Grammar (RG), and the analysis of them is binary. RG takes a promotional view of passivisation, with demotion secondarily triggered by promotion. Most generative grammars give binary accounts of passivisation. Demotional accounts see passivisation as reducing the number of arguments, thereby deleting the agent argument entirely, and optionally reinserting it in an oblique adverbial position.

RRG considers semantic roles to be the primitive notions at play behind the mapping of grammatical relations. This proves to be more useful in analysing voice

in Estonian, as it is relative prominence on a semantic role hierarchy which designates canonical macroroles and syntactic argument linking. However, the basic mechanics of the RRG semantic representation also tend to either give an argument an overt representation or else reduce it to ∅. Since the voice domain investigated here contains more than a simple active-passive opposition, I investigate in this section whether it is possible to define some of the differences in interpretation by means of different *degrees* of demotion, and find that in fact the various demoted arguments can be represented by different semantic representations (as indicated in Chapter 4), which give rise to different pragmatic interpretative processes.

Koenig & Mauner (2000) investigate the question of whether "the semantic interpretation of arguments that are not morphosyntactically expressed differs from that of explicit indefinite arguments with which they can be paraphrased *salva veritate*," and their investigation leads to the conclusion that "once the discourse potential of expressions is taken into account, the semantics of implicit arguments and their indefinite explicit paraphrases *do* differ," supporting a Discourse Representation Theory (DRT) analysis of the implicit arguments (2000:207). One need not, however, work in the DRT framework to accept that the "discourse potential" and discourse salience of semantic arguments is of crucial importance to the choice of syntactic constructions as well as their interpretation. In this sense, the semantics of constructions encoding valency modifications are so interrelated with their discourse pragmatics that it does not make sense to attempt to represent valency operations in the logical structure of a construction while ignoring the pragmatics of its interpretation.

This is not without its difficulties, however. An absent argument is difficult to test, and demotion seems to be a process with considerable variation along syntactic and semantic lines. The constructions in question all have in common the fact that an actor argument, or some higher semantic argument of the verb, is morphosyntactically unencoded, and hence some operation of "removal" (demotion or deletion) is involved. This section addresses the question of how the various types of demotion compare with one another.

5.3.1 Subjectlessness versus Agentlessness

In the literature, authors who distinguish between the impersonal and the personal passive acknowledge the difference in demotion of the actor argument in

the two constructions. Regarding impersonals, Rajandi (1999) notes the semantic presence of the actor: "Although there is no word denoting an 'actor' in sentences [5.18a and b[13]], i.e. no word denoting the swimmer or forcer, every Estonian speaker interprets these sentences with a crucial reference: *someone* swam or forced [him or her to be silent], probably a living person, but not an inanimate object" (Rajandi 1999:64). Blevins (2003) posits subjectlessness as the defining criterion for impersonals, while concurring with Rajandi's (1999) claim that a human actor is strongly associated with the impersonal, if not directly implicated by it.

> Whereas subjectlessness is also a purely contingent property of passive constructions, it is the defining property of impersonals. The grammatical reflexes of this difference clearly distinguish impersonals from passives, despite the close functional and formal parallels between the two constructions. There can be no promotion to subject in a subjectless construction. (Blevins 2003:482)

Ever since Comrie's (1977) paper on spontaneous demotion, a debate over the relation between the processes of promotion and demotion has turned partially on the status of the impersonal actor. Blevins (2003) follows the Relational Grammar view that "passivisation is a relation-changing operation," while following Comrie's (1977) treatment of subject demotion as more basic than object advancement. The impersonal, in any case, requires the demotional operation to be treated as primary. It treats intransitive and transitive verbs equally insofar as the demotion of the subject is concerned, and the question of promotion can only be entertained with transitive verbs. A treatment of demotion as basic has both more descriptive power and a wider application than one which places primary emphasis on promotion.

Personal passivisation, on the other hand, is described and defined by means of both a promotional and demotional relation to the active. A passive like *sa*

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[13]Rajandi (1999) refers to the following examples:

(5.18) a. ujutakse/ujuti   jäises vees
            swim.IMP.PRS/IMP.PST icy.INE water.INE
            one swims/one swam in icy water

        b. ta/teda   sunnitakse/sunniti   vaikima
            3SG.NOM/PAR force.IMP.PRS/IMP.PST be-silent.INF
            s/he is/was forced to be silent

oled üllatatud 'you are surprised' "is only possible, as a general rule, with transitive verbs, and differs from the ordinary personal—*keegi/miski üllatab sind* ['someone/something surprises you']—in that the subject (*sa* [2SG.NOM]) corresponds to the personal object (*sind* [2SG.PAR]), and the copular verb agrees with it in person and number. *The subject of the personal verb, however, is lost*, without any reference to its class ('animate') in the form of the verb" (Rajandi 1999:91, my emphasis).

Robert Van Valin has referred to the passive as a construction which "assassinates the actor."[14] I argue, however, that even this passive assassination is incomplete. The presence of an actor in the logical structure of the verb is crucial to the interpretation of the passive. The contrast in interpretation between 'short passives' (those without an agentive phrase) and passives with *by*-phrases is crucial to specifying the status of the demoted passive argument, as is discussed in the last chapter, section 4.4.2.

It has been noted that 'short passives' (e.g. *the dossier was sexed up*) and agentive passives with indefinite pronouns (e.g. *the dossier was sexed up by someone*) are not equivalent (Koenig & Mauner 2000:208, McCawley 1988). Although the agent expressed with the indefinite pronoun *someone* adds no *informational* content for identifying the actor referent, it nevertheless marks the actor overtly in an oblique adverbial, thereby raising its salience from the ∅ in the 'short passive' and, from a discourse perspective, adding an overt discourse referent to which anaphoric reference can be made (e.g. ...*and he or she won't own up to it*).

However, the agent referent is not entirely absent in the 'short passive' either. The presence of an actor argument in the semantic representation of the verb is the distinguishing factor between contrastive anticausatives and passives derived from the corresponding causatives, as demonstrated in Chapter 4. The anticausative deletes the actor argument entirely; the passive demotes the actor argument to zero in the logical structure; and the agentive passive demotes the actor and then identifies that demoted argument with a typically defocussed and low-salience actor referent.

Section 5.3.2 examines the accessibility for anaphoric reference of the various demoted arguments under investigation. Anaphors themselves vary, and the semantics of particular verbs may also have an effect on the interpretability of

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[14]Lectures at the International Course and Conference on Role and Reference Grammar, University of La Rioja, Spain, July 2002

a demoted argument as antecedent for anaphor. The results, nevertheless, are suggestive of a cline of demotion when this variability is taken into account.

Section 5.3.3 looks at the possibility of constructions co-occurring with an agentive adverbial, or the possibility of reintroducing the demoted argument in an oblique function. The results of these sections taken together indicate support for the emerging notion of a demotion hierarchy.

5.3.2 Anaphoric Reference

Data from anaphoric reference does not provide a hard and fast grammatical/ungrammatical division, but rather receives graded responses. Some cases are judged to exhibit a genuine syntactic conflict, as in example (5.19), which is unacceptable to most Estonian speakers.[15] Although the impersonal in the first clause can be interpreted as referring to one person, some sort of transitional clause is required in order to provide a discourse anchor which would allow a definite pronoun to corefer to the referent of the implicit impersonal argument.

(5.19) *baaris lauldakse$_k$, aga ta$_k$ ei   pea viisi
        bar.INE sing.IMP.PRS but 3SG.NOM NEG hold tune.PAR.SG
        one is singing in the bar, but s/he can't carry a tune

A construction may bar anaphoric reference entirely, but it is also often possible—especially with intonational breaks and pragmatic inferencing—to support anaphoric reference of various kinds without any overt antecedent. Example (5.20) comes from an email written by an Australian boy, and shows how pragmatic inferencing can overcome the obstacle of non-overt antecedence.

(5.20) Did Mum tell you I got mugged in the city last week? Well, he tried anyway!

How long does it take an English speaker to interpret the definite pronoun in the second sentence in (5.20)? My intuition is that it does not take long, and that the processing difficulty is not high. A definite pronoun following the demoted and unexpressed agent of a *get*-passive is interpreted without much processing cost.

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[15]Note that the cline of ungrammaticality judgments with this sort of anaphor is also reflected in English dialect differences. Impressionistic data suggests much variation in the acceptability of anaphorically referring with a definite pronoun to a referent established with the 'a-definite' *one*.

True, the verb *mug* is a highly agentive one, bringing with it a strong implication of an unexpressed agent, and this sort of jump is less likely with a less agentive verb and even perhaps less likely with a *be*-passive. This example demonstrates the flexibility of anaphoric reference and the difficulty of naming the restrictions on it.

However, there is an additional issue to be mentioned with regard to the last two examples. I have claimed that the impersonal actor is semantically more present in the interpretation of a clause than the passive actor. Should it then not be more available? The answer is no, and this should provide a warning for the analysis of various kinds of anaphora. The example in (5.19) does fill the actor argument position of the predicate, and it fills it with some semantic content. The impersonal actor referent is not highly specified, but it is not entirely blank either: the canonical impersonal actor referent is agentive, human, generic, and plural. Any one of these can be overridden contextually, but the properties of the impersonal actor are nevertheless associated with that argument. Grammatically, then, it is infelicitous to jump from the deliberately generic and general actor referent to a singular definite pronoun. Of course, with pauses and various sorts of contextual information, the two clauses in the example could come after one another, but they do not form a cohesive text, in and of themselves.

It is well attested that an indefinite first mention can naturally become a definite in the second mention, as in (5.21).

(5.21)   I'm looking for a book. It's got a sort of psychedelic purple cover.

When this is applied to a generic indefinite, however, it becomes odd, and accommodation is much less fluidly made, as shown even in English by the joke in (5.22).

(5.22)   Every day in Britain a man gets run over crossing a road, and by now he's getting rather annoyed.[16]

Definite pronoun anaphora

There are in fact two pragmatic reasons for an impersonal referent to be inaccessible to reference with a definite pronoun, whether singular or plural. The

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[16]I owe this example to Daniel White, who reminded me of it in an essay for an undergraduate honours class, The Structure of a Language: Finnish.

first is that noted above, that the use of the impersonal construction designates a generic referent, which does not supply the right sort of activated referent for an antecedent to a definite pronoun. Lambrecht (1994) subdivides identifiable discourse referents by means of their activation status, inactive, accessible, and active. Accessible referents are then divided according to whether their accessibility derives from textual, situational, or inferential means. The implicit argument referents in impersonal constructions are described by Shore (1988) as exophoric, meaning that they are most typically accessible from extra-textual information, either situationally (as is likely to be the case in example 5.19) or inferentially. However, even when identifiable, the impersonal referent is not available for immediate reference with a definite pronoun.

The second is that the impersonal actor, although present for certain syntactic purposes, does not in fact contribute a discourse entity to the discourse. The impersonal presents an event as focussed. If there is a topic, it is most often a locative adverbial, establishing the scope of the event or activity, rather than any event participant. Where an impersonal is used to refer to an activity that can be interpreted as being performed by only one person, it is not that (presumably identifiable) singular impersonal referent which is the topic of the clause. In fact, an impersonal construction often has no topic. It can take an adverbial as topic, or the undergoer as a topic, but the pragmatic thrust of the construction is to focus the event. The example above contains the information that 'there is singing in the bar' but does not contribute any actor argument to the discourse, and hence no actor argument can be anaphorically referred to without some sort of pragmatic bridging.

Koenig & Mauner (2000) draw a distinction between indefinites and a-definites. In their terminology, indefinites are indefinite pronouns which can become antecedents for definite pronouns in the following utterance (like French *quelqu'un*), and so are claimed to introduce a referent to the discourse. A-definites, like French *on*, which cannot be anaphorically referred to with a definite pronoun in the following sentence, are "neither definite nor indefinite: the status of the discourse marker they introduce is irrelevant, since they do not introduce one" (Koenig & Mauner 2000:213).

French *on* is an overt pronoun, and so might be expected to be more salient as a discourse entity than the Estonian impersonal argument, which is only encoded in a verbal affix. However, intersentential reference to *on* with a definite pronoun is infelicitous. Koenig & Mauner's (2000) examples from French are translated

in (5.23–5.24) into Estonian, with one difference. While in French, gender disambiguates between the two possible human referents for the anaphoric pronoun, Estonian lacks gender marking even on the 3SG pronoun, and so number is used instead for disambiguation.

(5.23) #President$_i$ tapeti$_j$.   Nad$_{i/j?}$ olevat Pärnust pärit.
        president.NOM.SG kill.IMP.PST 3PL.NOM be.QTV P.ELA   from
        The president$_i$ was killed $\emptyset_j$. They$_j$ are apparently from Pärnu.

If anything, the plural number should assist in referring to the generic impersonal referent, as the only possible plural antecedent in the utterance. But instead, the utterance is not only pragmatically infelicitous; it is judged to be ungrammatical. A few of my informants actually preferred a reading of the sentence where the plural pronoun referred back to the definite NP *president*, accommodating the plural number by interpreting the pronoun as referring to the president and his entourage, for instance. Out of a dozen informants to whom I presented the example in (5.23) by email, all of them responded to this example with varying degrees of negative responses, and ten respondents expressed very definite judgments of ungrammaticality. Most commonly, respondents wrote that the third person plural pronoun is uninterpretable. A few answers suggested that the only available referent for interpreting the pronoun is the NP *president*. These responses strongly suggest that the ungrammaticality of the example in (5.19) comes not from the number of the pronoun, but entirely from the inaccessibility of the impersonal argument as a discourse referent.

Interestingly, however, the following example (5.24) provokes some unexpected responses.

(5.24) Keegi$_j$ tappis   presidendi$_i$.   Ta$_{i/j}$ olevat
        someone.NOM kill.PST.3SG president.GEN.SG 3SG.NOM be.QTV
        Pärnust   pärit.
        P.ELA   from
        Someone$_j$ killed the president$_i$. S/he$_{i/j}$ is apparently from Pärnu.

The singular definite pronoun in example (5.24) can be given either reading, both as referring to the indefinite pronoun *keegi* 'someone' or to the definite NP *president*. Many of my informants protest against this example, saying that it sounds unnatural. Even the indefinite pronoun does not easily support anaphoric reference. However, this resistance may come from the fact that the sentence pair is

ambiguous between two interpretations: again out of twelve respondents, three prefer a reading where the third person pronoun refers to the entity denoted by *president*, and a further two note that the pronoun can have both readings. Hence, nearly half (five out of twelve) see at least a possibility of the pronoun referring to the president. Number cannot be used here to disambiguate the reference, as the indefinite pronoun is singular in number. However, another question posed uses the locative phrase to disambiguate the referent (translated as: 'Someone killed the president of Estonia. He is apparently from America.') With this sentence pair, more respondents accept the indefinite pronoun antecedent as the only logical one, as well as accepting the pair as grammatical. A few suggest better ways of saying the same thing in Estonian.

The responses in their entirety, however, suggest that the indefinite pronoun is available as an antecedent for anaphoric reference with a definite pronoun. Although the truth conditions of the two constructions, the impersonal and the active with an indefinite pronoun, are more or less the same, it is clear that truth-conditions do not adequately cover the semantics of the two constructions, which bear some important interpretative differences. The indefinite pronoun is available for intersentential reference with a definite pronoun, whereas the impersonal argument is clearly not. Nevertheless, the impersonal argument has a referent and is not fully demoted.

The definite pronoun is also entirely unacceptable when used with either anti-causative middles or the agentless passive (5.25), although the passive can be rescued by the addition of an agentive phrase (5.25c).

(5.25) a. Uksed$_i$ sulgusid.   *Ta/*Nad$_x$ ei   tahtnud
            door.NOM.PL close.ANTC.PST.3PL 3SG/PL.NOM NEG want.1PTC
            enam   külalisi.
            anymore guest.PAR.PL
            The doors closed. S/he/They didn't want anymore guests.

        b. Uksed$_i$ olid   suletud.   ??Ta/Nad$_x$ ei   tahtnud
            door.NOM.PL be.PST.3PL close.2PTC 3SG/PL.NOM NEG want.1PTC
            enam   külalisi.
            anymore guests
            The doors were closed. S/he/They didn't want anymore guests.

c. Uksed$_i$ olid   esinejate$_j$ poolt   suletud.
door.NOM.PL be.PST.3PL performer.GEN.PL by   close.2PTC
Nad$_j$ ei   tahtnud   enam   külalisi.
3PL.NOM   NEG   want.1PTC   anymore guests
The doors were closed by the performers. They didn't want anymore guests.

In these examples, it may be possible to supply the definite pronoun with some sort of extra-textual reference, and so the starred pronouns are not entirely disallowed, if heavy pragmatic inferencing is accounted for. In (a), however, the definite pronoun is not allowed the meaning of the actor of a door-closing event. This is ruled out, as the event of closing the doors is presented as occurring without any actor. The anticausative is the least accepting of any definite pronoun anaphor. The most obvious antecedent for a definite pronoun is the subject, which is pragmatically ruled out in the above example. A fairy-tale interpretation could, however, be given to this pair of sentences, and the definite pronoun could successfully refer to the single anticausative participant, the undergoer.

In (5.25b), however, a process of pragmatic bridging presents itself as a possible solution to the sentence pair, and so it can be given a grammatical reading. Koenig & Mauner (2000) predict this, hypothesising that "short passives make such inferences easier than middles because the presence of a lexically encoded agent can be used in bridging" (2000:231). The definite pronoun is interpreted as referring to someone behind the closed doors, but again, there is no necessary implication of agency on the part of those not wanting visitors. Finally, with an agentive adverbial, it is clear that the performers closed the doors, and that they themselves do not want visitors. With a definite overt NP expressing the actor, this interpretation is easy and natural. The use of *keegi* 'someone', however, is judged to be more awkward. The personal passive is used to demote the actor, and so introducing the actor without any informational content is considered odd, and even ungrammatical.

A split occurs in the data between those clauses whose demoted argument is a possible antecedent for a definite pronoun, and those whose demoted argument is not. The implications of this are discussed in section 5.4. In order to more firmly establish where this split lies, and to uncover any further nuances in it, a look at other anaphoric devices is in order.

Koenig & Mauner (2000) claim, "in accord with the assumptions of most syntacticians, that cross-sentential pronominal coreference differs from both subject PRO anaphoric identification and intrasentential reflexive binding." Specifically, the "latter two do not involve discourse marker equality clauses and are thus compatible with [the] hypothesis that implicit and explicit a-definites do not introduce discourse markers" (2000:217). Crucially, the difference in availability for intersentential definite pronoun reference demonstrates that the referent of the a-definites is not available as a discourse entity. Koenig & Mauner (2000) demonstrate that the interpretation of both the zero subjects of purpose clauses and reflexive pronouns comes from lexical processes or meaning postulates. I turn first to reflexive pronouns.

Reflexives

As noted previously, the implicit impersonal argument has a peculiar status in the discourse. It requires no antecedent itself, taking its interpretation from the exophoric context, which can be delimited by adverbials or contextual information from the discourse. It is generic at its core, and only encoded morphosyntactically in a verbal inflection. Yet it can serve, for instance, as an antecedent for a reflexive pronoun. In fact, it can trump the overt, sometimes nominative, impersonal object as the antecedent to which a reflexive pronoun is most easily interpreted as referring. Although it is not a subject, its semantic role is always higher than the impersonal object. But the fact that the implicit argument can be referred to with a reflexive pronoun is suggestive of its status as a discourse referent. This discourse status is clearly higher, at least, than the demoted passive agent, which is not available at all for anaphoric reference with a reflexive pronoun. The impersonal is no different from a normal active clause in usually preferring the actor (though implicit) as the reflexive antecedent, as in the attested examples (5.26a–b), but also allowing the reflexive to refer to the impersonal object, as in example (5.26c), from Erelt et al. (1993).

(5.26)   a.   kui peetakse$_i$ ennast$_i$ alaväärseks, siis   vajatakse$_i$ tõestust
             if   consider.IMP.PRS REF.PAR inferior.TRL then need.IMP proof.PAR
             if one considers oneself inferior, then one needs proof…[17]

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[17]http://hot.ee/celestis/art_eduk.htm

b. sooh, siis nüüd loetakse$_i$ ja naerdakse$_i$ ennast$_i$ segaseks
so then now read.IMP and laugh.IMP.PRS REF.PAR muddled.TRL
so now one reads and laughs oneself silly[18]

c. oma$_{i/*j}$ lapselapse pulma kutsuti$_j$ ka vanaema$_i$
REF.GEN grandchild.GEN wedding.ILL invite.IMP.PST also granny.NOM
grandmother was also invited to her grandchild's wedding

Regardless of the fact that the reflexive pronoun *can* also refer to the object of the impersonal, the fact that it can ever refer to the implicit argument is evidence for that argument not being fully deleted, but only suppressed. Accommodation often happens in interpreting discourse, and so an unavailable referent can be made available *post hoc* by a process of inference. However, this is facilitated by some constructions and inhibited by others; even where communication can take place, some constructions make this accommodation awkward and others enable it.

The passive stands in contrast to the impersonal, in that it prefers the promoted undergoer as an antecedent for a reflexive. The passive invites the listener to forget the actor. Example (5.27) demonstrates that it is much easier to refer anaphorically to the undergoer than the actor with a reflexive in a personal passive clause.

(5.27) laps$_i$ on oma$_{i,*x}$ voodisse pandud
child.NOM.SG be.PRS.3SG REF.GEN bed.ILL put.2PTC
the child has been to put to (his/her own) bed

Anticausatives have only one referent to act as antecedent for a reflexive pronoun, and the reflexive can never be interpreted as referring to an actor (5.28a). The apersonals, on the other hand, *do* support reflexive reference to the actor, despite its being unencoded morphosyntactically (5.28b).

(5.28) a. ta pettus iseendas
3SG.NOM be-disappointed.ANTC.PST.3SG REF.INE
s/he was disappointed in him/herself

b. võib iseennast süüdistada
can.PRS.3SG REF.PAR blame.INF
one can blame oneself

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[18]www.cl.ut.ee. (literature 0129)

Van Valin & LaPolla (1997), basing their description of information structure on Lambrecht 1994, make it explicit that the process of parsing a communicative utterance relies on the assumption on the part of the hearer that speakers choose a form for the utterance from which the hearer can "create the proper (i.e. most relevant) context of interpretation with the least amount of processing effort. Different types of coding can then be seen as guaranteeing different degrees of accessibility" (1997:201). Zero marking is taken to signal that the intended referent is the one most accessible in the preceding discourse. In a sense, the acceptability for control of zero elements is the proof of the pudding for whether a particular referent from the previous utterance is available in the discourse or not. This section examines the grammaticality of the demoted actor of each voice construction acting as controller of the following clause.

Koenig & Mauner (2000) use psycholinguistic reaction time measurements to test their hypotheses regarding the ease of various sorts of anaphoric reference and control. While this thesis does not allow time or space for reaction time experiments, the data reviewed here shows gradience of a different kind. A dozen native speaker informants were questioned regarding the acceptability of sentences with purpose clauses with null subjects. This study is detailed, along with its results, in Appendix A. The sample of responses is too small to conduct statistical analyses on them, and the analysis is, to a certain extent, subjective. Hence, the responses are merely indicative, but they demonstrate a similar ordering of constructions as demonstrated in the cline that has been emerging in the discussion of the data thus far.

For determining the acceptability of the implicit actor referents acting as controller of a purpose clause, the following sentences were presented to the informants. It is crucial that, although the meaning of each of these examples is similar, they are not 'allosentences' of each other (Lambrecht 1994:17–18). As this section shows, the status of the implicit arguments is quite different, and this leads to substantial differences in interpretation of the voice constructions. The original sentences as they were presented had the purpose clause given in (5.29g) at the end of each. Here, it is given only once for economy of space.

(5.29)   a.   laev   uppus. . .
                 ship.NOM.SG sink.ANTC.PST.3SG
                 the ship sank. . .

b.   laev   uputati…

       ship.NOM.SG sink.CST.IMP.PST

       the ship was sunk…

c.   laev   oli   uputatud…

       ship.NOM.SG be.PST.3SG sink.CST.2PTC

       the ship was sunk…

d.   laev   oli   kapteni   poolt uputatud…

       ship.NOM.SG be.PST.3SG captain.GEN.SG by   sink.CST.2PTC

       the ship was sunk by the captain…

e.   laev   läks   põhja…

       ship.NOM.SG go.PST.3SG bottom.ILL

       the ship sank (lit. went to the bottom)…

f.   alati   võib   laeva   uputada…

       always can.PRS.3SG ship.PAR.SG sink.CST.INF

       one could always sink the ship…

g.   …selleks, et   kindlustusraha   ∅ kätte   saada

       this.TRL   that insurance-money.NOM.SG ∅ hand.ILL get.INF

       …in order to get the insurance money

The answers were written by email, and longer comments have been taken into account in compiling the results. Each respondent's comments were compared within that subject, and the sample sentences were ordered in a scale of grammaticality for each informant. Comments include the following small sample (my translations).

1. (a) is not ungrammatical, but it is illogical—you're ascribing a willful activity to the ship.
2. (a) is grammatically wrong—the ship has no motives for sinking.
3. (c) is fine, but it sounds worse than (b).
4. (c) isn't used in colloquial Estonian.
5. No, you'd never use (c).
6. (d) is an Anglicism, but otherwise logical and correct.
7. (d) can indeed be attested, but our language editor would fix it to [an active construction]…like "the captain sank the ship in order to…"
8. (e) is like (a), but a bit better.
9. (e) is sometimes heard in faulty Estonian, but it sounds a little stupid. [An impersonal construction] would be better; otherwise it's again the ship who's extremely interested in the insurance money.
10. (e): nonononono!

The variability is easy to see: the personal passive in example (c), for instance, is variously judged fine (though the impersonal is better, comment 3), un-Estonian (i.e. awkward, comment 4), and ungrammatical (comment 5), the whole range of judgments on one example. From the written responses to the questionnaire, and considering both yes/no responses as well as comments such as the above, I ordered the responses for each participant on a scale from 1 to 5, as shown in Appendix A. The results from each subject vary slightly, but taken together they show a clear grammaticality cline, as presented in Figure 5.1.

The result which derives from interviewing several respondents is that the variation between speakers is great enough that the same sort of gradient results one would expect from reaction time experiments emerge from these. In other words, the intuitions speakers have about anaphoric reference and control is to some extent variable, but the variability engenders a cline precisely following the cline to be expected, from the analysis of the constructions. The most acceptable sentences (b and f) are judged good and grammatical by all speakers, and the least acceptable sentences (a and e) also receive a nearly uniform response, whereas the ones in between fall into a pattern based on the number of 'yes' and 'no' responses each. The resulting cline is that in Figure 5.1. The 'a-definite' (impersonal and apersonal) examples in (b) and (f) are both judged to be entirely grammatical, as predicted by Koenig & Mauner (2000), who say that both explicit and implicit a-definites can serve as the antecedent for reflexives and the controller of null subjects in purpose clauses.

Two interesting results ought to be remarked upon. First of all, the simple intransitive in (e) is consistently (ten out of twelve) judged to be equal to *or better than*

Most Grammatical

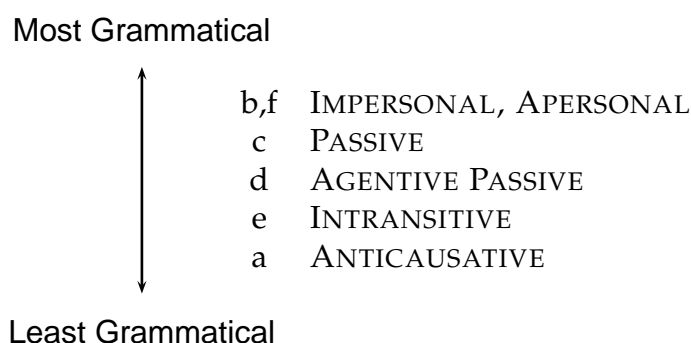|	
b,f	IMPERSONAL, APERSONAL
c	PASSIVE
d	AGENTIVE PASSIVE
e	INTRANSITIVE
a	ANTICAUSATIVE

Least Grammatical

Figure 5.1: **Grammaticality Judgment Results: Reference to Implicit Arguments with Zero Anaphora**

the anticausative in (a). Several respondents explicitly mention that (e), though similar in meaning to (a), is comparatively better (e.g. comment 8, above). Only two respondents give the converse judgment, that (a) seems better. This is an important discovery, in that it corroborates the prediction, compatible with Relevance Theory, as well as the analysis of the anticausative given in Chapter 4, that the very use of the anticausative makes an agentive phrase or other agentive anaphor jarring. In other words, it is not merely the fact that the clause is lexically intransitive which makes the actor argument inaccessible for control of the null subject in the purpose clause. Instead, the anticausative is a specifically, and maximally, actor-deleting construction. The semantics of the anticausative function precisely to delete the possibility of an outside agent, merging actor and undergoer into one intermediary role, and therefore this construction allows even less room for pragmatic accommodation of an agentive purpose clause than an ordinary undergoer intransitive. If the anticausative is used, it is even more anomalous to state something regarding the non-overt actor than it is with a simple intransitive.

The other interesting result goes precisely against the predictions of Koenig & Mauner (2000): the agentive passive in (d) is judged to be worse than the agentless passive in (c). This flouts many of the predictions regarding the accessibility of the implicit referent. Making it explicit ought to enable its acting as controller. However, my respondents appear to be reacting against the use of an agentive phrase rather than the control relation in this particular example. The personal passive is used to delete the agent. In a short sentence, it seems to be ungrammatical to use a (de-agentivising) passive construction, then reintroduce the agent, and immediately proceed to make the agent the topic of the immediately following clause. The reintroduction of the agent as topic works against the topicalising and detransitivising function of the personal passive construction. It is this aspect of the clause which was remarked upon (seen to be an Anglicism or else not very Estonian), rather than the actual establishment of the controller of the purpose-clause null subject.

Koenig & Mauner (2000) claim that "cross-sentential pronominal coreference differs from both subject PRO anaphoric identification [null subject control] and intrasentential reflexive binding" (2000:217). The data presented here support this, as cross-sentential reference is blocked with the a-definites, whereas reflexives

	Def. Pron.	REF Pron.	Purp. clause
IMPERSONAL	*	✓	✓
APERSONAL	*	✓	✓
PASSIVE	*	*	✓
ANTICAUSATIVE	*	*	*

Table 5.1: **Accessibility of Implicit Actors for Anaphoric Reference**

and null subjects are both allowed. Both cross-sentential and intrasentential reference to the demoted argument of anticausative and personal passives are impossible. However, the personal passives are intermediate between the two, as the presence of an agentive phrase identified with the implicit actor can have a restorative effect. In making the agent explicit, the agentive phrase restores the agent to a level of salience where it becomes accessible for anaphoric reference or control of purpose clauses. A line seems to be drawn here between the a-definites on one hand, whose agent is accessible, and the personal passive and the anticausative, whose actors are much less accessible. The personal passive has an agent which can be restored more easily than any of the others. This is summarised in Table 5.1.

5.3.3 Agentive Adverbials

While various discourse functional factors can provoke the use of agent-demoting constructions, the intention of avoiding mention of the agent is not necessarily the primary discourse function. The effect of backgrounding the identity of the agent while not concealing it entirely can be achieved in various ways. The option of reintroducing the agent in oblique forms is another test of the extent of agent demotion.

The ability of various constructions to have the actor argument expressed in agentive adverbials supplements the findings given in the previous section with a slightly different division than that shown in Table 5.1. Anticausatives and apersonal generic verbs are entirely anomalous with a *by*-phrase or other agentive adverbial. Impersonals and passives, on the other hand, are not.

Impersonals and agentive phrases

Although a favorite generalisation about impersonal passives is that they cannot take any overt agent-expression, in fact this is not the case. Siewierska

(1984:100) repeats the common claim that the Finnish impersonal cannot express an overt agent phrase. This is refuted in Manninen & Nelson (2002), as well as Holvoet (2001) and elsewhere. For Estonian, Rajandi (1999) notes a few examples of impersonals with agent phrases, and this sort of development seems to be slightly more accepted and more common in Estonian than in Finnish impersonals. Blevins (2003) notes that "while the implication of human agency and a resistance to agentive phrases are strongly characteristic of impersonals, neither property is definitional" (2003:489).

With the Estonian impersonal, a continuum of acceptability seems to exist, increasing from specific/personal agents, which are usually awkward if not ungrammatical, to generic/impersonal agents, which can be grammatical and felicitous. Pronouns, located furthest toward the specific/personal end of this scale, are never grammatical in an agentive adverbial in the context of an impersonal construction. Individually specified people are usually not used with impersonals, and such constructions are generally judged to be wrong or awkward. Example (5.30a) is not judged to be grammatical, whereas the similar constructions with more generalised and less personal agents in (5.30b–c) are entirely acceptable.

(5.30)   a.   *puid   raiuti   talveks   mu   isa   poolt
                wood.PAR.PL chop.IMP.PST winter.TRL 1SG.GEN father.GEN by
                wood was chopped for the winter by my father

        b.   teaduskonnad kinnitatakse   ülikooli valitsuse poolt
                dept.NOM.PL   confirm.IMP.PRS univ.   govt.GEN by
                the departments are confirmed by the university government[19]

        c.   neid   tooteid   hinnatakse   tarbijate   poolt
                these.PAR product.PAR.PL evaluate.IMP.PRS consumer.GEN.PL by
                these products are evaluated by consumers[20]

The most widely accepted agentive phrases are adverbials expressing the agent as an institutional body or general group, rather than individuals, as in examples (5.30b–c). These results fall out of the analysis of implicit impersonal arguments in Chapter 4. The agentive phrase is acceptable and grammatical if and only if the explicit agent specified in the agentive phrase, $Actor(e) = \alpha$, entails the properties carried by the implicit impersonal argument, $Actor(e) = A$. A carries with it properties associated with the impersonal actor, genericity, humanness,

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[19]www.tpu.ee
[20]Rajandi (1999:68,fn40)

agentivity. If the unification of these two phrases identifying the actor does not produce a conflict in interpretation, then the agentive adverbial is allowed. This explanation accounts for the data in (5.30). Both (5.30b and c) express agents which are general, unspecific and impersonal, whereas example (a) expresses a very specific and personal agent, and for that reason it is ungrammatical.

Agentives are commonly found in technical, bureaucratic, and translated texts, as in (5.31), from a rental contract compiled by a real estate agent in Tallinn.

(5.31) lepingu   muudatused... kirjutatakse   alla   mõlema Poole
        contract.GEN change.NOM.PL write.IMP.PRS under both.GEN side.GEN
        poolt
        by
        changes to the contract will be signed by both parties

Although it is an impersonal construction with an adverbial referring to two individuals who are to sign the contract, the individuality disappears in the bureaucratic language of the text, as well as the fact that the individuals may represent a business or a group of people. This clause is judged bureaucratic but grammatical, presumably because of the essential genericity of the actor referent. In sum, the impersonal constructions accept precisely those explicit agent phrases which entail the properties entailed by the impersonal.

The possible morphosyntactic forms for expression of agentive adverbials is also restricted, with one primary possibility: *by*-phrases (NP.GEN + *poolt*), as the above examples have illustrated. Rajandi (1999) also lists elative noun phrases as possible agentive adverbials in impersonals. He considers these idiomatically quite limited, but exemplifies this agentive phrase with the example repeated in (5.32), with a non-prototypical impersonal agent.

(5.32) frakk   näriti   koidest   auklikuks
        tail-coat.NOM.SG chew.IMP.PST moth.ELA.PL full-of-holes.TRL
        the tail coat was chewed to bits by moths[21]

In fact, most contemporary speakers reject this form, or at least prefer the same clause with an agentive *by*-phrase. I therefore concentrate only on the *by*-phrases.

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[21]Rajandi (1999:68, fn40)

As Comrie (1977) claims, demotion and deletion are related, but it is neverthe-less important on semantic and pragmatic grounds to distinguish between the two, rather than subsuming them under a general operation of 'removal'. The syntactic-semantic effects as well as discourse effects are distinct enough to war-rant making a clear distinction between impersonals and passives. Impersonals are syntactically subjectless, but semantically agentive, with the actor merely suppressed. Passives have a derived subject and a deleted actor. "Unifying" the two in the way Comrie suggests may have led to more confusion than clarity.

Personal passives with expressed agents

Personal passives, in contrast to impersonals, easily accept agentive phrases of a much broader range. Semantically, there are no more restrictions on the passive agentives than those on agents in general. The actor in a passive construction is unassigned and has no semantic content at all, and so no restrictions are placed on the agentive adverbial. Morphosyntactically, agentive adverbials can be ex-pressed as both *by*-phrases and elatives (both demonstrated above, but repeated with the personal passive in examples 5.33a–b), as well as genitive (5.33c) and adessive NPs (5.33d).

(5.33)   a.   linn   on   taanlaste   poolt vallutatud
              city.NOM.SG be.PRS.3SG Dane.GEN.PL by   conquer.2PTC
              the city has been conquered by the Danes

         b.   järved   on   heitvetest   saastatud
              lake.NOM.PL be.3PL.PRS waste-water.ELA.PL pollute.2PTC
              the lakes are polluted from waste waters[22]

         c.   maja   on   mu   venna   ehitatud
              house.NOM.SG be.PRS.3SG 1SG.GEN brother.GEN.SG build.2PTC
              the house was built by my brother[23]

         d.   meil   on   see mägi   juba   võetud
              1PL.ADE be.PRS.3SG this mountain.NOM.SG already take.2PTC
              that mountain has already been taken by us

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[22]Rajandi (1999:99)

[23]This construction is used as evidence for the Estonian personal passive having been gram-maticalised as a verbal form in contrast to the similar Finnish construction, which seems to be entirely adjectival and does not allow an agentive expression, e.g. Finnish *Kakku on (*Epun) leiv-ottu* versus the optional grammatical adverbial in Estonian *Kook on (Epu) küpsetatud* (both gloss as: cake.NOM is Epp.GEN baked) 'the cake has been baked by Epp.'

There are restrictions on some of these, and not all verbs nor all passive construc-
tions allow each of these adverbials. Genitive agentives seem to be restricted to
verbs of creation and destruction, which might be seen as the most transitive
verbs, the patient's very existence depending entirely on the agent. The geni-
tive is one of the grammatical cases, rather than an oblique case. When used to
express a passive agent, it is not a core argument, but it is more closely tied to
the core of the clause than any of the other agent expression types. It forms part
of the verbal constituent, and so its structure is not a peripheral oblique like the
by-adverbials. It might be said that these constructions function less to delete
the agent than others do. In fact, the verbs of creation often take the genitive
adverbial as an obligatory adjunct.[24]

As the verbs of creation involve the bringing into existence of the undergoer ar-
gument, it is informationally empty to use a phrase such as 'the house was built'
(Goldberg & Ackerman 2001). The use of *the house* as a subject and topic involves
a presupposition of its existence, and the normal understanding of the existence
of a house includes its having been built. Hence, without any additional informa-
tion, the personal passive lacks an information focus, and fails some sort of prag-
matic communicative principle, such as Grice's (1975) conversational maxim of
quantity. The addition of a temporal, locative, or agentive phrase redeems the
clause, adding information which is not already in the evoked presuppositions.
Iconic motivation might be used to explain the fact that in Estonian the genitive
case is used here for agentives, where the agentive is obligatory, unlike any of
the other forms of agentive expression, which are not obligatory and make use
of oblique case-marking on the agent, and result in a more backgrounded agent
referent, pragmatically and syntactically. Personal passives allow agentive ad-
verbials of various kinds, irrespective of semantic features like agentivity and
animacy, and with a greater variety in morphosyntax than impersonals. Like-
wise, the actor argument in a passive logical structure carries no information
regarding the actor, and so the lack of restrictions is to be expected.

Anticausatives and apersonals resist agentives

Anticausatives do not block cause adverbials, but a human agent is not allowed.
Anticausatives are very odd or ungrammatical with any agentive phrase, as

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[24]The phrase *obligatory adjunct* may seem like an oxymoron. In fact it refers to an expression
made obligatory on the level of the *clause*, by the construction in which it participates. It is
nevertheless an adjunct, as it is optional on the level of the *predicate*, not in any way required by
the verbal semantics or the argument structure.

shown in example (5.34a), although an inanimate causer is acceptable (5.34b).

(5.34) a. *rong   peatus   rongijuhi   poolt/ rongijuhist
           train.NOM stop.ANTC.PST.3SG conductor.GEN by/   conductor.ELA
           the train stopped by the conductor/ of the conductor

        b. rong   peatus   hädapiduri   tõmbest
           train.NOM stop.ANTC.PST.3SG emergency-brake.GEN pull.ELA
           the train stopped from the pulling of the emergency brake[25]

Although the data from anaphoric reference lead to the conclusion that the anti-causative agent is more demoted than the personal passive agent, the behavior with agentive adverbials seems to provide the opposite cline, with personal passives at one end and anticausatives at the other, mediated by the impersonal, with its various restrictions on the sort of agentives it co-occurs with. However, this is explained as follows. With the impersonal and the personal passive, there is a syntactic operation of agent suppression or demotion, which is part of the argument linking process. The difference between the two constructions lies in the fact that the impersonal retains the argument structure of the verb, while the passive is a detransitivising, or valency-reducing, operation.

With the anticausative, the removal of the agent occurs before the verb enters into any argument linking or syntactic processes. The agent is not only demoted from a position of salience, but it is removed from the representation of the event, leaving only the undergoer, either as initiator/causer of the event or as the affected undergoer of a spontaneous event. There is no semantic slot to be taken by an actor or agent, nor one for an actor referent to be associated with. The personal passive and the impersonal retain the actor argument position in the logical structure, and an expressed agentive can be associated with that position.

Because the personal passive has a more complete demotion operation, essentially amounting to deletion, it has no restrictions on type of agent and the type of adverbial that can be used to express the agent. The impersonal only partially demotes the actor argument. The argument position is considered to be filled—and given some semantic content—by the impersonal actor, and so the restrictions on any additional overt expression of the actor argument derive from the semantic properties associated with the impersonal actor. The impersonal construction is used precisely in order to avoid direct mention or specification of the

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[25]Erelt, Erelt & Ross (1997:323)

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agent, or to actually express the agent as unspecified and generalised. Hence, a specific agentive adverbial is usually anomalous, and this is also why the less specific agents redeem the grammaticality and acceptability of overt agentive adverbials. The implicit argument is present on the level of argument structure, and has an interpretation of a generic actor, but it does not introduce a discourse referent which could be referred to by a definite pronoun.

The personal passive, on the other hand, is used primarily to topicalise the undergoer, and to detransitivise the verb. An agent expressed in an oblique is demoted, backgrounded, and therefore does not interfere with the main functions of the construction. The undergoer is highlighted by appearing as a subject, and the reemergence of the actor is not problematic for the personal passive.

The apersonal, also unsurprisingly, allows no agentive adverbials, as its argument is not at all syntactically demoted, merely unexpressed, and semantically unspecific and generic.

(5.35)   *siit   näeb   tervet   linna   turistide   poolt
         here.ELA see.PRS.3SG whole.PAR city.PAR.SG tourist.GEN.PL by
         you can see the whole city from here by the tourists

The implicit impersonal argument has a peculiar discourse status not shared by any of the other demoted arguments. It is salient enough to support anaphoric reference with a reflexive pronoun or act as controller of a purpose clause, but it does not introduce a discourse entity which could be referred to with a definite pronoun. It allows certain agentive adverbials, but has enough semantic content to conflict with others. The implicit impersonal argument fills a semantic *role* but dissociates that from *reference* to a discourse entity. The example in (5.36) demonstrates the flexibility with which the exophoric impersonal argument is supplied with an interpretation.

(5.36)   muuseumides hävitati   peaaegu kõik, mida   nendes oli
         museum.INE.PL destroy.IMP.PST almost all   what.PAR 3PL.INE be.PST.3SG
         aegade   jooksul säilitatud
         time.GEN.PL during preserve.2PTC
         *in the museums, almost everything that had been preserved through the ages
         was destroyed*[26]

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[26]*Eesti Päevaleht*, 24.04.03

This example contains two impersonal constructions, in a main and a subordinate clause, which point to two different referents: the destroyers (looters), in the first clause, and the preservers (museums and their workers) in the subordinate clause. Clearly, the impersonal does not introduce a discourse entity to which the successive impersonal must also refer. Rather, each instance of the impersonal receives an interpretation based on context and relevance.

Koenig & Mauner (2000) characterise what they call 'a-definites' (which I take to include impersonals and apersonals) by their discourse inertness. The fact that a-definites clearly satisfy an argument position (rather than deleting it) but do not introduce a discourse entity is taken to provide evidence for an analysis which includes two types of information in the semantic representation of predicates: the predicative conditions and the set of available discourse markers. However, Koenig & Mauner (2000) note that "the (relative) discourse inertness of a-definites does not entail their imperviousness to anaphoric processes" (2000:233). A-definites are shown to serve as antecedents to intrasentential reflexive binding and cross-sentential indefinites and definite pronouns. However, interpretation of this sort of anaphoric reference is shown to derive from the hearer's interest in accommodating in order to make a discourse coherent. "Binding of definite NPs or pronouns to a-definites is the result of an accommodation process by which the presupposition attached to definite NPs or definite pronouns is resolved through bridging inferences even when no appropriate antecedent is available" (2000:233). The results of their study suggest a clearly graded availability of antecedents for anaphoric reference, depending on the availability of enough semantic content to support bridging as well as the requirements of each type of anaphor.

5.4 Hierarchy of Demoted Arguments

The varying discourse behavior of the constructions examined in this chapter reveals the reasons for a language having such an array of valency-modifying operations. Some other languages have richer voice paradigms than Estonian,[27] and each construction then has a different combination of functions, involving verbal semantics as well as topicality and agentivity of the arguments. As suggested by Koenig (1999), non-quantificational NPs or pronominals have three distinct functions: they can introduce new discourse entities; they satisfy an argument of a

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[27]Chamorro, for instance, is reported to have five different options for expressing semantic transitivity (Cooreman 1982).

predicate; and they introduce restrictions on the referent of the discourse marker they introduce. When these three functions are taken into account, the variability between the argument structure-modifying constructions is less surprising.

The implicit arguments looked at thus far can differ both in their semantic and pragmatic roles and grammatical relations. Naturally, the accommodation that takes place on the part of hearers is powerful, and can often overcome the limits of grammaticality by pragmatic inference and bridging. Reaction-time experiments would be particularly interesting for investigating the comparative difficulty of processing the various implicit arguments as antecedents of various forms of anaphora.

The anticausative construction fully deletes its actor argument before lexical selection, and so there is no actor argument to satisfy, no discourse marker, and no restrictions introduced. The inaccessibility of the actor argument is shown by the fact that the controller of purpose clauses, which can successfully be the a-definite actor, can only be interpreted as the undergoer argument in the anticausative construction, which results in a pragmatically unacceptable interpretation of the anticausative in (5.29). Several informants remark on the anticausative clause as simply illogical: "you are granting agency to the ship" or "the ship can't have wanted the insurance money." There is no agent referent remotely accessible for acting as controller of the null subject of the purpose clause or as an antecedent for definite pronouns.

The personal passive involves deletion but retains the actor argument slot, although the grammatical relation of subject is linked to the undergoer argument. This construction certainly does not involve the implicit actor satisfying an argument. Instead, the verb is detransitivised such that that argument is no longer available to be satisfied. However, the semantic presence of an actor is undeniable, and can act as controller of a purpose clause without anomaly. In addition, the insertion of an agentive phrase, and the association of that agentive with the actor role of the predicate, demonstrates that the actor is not entirely deleted in the way it is with the anticausative construction, which cannot accommodate any agentive adverbials.

Impersonal actors, or a-definites, function in much the same way predicted by Koenig & Mauner (2000). The implicit impersonal argument both satisfies an argument *and* introduces a (low-level) restriction on the referent of that argument,

but does not in fact introduce a discourse entity. In order to refer to the impersonal with a definite NP or pronoun, there has to be a transitional sentence to facilitate pragmatic accommodation. Koenig & Mauner's (2000) "hypothesis is that the discourse function of implicit arguments in the case of lexical NPs and indefinite pronouns...is mostly a matter of *inference* not *coreference*. More precisely, [they] suggest that the identification of referents follows from a process of accommodation (or bridging inference) of the kind described in Clark & Haviland (1977) or of factoring" (2000:224).

The generic apersonal also satisfies an argument, but its discourse referent is so underspecified that it is only given the interpretation of 'anyone' through a process of inference. In this case, the presence of an actor is dependent on the verbal semantics, as the same structure is used for non-personal weather verbs as for the apersonal generic modal verbs. For this reason, the interpretation of the potential actor referent *must* be arrived at through pragmatic inference, which only obtains if the verbal semantics and contextual evidence support that interpretation. Again, some overt bridging needs to happen before any apersonal referent can be identified with a discourse marker to which further anaphoric reference can be made with a definite NP or pronoun. However, the argument it satisfies and the inferential generic interpretation gives the apersonal referent enough salience to serve as antecedent for a reflexive or controller of a null subject, as with the implicit impersonal argument.

Construction grammars provide an apt framework for expressing the distinctions involved in these constructions. The differences come out on syntactic, semantic, and pragmatic levels of linguistic structure, and the effects these distinctions have on the discourse status of the implicit arguments are dependent on both the structure in which they are embedded, and the process of interpretation required. In effect, each construction examined here has a slightly different process of argument demotion, and each one has a different process of implicit argument interpretation.

For the distinction between impersonals and personal passives, "the key contrast is not between lexical and syntactic views of valence alternations, but rather between valence-reducing and valence-preserving processes" (Blevins 2003:475). The impersonal retains the argument, satisfied by the non-discourse-referent-introducing implicit impersonal argument, while the personal passive deletes that argument, reducing the valency of the construction.

Unlike morphosemantic operations like causativization (and perhaps middle formation), both passivization and impersonalization preserve the thematic structure of a predicate. The difference between passivization and impersonalization reflects a secondary division within the class of morphosyntactic operations. Passivization is a detransitivizing operation that deletes a subject term in the argument structure of a verb. Impersonalization, on the other hand, maintains the lexical transitivity of a verb, but assigns an empty SUBJ value... that prevents any term from being associated with the subject function. (Blevins 2003:512)

This "empty SUBJ" is a different means of expressing the same relation just discussed as a-definite. The argument position is satisfied by an arbitrary term with some semantic content, but no discourse referent is introduced. The grammatical relation is in place, and the semantic role is derived from the semantics of the verb, but the argument is underspecified as a discourse entity.

Anticausatives and passives are both relation-changing; impersonals and apersonals are both relation-preserving. Anticausatives are derivational (the relational change occurs before argument linking); impersonals are lexical operations; passives are syntactic (the relational change occurs in the linking of arguments); and apersonal interpretation occurs as a clause-level pragmatic inference from the underspecified construction.

A summary of the hierarchy that has emerged from the investigation in this chapter is given in (5.37). The hierarchy represents the extent of demotion of the actor in the constructions given. In fact, this refers to any argument that can be demoted, be it actor or undergoer. It has been noted, for instance, that the impersonal construction applies to unaccusative verbs with single undergoer arguments. However, the hierarchy applies prototypically to actors, and as some of the constructions demote only actors, the status of the demoted actors is the point of contrast throughout the various operations of demotion.

(5.37)   **ACTOR DEMOTION HIERARCHY**
          ANTICAUSATIVE > PERSONAL PASSIVE > IMPERSONAL > APERSONAL

The anticausative actor is thus deleted before the operation of argument linking occurs, whereas in the personal passive it is deleted as a syntactic operation. The

impersonal retains the argument structure but links the actor to an a-definite argument holder.

The apersonal actor is not syntactically demoted, but it is semantically reduced to a non-agentive potential actor, rather than transitive actor. The generic interpretation of the apersonal actor role comes from the unspecified argument and modal nature of the predicate. The verb is active and the default 3SG agreement only suggests a general person, rather than involving any sort of demotion at all. The actor role is given a stative modal interpretation, which can be analysed as a stative undergoer. This could be called semantic role demotion. Regardless of the agentivity of the verb, the apersonal only expresses the event as a modal possibility, or as background for other events, and so the a-definite actor role, even if it is an agent, is demoted to a stative undergoer.

The Actor Demotion Hierarchy follows directly from the semantic representation of the constructions developed in Chapter 4. The anticausative has no actor, and provides no possible semantic referent and no discourse entity. The personal passive has an actor demoted to $\emptyset$, and is interpreted as having a *possible* referent, made more accessible with an agentive phrase. The implicit impersonal actor is denoted in the logical structure with the arbitrary term A, which carries certain restrictions. It follows from this that it has a restricted generic reference. The apersonal, represented with the arbitrary term a with no restrictions, has a generic referent with no restrictions. As the demotion of each argument occurs through different means, the actor referent has variable accessibility because of its status of demotion as well as its different process of interpretation.

5.4.1 Hierarchy of Promoted Arguments

Argument promotion is secondary to argument demotion on descriptive and theoretical grounds. Where promotion is only partial, the promotional character of the construction comes about as a by-product of other operations. Nominative case-marking of the impersonal undergoer is not a result of promotion, but a result of the construction lacking another nominative argument. Nominative case-marking does not mark promotion to subject, although it can correspond to topicalisation as well as some pivot-like behavior. Demotion can occur without promotion, but promotion never occurs without demotion. All of the voice constructions involve some amount of demotion, whereas not all involve promotion.

As the operation of argument promotion is secondary to the demotional opera-
tions, the ranking of the hierarchies also places the promotion hierarchy as de-
pendent on the hierarchy of demotion. However, it can be directly derived from
the demotion hierarchy, and it functions in exactly the same direction. The Pro-
motion Hierarchy is given in (5.38).

(5.38)   **UNDERGOER PROMOTION HIERARCHY**
ANTICAUSATIVE > PERSONAL PASSIVE > IMPERSONAL > APERSONAL

The constructions with the least demoted actors have the least promoted under-
goers. Those with a deleted actor argument have a promoted undergoer subject.
In fact, this is a logical result of the relationship between these hierarchies. Only
if the demoted argument is fully demoted is there a possibility of full promotion
without a confusion of grammatical relations. The prediction is that this de-
pendency between promotional hierarchies and demotional hierarchies is valid
cross-linguistically.

If this is the case, then the independence of the 'removal' of the actor argument
from the promotion of the undergoer argument is an illusion. The illusion is
brought about by a binary view of promotion and demotion. By observing the
nuances involved, and the different degrees of demotion effected by the valency
changing operations in Estonian, the interaction between promotion and demo-
tion is made more clear.

At the high end of the undergoer promotion hierarchy, the anticausative and
the personal passive both have fully promoted subjects. The primary difference
in the interpretation of the two constructions results from the different status
of their actor arguments. This in turn has an effect on the extent of promotion.
The anticausative undergoer can be seen to have some more actor-like properties
than the personal passive, in that it can take on both actor and undergoer roles,
as the event is represented as both initiated from and affecting the undergoer
referent.

The personal passive is a syntactically fully promotional construction. Yet the un-
dergoer is represented in a result state, and is certainly not seen to be any more
active than in an active clause. More importantly, it does not take on any seman-
tic features of the actor role, but remains an undergoer, unlike the anticausative
subject argument.

The impersonal undergoer is not promoted, and retains its object status. However, it can be coded with nominative case, and it can also act as a controller in some constructions. The absence of an overt actor, and the partial demotion of the actor argument, results in a small amount of promotion of the undergoer argument. As the only overt NP, it is accessible as an antecedent for various anaphora. However, the semantic presence of the actor is attested by the fact that even that argument, though unencoded, can act as antecedent to some anaphors.

5.5 Conclusion

As demonstrated by Koenig & Mauner (2000), the semantics of implicit arguments and their explicit indefinite paraphrases differ. This chapter contributes to this finding, and adds the suggestion that the semantics of various implicit arguments themselves differ as well. The RRG constructional approach goes some way to providing a way of representing these differences, as shown in the last chapter. However, in order to account for the discourse behavior of the implicit actor arguments, an additional pragmatic layer of available discourse entities must be added to the semantic information encoded in the RRG logical structure.

RRG is not a theory of discourse. Van Valin & LaPolla (1997) suggest a way of handling information structure by affixing labels of 'active', 'inactive', etc., to the various arguments in a predicate. This is not a rich enough representation to encapsulate the differences between discourse entities described in this chapter. The RRG representation needs to be expanded upon to account for pragmatic differences, but it is possible to represent the varying levels of demotion and the varying effects this has on availability for anaphoric reference in the RRG framework. Information regarding the hierarchies of demotion and promotion can be read directly from the logical structure of the output of valency changing operations.

The identification of arguments in the logical structure is the first step of semantic representation, and the accessibility of these arguments as discourse entities can be represented along with identifying the arguments with their referents. Even arguments identified as ∅ or overtly unspecified are given some sort of pragmatic status. Arguments which are entirely unencoded, such as the non-existent anticausative actor, are the only ones which are entirely unavailable, even for pragmatic bridging purposes. The Actor Demotion Hierarchy represents both

semantic and syntactic information. The Undergoer Promotion Hierarchy is primarily syntactic. As the Promotion Hierarchy can be derived from the Demotion Hierarchy, they can either be subsumed in one Voice Hierarchy, or the Demotion Hierarchy can be taken as primary, encapsulating the different degrees of argument selection modification from the active, both demotional and promotional.

Of course, not all pragmatic information can be included in the semantic representation of predicates. A single utterance gives rise to numerous presuppositions and potential interpretations which are accessible though inactive, and can be triggered by a successive utterance. This is information which comes up in the much more complex process of interpretation of discourse, cohesiveness, and so on. However, pragmatic information which is grammatically encoded, and which is built into the use of a particular construction, ought to be included in the representation of that construction. This chapter shows how many results fall out of representing the degrees of actor demotion in the semantic structure of voice constructions.

6

Voice Combinations

In Chapter 5, a hierarchy of argument demotion is developed. Yet these constructions (and their arguments) are not autonomous, static structures, but rather form part of a fluid linguistic system. As such, they cover complementary linguistic functions, and they also interact and combine to give the voice system more complexity and depth. This chapter focusses on the combinatorial possibilities among valency-changing operations, and the question of whether the semantics of their interaction is predictable. The order of procedure is essential here, as valency change occurs by means of an operation, not merely as a construction with a particular predicate argument structure, and the operation requires particular information as input and results in a modified argument structure as output. Hence, the abstract possibilities of interactions between the four constructions consists of sixteen combinatorial possibilities.

A question which immediately arises concerns the possibility of a construction interacting with itself. Some of these constructions cannot, but theoretically, an operation can apply more than once to the same predicate, either twice or recursively. The answer to this question ought to provide information about the sort of input required for each operation and the type of output it gives, or the valency properties of the construction formed by each operation.

The combinatorial effects have to do with the differing degrees of demotion represented by the different constructions, but also with the morphosyntactic realisation of this demotion. The impersonal, for instance, can combine with a different set of constructions in the simple than in the perfect tenses. In the perfect tenses, a default-marked auxiliary—which carries nothing more than tense

information—opens the construction up to various sorts of marking; whereas in the synthetic simple tenses, the verb is marked for the impersonal, allowing no room for any additional inflection.

Certain discrepancies between grammars and actual usage highlight features of these constructions which provide more clues to their interpretation and their intrinsic versus incidental semantics. The possibilities of combination with the impersonal raise questions about grammaticality, diachrony, and language change, which are examined in the following chapter. This chapter consolidates the findings from the previous chapter and examines information to be gleaned from interactions among the voice constructions. From the outset, it is clear that anticausativisation and passivisation both strictly require bivalent input in order to operate successfully. Apersonal generics and impersonals both accept a broader range of input. Likewise, anticausativisation and passivisation both result in monovalent constructions, whereas impersonals and apersonals do not necessarily. This suggests that a line might be drawn between the two groups of constructions. Yet I begin by considering each construction in turn, as it is not clear whether they can be grouped thus for all combinatorial properties.

6.1 Anticausative Combinations

Anticausatives are placed on the extreme end of the Actor Demotion Hierarchy, with no actor present on any syntactic or semantic level, or even through any pragmatic interpretation process. The output of the demoting operation is a lexicalised monovalent verb. Hence, the personal passive, for instance, cannot be formed with an anticausative verb. The conflict is represented in (6.1).

(6.1) a. *sulgema* 'close (trans.)' [**do′** $(x, \emptyset)$] CAUSE [INGR **closed′** (y)]
  b. *sulguma* 'close (ANTC)' [INGR **closed′** (y)]
  c. PASSIVISATION:
    x (ACTOR) $\longrightarrow \emptyset$
    y (UNDERGOER) $\longrightarrow$ PSA

Example (6.1a) is a reminder of the formal RRG representation of a causative activity; example (6.1b) gives the anticausative derived from (a), namely the post-CAUSE element in the logical structure, which contains no actor argument. Simplified rules for two essential components of passivisation are given in (6.1c).

Neither rule can take effect on an anticausative such as (6.1b), as it has no actor to demote to ∅, and its undergoer is *already* the subject, or PSA, and so cannot be further promoted. Neither of the two defining operations of passivisation are available for a logical structure such as (6.1b), which is the result of an anti-causative operation on (6.1a).

Likewise, the converse operation is also impossible, namely, the anticausative cannot apply to a personal passive, for two reasons. First, the same problem as above arises, in that the passive construction is a derived intransitive, to which anticausativisation cannot be applied. Again, there is no actor to demote and no undergoer to promote, as the undergoer is already in a PSA position. However, prior to the question of valency, the anticausative requires a pre-argument link-ing lexical verb as its input, rather than a predicate. The personal passive is not a lexical verb; it is a predicate, and a derived monovalent one at that. Both the an-ticausative and personal passive involve a process of actor demotion, and both require a transitive verb with an actor to demote. Since both create a derived non-transitive predicate, interaction between them is blocked.

Of the remaining constructions, the anticausative can combine with both the apersonal and the impersonal construction. The apersonal, however, is only used with a small subset of anticausatives: those anticausatives which can both take arguments with human referents and have an actor argument rather than an un-dergoer. The construction provides no clues for interpretation of its own, requir-ing contextual information instead for interpretation. The reading of suppressed agentive potential can only come about with a demoted actor. Anticausatives with actor arguments, though less common than those with undergoers, do ex-ist, with examples like *riietuma* 'get dressed' and *kohtuma* 'meet'. A constructed example of an anticausative apersonal construction is given in example (6.2).

(6.2) kohtub   kõigepealt linnas ja siis vaatab   edasi
       meet.ANTC.PRS.3SG first   city.INE and then look.PRS.3SG onward
       we'll meet in the city first and then see what to do from there

I have not come across any attested apersonal constructions using simply an anti-causative verb. However, they are difficult to search for without any tagged text or even with tagged text, because of having no distinctive marking. The third person singular form of these verbs is common, but to find it with a null, non-anaphoric subject is rare in written Estonian. Short-cuts for searching for these

are not easy to come by. It is also a construction associated more commonly with colloquial speech than written text.

Nevertheless, the example given above is judged to be grammatical and pragmatically realistic, and I include it in order to give a complete picture of the possible combinations of voice constructions. A representation of the first apersonal clause in (6.2) is given in (6.3), leaving out the locative adverbial, with the event labels prompting a pragmatic inference of an indefinite, potential actor, in this case pragmatically supplied as the 1PL referent.

(6.3) $s : \mathbf{be}'([e\colon \text{INGR}\,\mathbf{do}'\,(a,\,[\mathbf{meet}'\,(a)])],\ \mathbf{possible}')$

It is worth adding, however, that it is easier to find examples of this construction in conjunction with the modal *võima* 'can' with a 3SG inflection followed by an anticausative, and giving a generic reading, as given in the following examples.

(6.4)   a.   energiakulu   suurendamiseks **võib**   **riietuda**
                  energy-spending.NOM.SG enlargement.TRL can.PRS.3SG clothe.INF
                  mõnevõrra soojemalt
                  somewhat more-warmly
                  to increase energy burning, one can dress a bit more warmly[1]

          b.   lõbunaisega   **võib**   **kohtuda** ka   baaris
                  prostitute.COM.SG can.PRS.3SG meet.INF also bar.INE
                  one can also meet with a prostitute in a bar[2]

          c.   muinasjuttudes **võib**   nähtamatuks **muutuda**   mitmel
                  folktale.INE.PL can.PRS.3SG invisible.TRL change.INF many.ADE
                  moel
                  way.ADE
                  in fairy tales, one can become invisible in many ways[3]

The modal makes explicit an important part of the semantics of the apersonal constructions, namely the interpretation of potentiality. In effect, the modal adds explicitly the state of event potential, which is added by inference in the normal parsing of an apersonal verb. Since the unmarked 3SG can be used for other constructions as well as the apersonal, the use of the modal makes an apersonal reading easier to access.

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[1]www.ut.ee/tervis/aastateema/artiklid/tselluliit.htm
[2]www.maaja.ee/07.shtml
[3]www.intra.ee/saale/nahtamatu.html

A question brought up from examples of apersonal usage such as those in 6.4 is what the semantic or pragmatic difference is between apersonal and impersonal usage. The apersonal generic sentence in (6.4c) is followed, in the original text, by an impersonal construction:

(6.5)   väga tihti   kasutatakse selleks mingit   pulbrit
        very often use.IMP.PRS it.TRL   some.PAR powder.PAR
        some kind of powder is often used for it

The logical structures for (6.4c) and (6.5) are given in (6.6).

(6.6)   a. $s : \mathbf{be}'([e : \text{INGR } \mathbf{change}' \, (a)], \, \mathbf{possible}')$
        b. $e : \mathbf{do}' \, (A, \, [\mathbf{use}' \, (A, \, \text{mingi pulber})])$

From the logical structure representations, it can be read that the apersonal relies on a pragmatic inference process, whereas the impersonal has an actor which typically points to something in the surrounding discourse context. Often the two can be used interchangeably, but often, too, once the apersonal interpretation is bridged pragmatically, the impersonal is used, with a now contextually salient referent. The apersonal construction is used to set up the context, and the impersonal construction is used once the context of fairy tales and their characters has been established. The apersonal allows a broader referent, and one which requires fewer presuppositions. The impersonal uses the context already set up for the interpretation of its scope. However, it is also true that in this example, the apersonal is used for a stative potential clause, whereas the impersonal is used for an active, dynamic verb. The stative potential clause is used for background information and context setting, whereas the dynamic impersonal is a foregrounding construction (Hopper & Thompson 1980).

6.1.1   Impersonalising the Anticausative

Causative verbs are closer semantically to the impersonal construction than their anticausative counterparts. Causatives necessarily have some element of agentivity and volitionality, and this tends to pair naturally with a human causer, just as with the impersonal, the human actor argument carries with it an agentive, volitional interpretation. Nevertheless, as previous chapters have shown, the impersonal accepts a broad range of predicates, and many of the cross-linguistic

restrictions typically associated with the impersonal do not apply to the Estonian impersonal.

Moreover, as discussed in Chapter 4, anticausatives and unaccusatives can be impersonalised in Estonian.[4] I have not, however, examined the various restrictions regarding which of these verbs in fact can be impersonalised. The groups of individual lexical items which bar the impersonal construction are larger in the class of anticausatives than any other. This is no surprise, considering the common association of anticausatives with non-human, non-volitional undergoer argument referents, and the clash this constitutes with the human, volitional, impersonal actor referents.

Again, however, the limitations placed on anticausatives combining with an impersonal construction are generally reducible to the issue of whether the anticausative PSA can take a human referent. Rajandi (1999) lists verbs such as those in (6.7a–b) among those which cannot combine with the impersonal.

(6.7) a. *toimuti
           happen.IMP.PST
           'one happened'

       b. *soikuti
           abate.IMP.PST
           'one abated/subsided'

The list expands to other verbs with abstract non-human argument referents, such as linguistic entities and events (as in example 6.8a) and verbs with concrete but non-human subjects (as in 6.8b). But the list of restrictions also includes verbs which can have human subjects, but nevertheless resist impersonalisation, such as the verbs in example (6.8c).

(6.8) a. *käändutakse* 'decline (nouns)'
           hääldutakse 'be pronounced (words)'
           allitereerutakse 'alliterate'
           esietenduti 'premiere'
           jõustuti 'take effect'

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[4]See section 4.6 for a discussion of the modified semantics associated with unaccusative verbs in the impersonal construction.

    b.   *hõõguti* 'glow'
           koiduti 'dawn'
           loojuti 'set (of the sun)'

    c.   *sarnaneti* 'be similar' *leiduti* 'be found'

This last group is the most curious, as here the problem with the impersonal stems not from the lack of a human referent but, apparently, from its stativity and non-agentivity, suggesting that both humanness and agentivity are central to the semantics of the impersonal. However, it also gives rise to variable judgements. *Sarnaneti* can be judged grammatical by some respondents given the right context, typically with an interpretation of volitionality. Peegel (1958) discusses defective verbs which are *only* used in the 3SG form, not inflecting for person, all of which are monovalent, and many of which are anticausative.

Finally, there are verbs which cannot apply directly to human subjects, yet have accepted metaphorical meanings when taking a human subject, and so can undergo impersonalisation. These include those in (6.9).

(6.9)   *hauguti* 'bark'
        sirtsuti 'chirp'
        laiuti 'widen, dilate'

Rajandi (1999) notes that as a "relict from an early anthropomorphic worldview," certain natural occurrences also appear in the impersonal, such as those given in example (6.10), where in fact no human actor is possible. Rajandi considers the human actor referent to be so inextricable from the semantics of the impersonal that he claims not that these examples override that semantic element, but rather that they reflect a pre-scientific explanation of natural occurrences. Rajandi seems to resign himself to the idea that "grammar is a stronger compulsion than our cosmogonic erudition" (1999:88).

(6.10)   a.   vaala   korjus   heideti   kaldale
                 whale.GEN carcass.NOM.SG cast.IMP.PST shore.ALL
                 the whale's carcass was cast upon the shore[5]

        b.   loodi   noor   kuu
                 create.IMP.PST young.NOM.SG moon.NOM.SG
                 a new moon was created

[5]Rajandi (1999:88)

The following two attested examples involve an anticausative verb, *veenduma* 'become convinced', whose causative counterpart, *veenma* 'convince' does not have overt causative marking. This reflects the fact that it is not a canonical causative verb, but rather a mental event causative, and denotes a slow process rather than a dynamic event—and so it is instead basic and unmarked. The anticausative is formed by adding an anticausative affix to the causative root, rather than changing a causative morpheme to an anticausative one. The anticausative *veenduma* 'become convinced,' is a typical carrier of middle voice semantics.

(6.11) a. tänapäeval   ollakse   valdavalt veendunud,   et…
            nowadays.ADE be.IMP.PRS mostly   convince.ANTC.1PTC that
            nowadays people are mostly convinced that… [6]

        b. oldi   veendutud,   et   kui riigipea…
            be.IMP.PST convince.ANTC.2PTC that if   head-of-state.GEN
            people were convinced that if the head of state… [7]

Interestingly, however, the two examples in (6.11) show an odd effect when this anticausative verb combines with the impersonal. Both (6.11a) and (b) are attested, and both have been judged correct by native speakers.[8] The form of these examples suggests that the orientation of the verb should be actor-directed in the case of the active participle in (6.11a) and undergoer-directed in the case of the passive participle in (b), but this is not the case, as can be seen from the translations.

The existence of both of the above constructions would seem to be modeled after a verb pair which does alternate between the *Ta*-causative and the *Tu*-anticausative. Since this particular item has no causative counterpart, and is monovalent, the only possible interpretation of (6.11b) is that of having the same orientation as in (a). If these two are in free variation, then this confounds the morphological cues Estonian possesses for parsing clauses like those above, and casts doubt onto verbs which do have the regular causative-anticausative alternation, but which might also enter into this orientation-switching construction, as shown in example (6.12).

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[6]www.zone.ee/eveliiintamm/arieetika/arieeetika%20-%20konspekt.doc
[7]www.tyk.ut.ee/pdf/presidendiraamat.pdf
[8]In fact, the example (6.11b) has received various responses from native speakers, from completely acceptable to completely unacceptable. As discussed in the following chapter, this may be evidence of a change in progress.

(6.12)   a.   ollakse   relvastunud

              be.IMP.PRS arm.ANTC.1PTC
              people have armed themselves

     b.   ollakse   relvastatud

              be.IMP.PRS arm.CST.2PTC
              people are armed

     c.   *ollakse   relvastutud

              be.IMP.PRS arm.ANTC.2PTC
              '*people have undergone arming of themselves*'

Example (6.12c) is ungrammatical, as the past passive participle cannot be used for an undergoer-oriented monovalent anticausative verb. Instead, either a causative passive participle (as in 6.12b) or an anticausative active participle (6.12a) must be used. It is likely that the ambi-directionality of *veenduma* above is a result of the anticausative semantics of mental event verbs, which conflate the actor and undergoer roles and confuse the boundary between initiator and end-point of an event. See also Pihlak (1993) on the confusion caused by the use of impersonal intransitives with both active and passive participles, and Haspelmath (1994) and Wiemer (forthcoming) with regard to the orientation of participles.

It is not coincidental that this confusion should come about precisely with the impersonal. In a sense, the PSA of the impersonal is 'slippery': the fact that the impersonal is open to such a variety of predicate types and various divergences from its prototype opens it to some ambiguous orientation as well. The actor referent is semantically present, but not nominally encoded. It is prototypically active in meaning, but it also accepts undergoers. In section 6.4, similar examples of vacillation in impersonal orientation come up, and they are discussed more thoroughly therein.

6.1.2   Anticausativised Anticausatives

The final combination in the anticausative group is that where an anticausative combines with itself. Judging from the form of the anticausative operation, this does not seem likely. Yet we do find verbal paradigms with either two distinct 'middle-marking' affixes, usually a *ne*-affix and an *u*-affix both applied to one root (Vihman 2002*b*), or even with two *u*-affixes, which would seem to suggest a doubly anticausativised verb.

The analysis in earlier chapters suggests that this ought to be impossible, as the anticausative specifically (and maximally) eliminates an actor argument and promotes the undergoer argument both syntactically to subject and semantically to something higher than a prototypical patient (although it still occupies an undergoer macrorole). From the beginning of this section, the anticausative is expected to behave just like the personal passive does.

However, the more general usage of the *u*-affix than anticausativisation, to mark the slightly broader (and vaguer) domain of middle voice, includes many uses of basic non-derived middles, and causatives derived from that. Many verbal roots can be found with two different derived middle verbs, one with the *ne*-affix and one with the *u*-affix. An example is the triad given in (6.13).

(6.13)	*erinema*	→	*eristama*	→	*eristuma*
	'differ'		'distinguish'		'distinguish oneself'

The second derived middle has a trace of the intermediate causative, reflected both morphologically and semantically, and it bears a subtle difference in meaning from the initial, more basic one (Vihman 2002*b*).

At least one example shows an anticausative marked with two *u*-affixes. The verb is *selgustuma*, derived from *selguma* 'clear up' (intr., often used to refer to weather), *selgustama* 'clarify' (trans.), and then changing the causative *ta* morpheme to anticausative *tu* to derive *selgustuma* 'be clarified, elucidated'. This example, however, is not a double anticausativised verb: rather, the initial *u*-verb is non-derived; it is basic. This verb is then causativised and anticausativised, but the anticausative operation only happens once. In addition, this verb is not accepted as being grammatical by all native speakers. Although it is included in Saagpakk's (1982) *Estonian-English Dictionary*, it does not receive any hits on either Google or an Estonian search engine at:
www.ee/www/search_more_index.html.

In conclusion, the findings of this section can be summarised as in example (6.14) below. Anticausatives cannot be further anticausativised, and neither can they be passivised. Impersonals and apersonals can both apply to anticausative verbs, and both require restrictions on the type of argument a particular verb requires—the most important restriction being that the referent be human.

(6.14)

ANTICAUSATIVE	*	*	✓	✓
	ANTC	PAS	IMP	APR

6.2 Apersonal Combinations

A distinction must be kept in mind between constructions which cannot combine because of morphological constraints, and those which cannot because of syntactic or semantic constraints. For instance, the impersonal and the apersonal cannot operate on the same predicate for simple morphosyntactic reasons. The impersonal inflects the verb in its synthetic simple tenses, leaving no room for an apersonal 3SG verb; and in the perfect tenses, the impersonal itself uses a default 3SG auxiliary, again leaving no way to identify an apersonal interpretation. The potential apersonal reading only comes through in the present tense. Example (6.15) shows the morphological impossibility of combining apersonal and impersonal voice.

(6.15) a. laulab   midagi
            sing.PRS.3SG something
            let's sing something / we could sing something

        b. lauldakse   midagi
            sing.IMP.PRS something
            people are singing something

        c. midagi   on   lauldud
            something be.PRS.3SG sing.2PTC
            there's been singing of something

Impersonalising the construction in (6.15a) gives the clause in (b) and loses the apersonal semantics, and vice versa. Examples (6.15c) is an impersonal perfect which uses the same 3SG default inflection as the apersonal uses. In Chapter 4 I note that those constructions with default 3SG verb inflection may be related, and given a similar analysis, and I hold that this is indeed the case with the impersonal perfect and apersonal distinction. The impersonal verb forms are distinct from apersonals in the synthetic tenses, and the semantic interpretation of the two accommodates these formal differences. The synthetic impersonal forms are given a more active, dynamic reading, whereas the apersonal, as has been discussed, is a stativiser, and implicates a more generalised implicit argument than the impersonal does.

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However, in the perfect tenses, where the difference in form is not as obvious, these semantic differences are also neutralised to a certain extent. This neutralisation results from both the perceived similarity of form and also the semantics of the perfect. In Chapter 2, an argument is laid out for why the development of a personal passive in Estonian involves only a small step from the perfect impersonal. The perfect is more stative and more resultative than the simple tenses, and so the semantics of the construction point in the direction of a more resultative construction, focussing more on the result state of the undergoer, rather than the event instigated by the indefinite and unmarked actor.

The semantics of the apersonal construction are understood to be stative like the passive, but they differ from the passive in focussing not on the undergoer, but rather on the actor. The stative semantic effect comes from the opposite perspective on the event from the passive. The passive presents the result state of an event, and it usually presents the changed undergoer of the event (the undergoer having undergone an event) as the topic. The apersonal, on the other hand, presents the state before the occurrence of the event, presenting the actor and the actor's potential to perform the event as central. The apersonal has a future-oriented perspective on an event, whereas the passive looks backward in a past orientation.

However, it is the morphosyntax of the apersonal which is both its functional strength and its interpretative weakness. Its strength lies in evoking a distinct pragmatic interpretation without requiring a separate construction or even an indefinite pronoun for it. The apersonal construction type is mentioned in Erelt et al. under "defective" clauses (1993:227),[9] but it is overlooked entirely in Tauli (1980), who includes a chapter on defective clauses and fragments, but covers only elliptical phrases and idiomatic expressions in the section on defective clauses. The apersonals take such an innocuous role in the grammar that they are easily overlooked.

The weakness of the apersonal lies in the fact that since the 3SG verb form is used for a number of constructions, the apersonal interpretation can only be felicitous under certain narrow circumstances, where it is not necessary to distinguish the

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[9]Erelt et al. (1993) discuss the constructions termed generic apersonals in this thesis under the category of subjectless clauses, along with impersonals and apersonal weather and physiological predicates. The distinction they make is based on the functional rather than formal characteristics. Indeed, the apersonal generic as examined here is also partially semantically defined: this can hardly be otherwise, since the formal marking of the apersonal overlaps with so many different constructions.

generic actor interpretation from a non-personal construction, an elliptical construction, or any other construction marked with a 3SG verb. And so, in many contexts the use of the apersonal and impersonal may be more or less equivalent, particularly when the verb itself is not very dynamic, and so the impersonal dynamics are low. Still, one is always chosen in any given utterance in place of the other. The example in (6.16) is attested as given in (a), with an impersonal stative and a generic apersonal stative main clause, but it could also be phrased as in (6.16b).

(6.16) a. kui ollakse   kurb, tuleb   nutta
            if be.IMP.PRS sad   come.PRS.3SG cry.INF
            when one is sad, one ought to cry[10]
        b. kui on   kurb, tuleb   nutta
            if be.PRS.3SG sad   come.PRS.3SG cry.INF
            when things are sad, one ought to cry

The distinction between the two options for this construction is suggested in the translations. The first one has a clear generalised impersonal referent, although the verb 'be' is not dynamic, nor is there any circumscribed scope for the referent. The option given in (b), with the intended apersonal verb, has a less forced interpretation. The apersonal reading can be achieved with this clause, but it is just as open to a non-personal reading, as suggested in the English translation. The unmarked verb can be read to refer to the general situation being sad as well as people being sad. It also leaves open the possible reading of an elliptical utterance, of coming in the middle of a discourse. Because of the many possible interpretations, an Estonian speaker may assume there must be some additional context on which to base an interpretation.

The main clause, *tuleb nutta*, is also unmarked, using a default 3SG verb, but the resulting interpretation is slightly different. The construction in question cannot be impersonalised (as shown earlier in examples 4.52c–d in Chapter 4), as its experiencer argument takes adessive case rather than nominative, and the grammaticalised verb is normally 3SG. Hence, this can be read as an elliptical expression, to be interpreted according to whatever referent is picked out by the initial subordinate clause, which supplies the referent of the main clause.

Finally, it has been mentioned earlier that apersonal constructions are difficult to search for without a tagged corpus. The anticausative apersonals given in the

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[10]www.parnu.ee/raulpage/21interv.html

previous section are clearly possible. Impersonals and apersonals do not interact within a predicate in either order of operation, but because of their compatible semantics, they can be coordinated.

As far as apersonals and passives interacting, the same problem of ambiguity arises as that which interferes with the hypothetical apersonal impersonals. As the personal passive construction does have a subject (as in 6.17a), there is no *morphosyntactic* problem with leaving the subject unexpressed in order to form an apersonal construction, as in (6.17b).

(6.17)   a.   me   oleme   karastatud
               1PL.NOM be.PRS.1PL refresh.2PTC
               we are refreshed

         b.   ∅ on   karastatud
               ∅ be.PRS.3SG refresh.2PTC
               ∅ *is refreshed / there has been refreshment*

         c.   (meid)   on   karastatud
               1PL.PAR be.PRS.3SG refresh.2PTC
               we have been refreshed

However, this construction is then indistinguishable from a perfect impersonal (as in 6.17c). It is, after all, the presence of a subject in the personal passive construction which is the primary distinguishing factor between the passive and the perfect impersonal. In addition, the apersonal usually requires an actor argument for felicitous apersonal generic interpretation, which is in conflict with the single undergoer argument of the passive construction. Hence, if the verb is bivalent (as passivisable verbs are), then the apersonal simply reads like a perfect impersonal which is incomplete, waiting for an undergoer argument to be expressed. This combination is unlikely to ever occur for pragmatic limitations on parsing and interpretability.

One final possibility is to use the more dynamic auxiliary *saama* 'get'. This is often used to refer to the speaker, either singularly or as part of a group, and it also felicitously encodes the imminent potential meaning of the apersonal, having a semi-grammaticalised future reading in Estonian. Since this auxiliary is not seen as quite as unmarked as *olema* 'be', it is easier to convey an apersonal meaning with it. However, examples where this reading is possible are those with an actor-oriented participle, and then the impersonal reading is paramount, as in

example (6.18). Again, the problem with combining the apersonal with other constructions is the multi-functionality of the 3SG inflection.

(6.18)   saab   tehtud
         get.PRS.3SG do.2PTC
         (it) will get done

To summarise the apersonal data, an already apersonalised construction cannot undergo any of the other valency changing operations. One reason for this is the morphosyntactic expression of the apersonal, which is relatively unmarked, and so can only be used in particular circumstances. The other reason, however, is that the apersonal is in fact a clause-level phenomenon. The primary change effected by the apersonal in logical structure is that of a stativising or modal predicate around the underlying logical structure of a predicate. The valency is not greatly affected. Since it is a clause-level operation, no further changes to the predicate can be made while keeping the apersonal reading intact. Hence, no possible combinations are allowed, as shown in (6.19).

(6.19)   APERSONAL

APERSONAL	*	*	*	*
	ANTC	PAS	IMP	APR

6.3 Passive Combinations

The personal passive, as already discussed in section 6.1, forms a derived monovalent predicate, and so cannot combine with either itself or an anticausative derivation. As discussed in section 6.2, an apersonal construction can be formed from a passive, but it is difficult to find a context where the resulting construction would have an apersonal reading.

This leaves only the impersonalisation of a personal passive. Impersonalised passives are entirely grammatical and well-attested, and function as additional evidence for the difference between the two constructions. Blevins (2003) notes that "because passivization does not directly constrain surface subjects, it may feed impersonalization in languages such as Irish (Noonan 1994) and Polish," and, as he demonstrates further on, Estonian as well (2003:476).

The interaction of passives and impersonals lends further support to the claim that they are separate morphosyntactic constructions. Personal passives can be impersonalized, since they are just derived intransitives (or transitives). Yet impersonals cannot be passivized, because impersonals are subjectless and thus do not satisfy the requirements of a subject-demoting passive rule. (Blevins 2003:507)

Rajandi (1999) also calls on the evidence of impersonalised passives, as given in (6.20), to definitively demonstrate that the impersonal is an active form and the two must be distinguished.

(6.20)   oldi   sunnitud   järele andma
          be.IMP.PST force.2PTC give-way.INF
          people were forced to give in[11]

Rajandi's (1999) rhetoric follows the line that if the terms 'personal passive' and 'impersonal passive' are used for the ordinary passive and impersonal (active, in his terms), then "where will we find terms for characterising sentences like [(6.20)]—they have already all been wasted" (1999:107). Whereas, if we have not already 'squandered' the term 'impersonal passive', then that is just the apt label for the above construction.

Therefore, when the order of the operations is such that passivisation occurs first, then the result of impersonalisation is grammatical, as the passive always has a subject argument which can be realised with an impersonal affix, whereas an impersonal cannot be passivised. A passive requires a bivalent predicate. Moreover, the impersonal is only to be read from the verbal inflection expressing its actor. The passive demotes the actor, and so nothing of the impersonal would remain if passivised, and the passive would not be given a different interpretation than an ordinary passive would. This combination, in other words, is unidirectional.

Pihlak (1993) calls these constructions 'Static Suppressives', in contrast to the 'Stative Passive' (known here as the personal passive) and includes them in his five primary voice distinctions. Regardless of whether the impersonalised passive ought to be viewed as a primary voice category or not, its existence gives the lie to the theory that the impersonal is a passive with a removed actor. Instead,

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[11]Rajandi (1999:107)

the impersonalised passive shows that the impersonal is a method of *realising* the argument with a particular interpretation, rather than a way of removing it.

Example (6.21) gives the result of a construction undergoing passivisation and then impersonalisation.

(6.21)   (loomavagunites) oldi   massiliselt küüditatud
           animal-car.PL.INE be.IMP.PST massively deport.2PTC
           people were deported in great numbers (in cattle cars)[12]

The example in (6.21) is an impersonalised passive: a clause in which the promoted passive subject is expressed by an impersonal verbal inflection rather than an overt pronoun or NP. Here, the impersonal does function semantically as a fourth person—a generalised, contextually given human referent. Note, however, that since the impersonal is only marked on the verb, it could not be used as a patient in a synthetic impersonal form, for instance, where the verb does not agree with any NP. The passive auxiliary expresses tense and agrees with its subject in person and number, and passive voice is marked on the participial verb form. The impersonal auxiliary suffix and the passive lexical verb suffix can thus coexist in the periphrastic passive.

For comparison with example (6.21), example (6.22b–d) presents a series of clauses with the transitive verb *küüditama* 'deport' with various subjects. Example (6.22a) gives the semantic representation of the active verb *küüditama* 'deport'. Example (6.22b) gives a standard clause in active voice, the actor expressed by the subject and the undergoer argument expressed as object. Passive clauses are given in (6.22c–d), where a personal pronoun acts as promoted subject, expressing the undergoer argument of the verb, with person and number concord on the auxiliary. In (6.21), the impersonal functions as subject, demonstrating its parallelism with the ordinary passive clauses in (c–d). The impersonal affix here satisfies and saturates the empty argument slot in the argument structure, in the same way the pronoun does in (6.22c–d).

(6.22)   a.   [do$'$ (x, $\emptyset$)] CAUSE [BECOME **deported$'$** (y)]
          b.   valitsus$_x$ küüditas   [tuhandeid   inimesi]$_y$
               government.NOM.SG deport.PST.3SG thousand.PAR people.PAR.PL
               the government deported thousands of people

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[12]www.cl.ut.ee

c. ma*y* olin küüditatud*x*
1SG.NOM be.PST.1SG deport.2PTC
I was deported

d. nad*y* olid küüditatud*x*
3PL.NOM be.PST.3PL deport.2PTC
they were deported

Another example of a straightforward impersonalised passive is given in (6.23)

(6.23) koht, kuhu ollakse alati oodatud
place.NOM.SG where.ILL be.IMP.PRS always wait.2PTC
a place, where one is always expected[13]

The semantic representation of these constructions involves an achievement or accomplishment predicate, as Estonian passives can only be formed from these.[14] The actor argument is demoted to $\emptyset$, as this is the result of passivisation. The impersonal then realises the remaining argument, the undergoer. This is represented with a capital A, despite its undergoer macrorole, as shown in (6.24b). Example (6.24a) gives a logical structure representation for the passive of the accomplishment predicate in (6.22c), above, and (6.24b) gives the logical structure for (6.21), the impersonalised passive.

(6.24) a. [do′ ($\emptyset$, $\emptyset$)] CAUSE [BECOME **deported′** (1SG)]
b. [do′ ($\emptyset$, $\emptyset$)] CAUSE [BECOME **deported′** (A)]

From an impressionistic trawl through examples of impersonalised passives, it appears that the most common usage of this form is with verbs whose participial form is most fully adjectival, such as *huvitatud* 'interested'. A construction like *ollakse huvitatud* 'people are interested' is not as directly relevant to a study of voice, as it is often analysed as a fully adjectival predicate. I try to focus on more clearly verbal predicates. The impersonalised passives, therefore, do not pose much of a problem in interpretation or in semantic representation. They are robust and their meaning is straightforward. This is related to the fact that the passive is a syntactic operation, and it is not constrained so much by semantics as the other constructions, which give vaguer grammaticality judgments.

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[13]Headline in *Õpetajate Leht*, 24.05.02

[14]Although the verb *oodatud* 'waited for' may not seem like an achievement or accomplishment, in this context it is, with the result state expressed and bounded by the illative relative pronoun *kuhu* 'to where'.

Once again, however, the effect described earlier regarding unaccusatives and anticausative verbs, when impersonalised, takes place here too. Namely, when an element of the cluster of semantic properties associated with the impersonal is absent from an impersonal clause, then the other semantic features from the cluster take a more prominent role. In this case, it is clear that the personal passive argument is non-agentive, being a syntactically promoted undergoer. The interpretation of these constructions, then, emphasises the other elements of impersonal semantics, giving an especially strong interpretation of a mass body of humans as the impersonal referent, a wide scope meaning being vital to the felicity of the impersonalised passive.

(6.25) oldi   rahvaste kaupa sisse   seatud:
        be.IMP.PST by-nationality in.ILL   arrange.2PTC
        ühes   toas   poolakad, teises   bulgaarlased
        one.INE   room.INE   Poles.NOM other.INE   Bulgarian.NOM.PL
        people were arranged according to nationality: Poles in one room, Bulgarians
        in another... [15]

The impersonal referent here cannot be interpreted as agentive, but it is a human undergoer, with generalised, exophoric reference. On a tangential note, many of the examples of impersonalised passives come from historical events happening to a large body of people. A mass human undergoer is not a prototypical linguistic phenomenon, nor is it typical as an event participant. Nevertheless, it functions as a peripheral construction and is allowed by the grammar, although it is not commonly used.

A summary of the passive combinations is given in (6.26).

(6.26)   PASSIVE | * | * | √ | * |
                    |------|------|------|-----|
                    | ANTC | PAS | IMP | APR |

6.4   Impersonal Combinations

Most possible combinations are already considered in previous sections. An impersonal construction cannot be apersonalised for morphological reasons. Although the passive can be impersonalised, the impersonal cannot be passivised. Or rather, if the active impersonal is passivised, the resulting construction is no

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[15]www.cl.ut.ee (literature, stkt0048)

different from an ordinary passive, with a demoted actor with no semantic information associated with it. However, some interesting data arises with the question of whether an impersonal construction can be further impersonalised.

The impersonalised impersonals are of questionable status, both in the analysis of their semantic structure and in terms of their grammaticality. They are superficially similar to the impersonalised passives of section 6.3 in that they consist of an impersonal auxiliary and a past passive participle. But they have no counterparts such as (6.22c–d). Indeed, they can even be formed from monovalent verbs. They are ungrammatical with a personal pronoun, but with the impersonal affix, they are acceptable.

Recall the anticausative example (6.11) above, where the intransitive participle may be accepted with the same meaning despite oscillation between active and passive oriented participles. That example might look like a mistake, but for the fact that examples of this sort are plentiful (though used in only a minority of impersonals), and many native speakers consulted judge the construction to be grammatical. The example in (6.27) is a quintessential example of the impersonalised impersonal.

(6.27)   teda   oldi   pildistatud   liikumise   pealt
         3SG.PAR be.IMP.PST photograph.2PTC movement.GEN on.ABL
         s/he was photographed in motion[16]

In this case, a bivalent verb is used, yet it has two possible interpretations for its undergoer, the 3SG pronoun *teda*, and the impersonal affix on the auxiliary *oldi*. Example (6.27) contrasts with (6.28a–b), and appears to be a conflation of the two.

(6.28)   a.   teda$_y$ [oli   pildista-tud]$_x$
              3SG.PAR be.PST.3SG photograph.2PTC
              s/he was photographed
         b.   oldi$_y$ pildista-tud$_x$
              be.IMP.PST photograph.2PTC
              people were photographed

Example (6.28a) is an impersonal perfect, with the personal pronoun *teda* as a partitive object, and the auxiliary marked as default 3SG. The verb is compound,

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[16]www.cl.ut.ee (literature 1990s, 0005)

but interpreted as a unit, with tense information from the auxiliary and voice information from the participial verb. In (6.28b), both the agent and the patient are impersonal. This is an impersonalised passive of the type given in section 6.3. The agent of the event of photographing is unspecified, general, and so is the patient. Each of these arguments is expressed through separate morphosyntactic means, however, as the indexical subscripts in the example show. The auxiliary, which in (6.28a) expresses only tense information, is also used in (b) to express information about the undergoer. The impersonal actor is still expressed through the voice of the whole construction, shown with overt morphological marking on the passive participle. The logical structures of (6.28a–b) are given in (6.29).

(6.29)   a.   INGR do′ (∅, [photograph′ (∅, 3SG)])
          b.   INGR do′ (∅, [photograph′ (∅, A)])

The construction in (6.27), however, is something else. Here, both the pronominal patient of (6.28a) and the impersonal patient marked on the auxiliary of (6.28b) are expressed. These do not agree with each other, and so how is (6.27) to be parsed? Is the impersonal auxiliary read as undergoer-oriented, marked indexically in (6.30a), along the same lines as in (6.28b); or is the impersonal auxiliary associated with the impersonal actor, agreeing with the participial verb in some sense, as in (6.30b)?

(6.30)   a.   teda   oldi$_{y?}$ pildista-tud$_x$
                3SG.PAR be.IMP.PST photograph.2PTC

          b.   teda$_y$ oldi$_{x?}$ pildista-tud$_x$
                3SG.PAR be.IMP.PST photograph.2PTC
                s/he was photographed

Neither of these analyses is self-evidently better than the other. It is important to note that this construction (like the impersonalised passive) depends on the impersonal being expressed via a verbal affix, as no pronominal subject/actor element would be accepted here, as shown in (6.31). This is in contrast to example (6.22) above, where the impersonal can alternate with subject pronouns.

(6.31)   *teda$_y$ me$_x$ olime$_x$ pildista-tud$_x$
            3SG.PAR 1PL.NOM be.PST.1PL photograph.2PTC
            s/he we had been photographed

The reading of (6.27) is in fact that of an actor-marking auxiliary (as in 6.30b), but this does not resolve the quandary. If that reading is the same as in (6.28a), without any impersonal affix, then what information does the impersonal affix add? Why is the affix used in a construction where the arguments are satisfied without it? And what is the role of that impersonal referent? It should be emphasised that this construction type is attested and accepted in Estonian with both one and two-place verbs, so it is not a form of impersonalised passive (which can only be formed of bivalent verbs). It should also be noted that this usage has been prescriptively rejected by some linguists (Pihlak 1992*b*, Pihlak 1993, Pihlak 1995, Aavik 1936), but the majority of other native speakers consulted have judged these constructions to be acceptable. Even Pihlak, while casting doubt on the grammaticality of these constructions, refers to personal communication with linguists M. Erelt and H. Metslang, who seem to contradict the judgment (1993:20–21).

These constructions involve several interacting phenomena, and I consider these to be important enough to devote a separate chapter to them. The next chapter considers what an appropriate analysis of the impersonalised impersonals might look like, as well as diachronic development of this form, in conjunction with possible explanations for their use.

For the present section, I simply conclude with the following summary (in 6.32). A bivalent impersonal predicate, once it has been formed, can in principle be further passivised, but then the impersonal reading is lost. This is because the impersonal is expressed as a type of actor, and the passive deletes the actor. Hence, this combination adds nothing to the voice possibilities in Estonian. An impersonal cannot be apersonalised (because of morphological conflict) or anticausativised (for the anticausative applied to lexical items, not predicates). It can, however, be further impersonalised, and the next chapter examines how this works and whether this is a voice phenomenon, a production error, or something else.

(6.32)

IMPERSONAL	*	(*)	√?	*
	ANTC	PAS	IMP	APR

6.5 Conclusion

To conclude this chapter, the data on individual constructions can now be put together, completing a full table on possible voice combinations in Estonian. Table

6.1 below collates the information gathered in this chapter about each theoretically possible combination. The operations listed on the left are applied first, with the operations along the top applying to these.

The impersonal construction applies most readily to other constructions, as the third column shows, and the reason for this is evident. The impersonal accepts the broadest range of predicates. As it is not a promotional construction, monovalent predicates can be impersonalised, and it can also interact with derived intransitives. The macrorole of the impersonal argument is prototypically an actor, but, as has been demonstrated, this does not constitute an absolute restriction against undergoer impersonal referents. The only real requirements of the impersonal are that there be a nominative PSA argument and that it be interpretable as human.

The anticausative and passive constructions require bivalent predicates as input, and therefore cannot operate on already detransitivised constructions. The apersonal construction cannot interact with any of the others, and, as has been discussed, this is for both morphological and syntactic reasons. The impersonal turns out to be the only valency-changing operation which can apply to itself. This combination needs a closer examination; its interpretation is not clear, its grammaticality status has been contested, and the operations involved require further explanation. If this combination is bracketed, then the table reveals something of a distinction between the apersonal and impersonal on one hand, and the passive and anticausative on the other.

The 'a-definites', including the impersonal and the apersonal, resist additional valency-changing operations. The partial demotion of the impersonal and apersonal actor makes that argument inaccessible to further reduction. The interpretation of the referent comes from semantic and pragmatic processes. The a-definite referent can act as an antecedent to further anaphoric reference only through pragmatic inferencing and accommodation (Koenig & Mauner 2000).

	ANTC	PAS	IMP	APR
APERSONAL	*	*	*	*
IMPERSONAL	*	(*)	√?	*
PASSIVE	*	*	√	*
ANTICAUSATIVE	*	*	√	√

Table 6.1: **Summary of combinations of voice constructions**

This partial demotion is attested to by the resistance these constructions show to further valency changes. However, both a-definites can apply to other constructions, as the a-definite constitutes a realisation of an argument (though also involving a process of partial demotion or suppression).

The passive and anticausative, on the other hand, have a fuller process of both demotion and promotion. Of course the actor argument is deleted entirely from the anticausative logical structure, whereas it can be accessed for purposes of some anaphoric reference in the personal passive. Nevertheless, the process of demotion for both of these is much more complete than in either of the a-definites. Likewise, and paired with the syntactic demotion, the undergoer argument is fully promoted in both of these constructions, whereas it is not promoted at all in the a-definites. Hence, the PSA is available to various syntactic processes, including impersonalisation and apersonalisation, where this is semantically possible.

The impersonal and apersonal involve different degrees of demotion, and different processes of valency change. The impersonal is a lexical operation which results in a predicate with particular semantic effects. The impersonal argument is filled, and carries semantic information. The apersonal is a clause-level phenomenon involving pragmatic interpretation, and it leaves the actor referent semantically unspecified. However, in both of these, the actor argument is semantically present, the undergoer argument (when there is one) is relatively unaffected, and the argument structure is intact.

Both the passive and the anticausative are fundamentally promotional operations. The anticausative is a derivational pre-lexical operation, whereas the passive is a syntactic argument-linking operation. However, both result in a syntactically promoted undergoer argument. Both the various levels of valency change and the hierarchies of promotion and demotion are attested to by the combinatorial possibilities of the voice domain.

A line can be drawn between the a-definites (impersonalisation and apersonalisation) and the true promotional operations, passivisation and anticausativisation. The only demotional voice combination which confounds this distinction is the impersonalised impersonal. Pihlak (1993) considers the impersonalised passive a basic voice category and labels it a static suppressive. As mentioned

earlier, he dismisses the impersonalised impersonal as ungrammatical and errant. However, even Pihlak (1993) considers this grammatical construction acceptable in the context of a reflexive pronoun as direct object, demonstrating the contradictory nature of this construction. The impersonalised impersonal is not regularly used, but neither is it seen as unacceptable by most contemporary Estonian speakers. Chapter 7 now considers this seemingly aberrant combination.

7

Impersonalised Impersonals

This chapter is devoted to a closer investigation of the "impersonalised impersonals" introduced in Chapter 6. As noted at the end of the chapter, there is some disagreement as to whether these form an acceptable part of the Estonian verbal paradigm. However, nearly all native speakers I have questioned have accepted these forms, and clauses using this type of combination appear frequently enough to be taken seriously.

More examples of the impersonalised impersonals can be easily found through searching the Internet. The examples in (7.1) were retrieved in this way.

(7.1) a. kui **ollakse** kõik alternatiivsed variandid läbi
        when be.IMP.PRS all.NOM alternative.NOM version.NOM.PL through
        proovitud ning leevendust pole saadud
        try.2PTC and alleviation.PAR be.NEG get.2PTC
        when one has tried all the alternatives, and hasn't gotten better[1]
    b. hindamisjuhendit **oldi** korralikult **jälgitud**
        marking-guide.PAR.SG be.IMP.PST properly follow.2PTC
        the guide for marking was correctly followed[2]

Example (7.1a) has a nominative undergoer NP (*kõik alternatiivsed variandid*), and so it would constitute an example of ambiguity between a personal passive and an impersonal, were the auxiliary in the canonical 3SG. But instead of a default inflection, the auxiliary has an impersonal affix, doubly marking the construction

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[1] arendus.hansanet.ee/reio/fertilitas/index.php?page=7
[2] www.math.ut.ee/olympiaadid/ftp/piirk_03/pk03kom.ps

as an impersonal. Example (7.1b) has a partial object, which makes it unambiguous in any event, in addition to the impersonal auxiliary.

Pihlak (1992*b*) gives more examples culled from the literature, including those he judges to be ungrammatical, an example of which is given in (7.2a), and those seen as grammatical structures, as in (7.2b).

(7.2)   a.   sellest   eesmärgist **ollakse**... ilmselt   **loobutud**
             this.ELA goal.ELA   be.IMP.PRS apparently quit.2PTC
             this goal seems to have been given up

        b.   vaesusega   **polnud**   veel **lepitud**,   seda häbeneti
             poverty.COM be.1PTC.NEG yet   accept.2PTC it.PAR shy-from.IMP.PST
             people hadn't yet accepted poverty, they were ashamed of it

Pihlak's (1992*b*) first example above might be explained as an adjectivalised or grammaticalised form, which would be a sufficient explanation for its appearance with an impersonal copula, and consistent with the fact that the verbal and adjectival forms are homophonous and indistinguishable. Pihlak refers to Erelt, who has made this same claim (Pihlak 1993:20). However, this explanation does not cover all the data on impersonalised impersonals. One would be hard pressed to claim that the intransitive example in (7.3a) is adjectival. With regard to the examples with bivalent verbs in (7.3b–c), this argument does not apply at all.

(7.3)   a.   Jeesusest   **oldi**   siinmail   ju enne ristirüütlite
             Jesus.ELA   be.IMP.PST this-country FOC before Crusader.GEN.PL
             tulemist   **kuuldud**
             coming.PAR hear.2PTC
             people in this land had heard of Jesus before the Crusaders' arrival

        b.   võeti   kasutusele needsamad pildid,   mida   seni
             take.IMP.PST usage.ILL these-same picture.NOM.PL what.PAR hence
             tehtud   **oldi**
             make.2PTC be.IMP.PST
             those pictures were used which had been taken so far

c. järgmine, veel rangem tee algas siis, kui
next even harsher road.NOM.SG begin.PST.3SG then, when
ehitust **oldi** **alustatud**
building.PAR.SG be.IMP.PST begin.CST.2PTC
the next, and even harsher, road began when they had begun building[3]

The last two examples (7.3b–c) involve bivalent verbs with two argument positions filled, in addition to the impersonal auxiliary. An attempt at representing the argument structure of e.g. (7.3c) suggests that it would lead to a conflict in interpretation, as shown in (7.4), but in fact these examples are parsed without difficulty.

(7.4) a. [**do′** $(x, \emptyset)$] CAUSE [INGR **begun′** (x, y)]
       b. [**do′** $(A, \emptyset)$] CAUSE [INGR **begun′** (A, ehitus)]

The logical structure given in (7.4) represents the predicate in (7.3c), *ehitust oldi alustatud* 'building had begun'. The first representation, (a), gives a logical structure for the causative verb *alustama* 'begin'; the second, (b), gives the logical structure for an impersonal construction with the undergoer argument filled and the actor argument realised as an impersonal. There is then no parallel to example (6.24) above, in that there is no remaining argument in the argument structure open to realisation with the impersonal affix on the auxiliary. The normal function of an impersonal is the realisation of an argument, and the filling of an argument slot. The impersonal construction above, as shown in (7.4b), fills one argument, the higher one in a bivalent predicate, and the undergoer argument is realised with an overt NP. Example (7.4b) clearly has no unrealised argument positions, as the impersonal construction supplies the actor referent and the undergoer is explicitly given. However, this would ordinarily be linked to the structure in (7.5), rather than that in (7.3c) above.

(7.5) ehitust oli alustatud
       building.PAR.SG be.PST.3SG begin.2PTC
       the building work had begun

The readings given of the impersonalised impersonals consistently map the impersonal auxiliary affix onto the actor argument, and the native speaker informants consulted consistently claim that it adds a notion of plurality to the actor

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[3]All from www.cl.ut.ee

referent. The following sections examine this construction more closely in an attempt to provide an analysis of it.

7.1 Reflexive Impersonalised Impersonals

Reflexive pronouns in the same construction as the transitive impersonalised impersonals above seem to increase the acceptability of the construction. Reflexives are situated between intransitives and transitives, with two syntactic arguments, but semantic identification of the two as one entity (Kemmer 1993). Transitive constructions of the type in example (6.27) with reflexives constitute a middle ground, where even linguists who reject (6.27) disagree over what the acceptable form would be. Pihlak (1995) lists a series of examples similar to (6.27) and (6.11b), deploring them as "regretful mistakes". Yet an example from Pihlak (1993), citing Aavik (1936), illustrates the ambiguity of reflexives. The basic clause under debate is given in example (7.6).

(7.6)   kui   oldi   end   ristisõiduks   korraldatud
          when be.IMP.PST REF.PAR Crusade.TRL organise.2PTC
          when people had prepared themselves for the Crusade

Aavik (1936), like Pihlak, generally maintains the ungrammaticality of examples like this, and he claims that an impersonal auxiliary is always incorrect with a passive participle. However, he "wavered whether the sentence...[repeated in (7.7a)]...was more acceptable than the same sentence with Personal [active] Past Participle of the Reflexive...[given in (7.7b)]? He somehow missed the third alternative *Kui oli end ristisõjaks* [sic] *korraldatud* [7.7c]" (Pihlak 1993:20). The three versions of the clause are given in (7.7); the intended meaning is the same for (a) through (c), and Pihlak's (1993) translations are given under (7.7a–b).

(7.7)   a.   kui   oldi   end   ristisõiduks   korraldatud
               when be.IMP.PST REF.PAR Crusade.TRL organise.2PTC
               lit.*when there was being got himself ready for the Crusade*
          b.   kui   oldi   end   ristisõiduks   korraldanud
               when be.IMP.PST REF.PAR Crusade.TRL organise.1PTC
               lit. *when there was having got himself ready for the Crusade*
          c.   kui   oli   end   ristisõiduks   korraldatud
               when be.PST.3SG REF.PAR Crusade.TRL organise.2PTC
               when people had got themselves ready for the Crusade

The past participle requires suppression of the actor argument, and an orientation toward the undergoer argument. Example (7.7a), however, though structurally parallel to (6.27), is easier to analyse because of the semantic identification of the object with the subject, or the reflexive pronoun with its referent, the same as the impersonal actor referent. The logical structure of (7.7a) is as shown in (7.8). The highest argument is suppressed, but the impersonal affix on the auxiliary is associated with that suppressed argument. The two implicit arguments are represented with A and U, each carrying the implicit actor properties discussed in Chapter 4. The U designates an undergoer, but it is used here only for distinguishing the two implicit arguments (canonical impersonals with an undergoer argument are nonetheless represented with A).

(7.8)   a.   kui   oldi$_y$ end$_z$ ristisõiduks   korraldatud$_x$
             when be.IMP.PST REF.PAR Crusade.TRL organise.2PTC

        b.   BECOME **do**$'$ $(A_x,$ [**organise**$'$ $(A_x,\ U_y)$])
             or:
             BECOME **do**$'$ $(A_x,$ [**organise**$'$ $(A_x,\ \text{REF}_z)$])
             but:
             REF$_z$ $\longrightarrow$ actor$_x$=undergoer$_y$

This is parsable, since the reflexive pronoun identifies the undergoer with the actor, and therefore returns the impersonal agent to some status in the clause. In other words, the two logical structures in (b) look like they are in conflict, with both the impersonal (U) and the reflexive pronoun (*end*) vying for the undergoer argument position. However, because REF is read as identifying the actor argument referent with the undergoer argument referent (REF is interpreted as x=y), the conflict is resolved. The reflexive pronoun enables the two rival structures to be equated. Although there seem to be more discourse entities than argument positions, this is resolved by way of the reflexive. With the reflexive as one of the discourse entities, there are no more semantic referents than argument positions.

Aavik accepts (7.7a) and (7.7b), despite disapproving of the intransitive cases where the orientation of the participle does not match the arguments in the clause.

The reflexive pronoun resolves this construction, yet its structure is still problematic. The impersonal affix behaves like a passive subject, yet the lower argument slot is somehow still open for a partitive reflexive pronoun, which ought to be in

competition for the already satisfied argument position. The conflict is resolved semantically, yet the realisation of more *syntactic* positions than the verb's logical structure provides is still puzzling. Additionally, it is curious that (7.7a) should emerge at all, if (7.7b–c) are possible and do not pose any conflict of argument structure or parsing.

Although Aavik and Pihlak assert the grammaticality of both (7.7b) and (c), and their preferability to (7.7a), this is not confirmed by any of my native speaker informants. None of them prefer (7.7b) to (7.7a), and most of them judge (b) to be ungrammatical, while (a) is unanimously judged to be grammatical. Several informants prefer (7.7c) to either of the others, but the dislike of (7.7b) is robust and serious. Although the logical structure might seem to work, it is in fact not accepted in linguistic usage. The degree of non-acceptance varies, but the variable acceptability of this construction may be a signpost of a change in progress. The next sections turn to possible solutions for the conundrum posed by the impersonalised impersonals.

7.2   Possible Analyses

As the conflict appears to involve the problem of too many expressed arguments for the number of argument positions, Vihman (2002*a*) considers and rejects two possible solutions stemming from the analysis of argument structure.

The first analysis says that perhaps the impersonal argument is not, in fact, an argument (at least not in these constructions). This analysis would have to maintain that the interpretation of the impersonal as actor comes from it being "associated with" an argument position, for instance through a mechanism similar to that used by Grimshaw (1990). Her claim is that agentive *by*-phrases are associated with the suppressed external agent, which becomes internal in her representation of passive argument structure (1990:109). This solution is problematic in that there is no morphological difference between the use of the impersonal as an argument or as an oblique, whereas in general this is a key syntactic difference. This would also involve stipulating a new function for the impersonal affix, which is not to be preferred if it can be avoided. See Vihman (2002*a*) for other reasons for rejecting this analysis. On the whole, this analysis is unsatisfactory in that it merely pushes the burden for explanation back one step, but does not resolve the matter.

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A second analysis proposes that the impersonal argument may be an argument of the auxiliary, but that the auxiliary and the lexical verb have separate argument structures. This resolves the problem of not having enough semantic argument positions for the expressed arguments. It is also appealing because the impersonalised impersonals rely on the default 3SG auxiliary, and cannot occur in constructions without both the auxiliary and main verb. The auxiliary is used directly to increase the number of expressed arguments. It also suits the reflexive examples given above. However, the argument structures are in fact semantically related, and it is not clear how this parsing should take place; nor is it clear *why* the two do not share an argument structure in these peripheral cases, and why the argument structure should be distinct *only* in these cases. The semantic role of the auxiliary argument still comes from the lexical verb, and so the incompatible argument structures remain mysterious.

A third analysis, not discussed in Vihman (2002*a*), is that the impersonalised auxiliary is a form of verbal concord. This is an elegant solution in its simplicity, and it does away with the problem of too many arguments for the available argument structure. Karlsson (1977) proposes precisely this analysis of the same construction which has developed in Finnish,[4] claiming that this double impersonal (or passive, in his terminology) marking could be attributed to concord:

> In the informal spoken language there are often occurrences of double passives of the type *ol+LA+an sano+TTU*,[5] *ol+T+iin tul+TU, ei ol+TU men+TY*, instead of *on sanottu, oli tultu, ei ole menty,* which accord with the norms of the standard language. The former forms can perhaps be interpreted as passive concord: the passive morpheme gets attached regressively from the main verb to the auxiliary verb. (Karlsson 1977:365)[6]

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[4]The construction in Finnish is more common, as the impersonal construction is used for 1PL indicative in colloquial Finnish. I wish to thank Maija McKinnon for drawing my attention to this analogous development in Finnish and for translating Karlsson's (1977) passage; and I also thank Mati Erelt for pointing out this key reference.

[5]Glosses for the Finnish phrases in this passage are as follows:
ollaan sanottu (be.IMP.PRS say.2PTC), *oltiin tultu* (be.IMP.PST come.2PTC), *ei oltu menty* (NEG be.2PTC go.2PTC), *on sanottu* (be.PRS.3SG say.2PTC), *oli tultu* (be.PST.3SG come.2PTC) *ei ole menty* (NEG be go.2PTC)

[6]The Finnish original reads: *Puhekielessä esiintyy usein kaksinkertaisia passiiveja tyyppiä* ol+LA+an sano+TTU, ol+T+iin tul+TU, ei ol+TU men+TY *pro virallisen yleiskielen normiston mukaiset* on sanottu, oli tultu, ei ole menty. *Ensin mainitut muodot voitaneen tulkita passiivikongruenssiksi: passiivimorfeemi liimautuu regressiivisesti pääverbistä apuverbiin.*

If the impersonal auxiliary affix is merely a sign of agreement with the lexical verb, then the grammaticality of the construction ceases to be puzzling. However, the question still remains of why this concord only occurs in certain contexts. In addition, the evidence from native speakers' intuitions about the impersonal affix being used in order to emphasise the plurality of the impersonal referent is a slight detraction from the appeal of this proposal, suggesting that it involves semantics, which would not be compatible with an agreement analysis.

An analysis which employs the simplicity of Karlsson's (1977) suggestion as well as accounting for the semantics associated with the impersonal affix is the idea that optional verbal concord has emerged as a result of the semantic bleaching of the impersonal perfect. Vihman (2002a) concludes that the most convincing solution lies in semantic bleaching of the construction (reanalysis and re-grammaticalisation of a syntactic construction). Adding to this the notion of verbal concord forms the key to this construction. These two notions are examined in more detail in this chapter. Section 7.3 discusses semantic bleaching, followed by a discussion of diachronic development in section 7.4. Finally, the notion of agreement and possible psycholinguistic factors are discussed in section 7.5. With this combined analysis, it is made clear that argument structure is not centrally involved in the development of the impersonalised impersonals.

7.3 Semantic Bleaching of the Impersonal Perfect

The first step in a successful analysis of the nonstandard impersonal affix in the impersonalised impersonals seems to lie in an ongoing process of semantic "bleaching" (weakening, reduction). Though this concept is most strongly connected to work done in the grammaticalisation framework, the aim here is not to claim that this is a case of grammaticalisation in the standard sense of lexical items developing into grammatical items. Rather, one or more of the processes typically involved in grammaticalisation (at least desemanticisation and decategorialisation) are involved in and illuminate the development of the impersonalised impersonal in Estonian.

A related issue, however, is that of the grammaticalisation of syntactic forms. Wiemer (forthcoming) argues for a broader view of grammaticalisation, noting that "for [morpheme-based approaches], grammaticalisation would stop

where it should actually start for construction-based approaches" (Wiemer forthcoming). Campbell (1991) also argues against the unidirectional view of lexical words grammaticalising to grammatical morphemes: "it is nevertheless the case that the examples considered…do not come from lexical items, but rather from the (re)grammaticalization of participles, bound clitics, and postpositions" (1991:294). Syntactic constructions can also be viewed as whole entities which can undergo grammaticalisation.

Heine (1997) defines grammaticalisation as "a process whereby a linguistic expression E, in addition to its conventional meaning M_1, receives a more abstract and more grammatical meaning M_2" (1997:6). Under this definition, these constructions could be described by means of grammaticalisation. In any case, it is the concept of semantic weakening which lies at the core of the development of the impersonalised impersonals. The element in common with other examples of grammaticalisation is the change from concrete to abstract meaning.

To begin with, the notion of semantic "bleaching" needs to be unpacked insofar as it applies to the impersonalised impersonals. Initially, with the development of a personal passive from the impersonal perfect,[7] a certain amount of semantic generalisation begins the process of desemanticisation. As was shown in section 3.2.2, the development of the personal passive does not involve a metaphorical leap from the impersonal, but merely a small shift in emphasis. Nevertheless, with the grammaticalisation of the personal passive, the compound form of auxiliary + past passive participle necessarily undergoes generalisation, to cover more semantic ground than the impersonal perfect alone covers. In addition, the impersonal carries semantic information about the suppressed actor participant (that it is human, that it is generalised), whereas the passive actor is entirely demoted. This difference requires both a change of perspective on the event (from the dynamic event in action to the resultant change) and a broadened—and bleached—semantics. The impersonal actor referent is generalised but semantically present, whereas the passive actor is demoted and not semantically present (as demonstrated in Chapter 5). The impersonal perfect alludes to an impersonal actor, whereas the personal passive is devoid of any characterisation of an actor or initiator of the event.

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[7]As mentioned in Chapter 3, the development of the personal passive from the impersonal is a working hypothesis. The older personal passive from which the impersonal developed (Kont 1963) was a morphological passive. The evidence strongly indicates a development in the direction of a personal passive from an impersonal, but this needs further documentation.

Secondly, this move also furthers the process of decategorialisation of the verb. Decategorialisation involves the development from a full category (such as verb) to a secondary grammatical category (such as participle, Heine 1993:55). In the case of the personal passive, the verb has already begun this development, and has begun to "lose or neutralize the morphological markers and syntactic privileges characteristic of the full categories...and assume characteristics of secondary categories such as Adjective, Participle, Preposition, etc." (Hopper 1991:22). In the passive, the verb has assumed the category of participle. The impersonal, on the other hand, also makes use of the participle, but it shows evidence of not having lost the full categorial status of a verb, as the passive participle is associated with an implicit actor argument, and the inflectional paradigm the impersonal participates in fluctuates between synthetic and periphrastic forms. The development of the personal passive shifts the form further toward the functional end of a lexical-functional cline.

Third, the above two steps lead to an ineluctable semantic reduction of the informational content associated with the [auxiliary + past participle] compound verb, or desemanticisation (Heine 1993:54). Initially, in the impersonal perfect, the passive participle contains an implicit human actor, as in the simple tenses. With the development of the personal passive, which has no implied agent, occasional ambiguity is entailed by the syncretism of the two constructions. Crucially, as an effect of this ambiguity, the agentivity of the impersonal perfect loses some of its force. To put this another way, the informational content regarding agentivity carried by the impersonal form is compromised, and therefore not as definitively expressed, by virtue of the existence of a different construction which is identical in form *and* similar in meaning, but for lacking any agentive implication.

Heine (1993) outlines steps along the path of desemanticisation in the development of auxiliaries. The construction at hand involves a different (albeit related) development, but the first and last steps he refers to have relevance for this discussion. In the first place, "the subject is typically human, the verb expresses a lexical concept, and the complement a concrete object or location" (1993:54). This is the case for impersonals (if 'subject' is replaced by 'actor'). Further down the path of grammaticalisation, "the subject is no longer associated with willful human referents, and the verb acquires a grammatical function" (1993:54). This seems to reflect the personal passive quite directly. Therefore, although the development under discussion is not a lexical item becoming grammaticalised, but

rather a grammatical construction becoming more grammatical, the steps along the way mirror the process of grammaticalisation well.

At this stage, then, the impersonal perfect tenses are less imbued with impersonal semantics than the simple tenses. Alongside the ambiguity and weakening in the perfect, however, the impersonal affix in present and preterite tenses remains a strong indicator of the impersonal actor. Hence, when the impersonal actor is relevant and needs to be stressed alongside the temporal perfect, the impersonal affix can be reinserted into a construction whose impersonal color is beginning to fade. The default auxiliary provides a convenient contentless, semantically empty slot to reinstate the impersonal, while the passive participle remains ambiguous regarding the presence or absence of an impersonal actor. The impersonal affix is reinstated in a construction which originally included information associated with impersonal arguments, but where this information has weakened. Using the impersonal affix is a way of emphasising the presence of the impersonal actor without compromising tense information.

The argument is that it is not the auxiliary or the passive participle which has become bleached, but the two together in this particular construction which have become bleached of the semantics associated with the implicit impersonal argument.

7.4 Diachronic Development

As semantic bleaching and grammaticalisation inherently involve change over time, this section consists of a digression on historical development. Some comments are made regarding the diachronic development which may have led to the situation at present, and which gives some notion of how the system may be changing. As diachrony is not the focus of this thesis, some of this section is speculative.

7.4.1 Development of the Passive from the Impersonal

The description of the personal passive in Chapter 3 gives an overview of the hypothesised diachronic development of the passive from the impersonal. Within the context of Finnic languages, as well as within Estonian, it is well substantiated that the synthetic forms of the impersonal are older and more wide-spread than the periphrastic passive, as well as being indigenous to Finno-Ugric, and

more basic synchronically. The personal passive seems to have developed by extension from the perfect forms of the impersonal in Estonian.

Interestingly, although the development of a personal passive in Estonian is well-established by now, Finnish may be currently in the initial stages of a similar development. Although Holvoet (2001) claims that there "does not seem to be a tendency in Finnic to develop the agentless[8] passive into a passive proper" (2001:368), this is contradicted in several places in the literature. First of all, Holvoet's (2001) claim refers to 'Finnic', but it does not account for the personal passive data from Estonian.

It is clear that Holvoet is basing his claims on Finnish, but even here, there is evidence for an incipient personal passive developing from the impersonal. The strongest supporting evidence of this is the increasing appearance and acceptance of agentive adverbials used in conjunction with impersonal constructions. This suggests the loosening of the semantic presence of an impersonal agent. Pihlak (1993), in comparing the Finnish and Estonian voice systems, cites Shore (1986), who "treats the structures with Agentive Adverbials *jonkin toimesta/taholta* 'by somebody' as the sign of Finnish Suppressives [impersonals/indefinites] developing toward [the] Passive" (Pihlak 1993:23). Shore's (1986) cited passage reads: "the seeds of change may be visible in this kind of usage: the indefinite [impersonal] moving partially toward the passive" (1986:31).[9]

Pihlak (1993) maintains that Estonian freely allows the use of agentive adverbials in the impersonal construction, to which he refers as a suppressive. Manninen & Nelson (2002) go further than evidence from agentive adverbials, and cite examples of number agreement between plural nouns and finite verbs, although "rejected by grammarians as 'hypercorrect'." Manninen & Nelson (2002) also venture that this data "may suggest that Finnish is moving toward a personal passive diachronically" (2002:7).

7.4.2   Syntactic Reanalysis

The model of syntactic reanalysis is that upon which the sort of change involved in the impersonal to personal passive would have been based. Reanaly-

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[8]Holvoet seems to use "agentless" here to mean "subjectless", as his examples make it clear that he is in fact discussing the subjectless (but agentive) impersonal, and not the true agentless passive.

[9]As this is not my own translation, I include the original as well: *Tällaisessa käytössä saattaa näkyä muutoksen siemeniä: indefiniitin siirtymistä joiltakin osin kohti passiivia.* (Shore 1986:31)

sis is "a mechanism which changes the underlying structure of a syntactic pattern and which does not involve any modification of its surface manifestation. [U]nderlying structure in this sense [is understood] to include at least (i) constituency, (ii) hierarchical structure, (iii) category labels, and (iv) grammatical relations. Surface manifestation includes (i) morphological marking, such as morphological case, agreement, and gender class, and (ii) word order" (Ackerman & Webelhuth 1998:50). The change from impersonal to personal passive involves at least category labels and grammatical relations in underlying structure. As shown in Chapter 5, the undergoer constituent is an impersonal object but a passive subject. Surface manifestations in this particular case certainly involve case-marking (the passive does not allow partitive case, while the impersonal marks its undergoer as either partitive or nominative depending on affectedness and aspect) and agreement.

Once again, in this case syntactic reanalysis leads to the wider use of a construction which brings along semantic bleaching. By promoting the undergoer to PSA, the construction loses the strong agentive impersonal referent from its only partially demoted position. The suppressed impersonal actor becomes a deleted passive actor. The verb, which carries impersonal information in the impersonal, agrees with the promoted subject in the passive, and so assists in the bleaching of the construction. Because the two constructions do not become entirely distinct, but rather retain some syncretism in their paradigms, the impersonal agent is optionally reintroduced on the auxiliary in order to better distinguish the two.

To sum up, the synthetic impersonal forms are indigenous to Estonian (and Finnic). The perfect forms developed from those. I hypothesise that the personal passive construction developed even later, as an extension of the impersonal perfect form. In the process of this extension of meaning, the impersonal perfect is left in between two constructions: it shares its formal structure with the personal passive (though its undergoer argument has different coding options) and it shares its meaning (other than tense) with the canonical synthetic impersonal past and non-past forms. Because the meaning of the personal passive is quite close to the impersonal, other than the absence of an implicit actor argument, and at times they are syncretic, the perfect impersonal ceases to strongly convey the presence of an implicit actor. When a clause is in a perfect tense, and is likely to be misinterpreted as a passive, the impersonal affix is reinserted in order to underline the impersonal nature of the clause, and to make more accessible the impersonal interpretation.

7.5 Agreement

Despite proposing an analysis of the impersonal affix on the auxiliary as a form of agreement, I must emphasise that this only constitutes an adequate explanation in conjunction with the semantic bleaching of the construction. It has been noted that there are other constructions in Estonian with an apparently random choice of verb agreement or non-agreement with the pre-verbal NP. Rajandi, for instance, makes the following observation, in discussing the fact that the compound impersonal tenses sometimes have an agreeing verb:

> This sort of fluctuation in concord is no rarity in Estonian syntax. The finite verb has a tendency to agree not only with the object of impersonal compound tenses, but also with the so-called 'contentfully impersonal'—or rather, 'apersonal'—sentences such as [7.9a–c], where the attempt to classify the grammaticality or ungrammaticality of concord and lack of concord is a pretty risky business. (Rajandi 1999:77)[10]

(7.9)   a.   puudujad   tuleb/tulevad   üles märkida
             absentee.NOM.PL come.PRS.3SG/3PL up   note.INF
             absentees must be noted down
        b.   need   mehed   tasub/tasuvad   tööle   võtta
             these.NOM man.NOM.PL be-worth.PRS.3SG/3PL work.ALL take.INF
             these men are worth employing
        c.   patsiendid   sai/said   läbi   vaadatud
             patient.NOM.PL get.PST.3SG/3PL through look.2PTC
             the patients got examined

All these examples have an undergoer element as the topic and either an apersonal or passive construction following them. The interpretation of the clause is not changed with the agreeing verb versus the default non-agreeing 3SG verb.[11] Meanwhile, the interpretation of the impersonalised impersonal construction by

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[10]The assignment of grammaticality to these is indeed risky. From a few informants consulted, the judgments are that (7.9a–b) are both only acceptable with the default 3SG, while (7.9c) is acceptable either with or without verb concord. This may be a phenomenon which varies with dialects.

[11]Rajandi does, however, also point out instances like (7.10), where a lack of concord explicitly makes the clause undergoer-oriented, with an implicit actor argument, while verb concord can only be interpreted as having a subject, and hence makes the clause actor-oriented, with an implicit undergoer argument:

native speakers much more often than not gives the impersonal ending some sort of meaning. Both the straight impersonal perfect (*be*.3SG + V.2PTC) and the impersonalised impersonal (*be*.IMP + V.2PTC) exist side by side. Unlike the examples in (7.9a–c), however, which are purportedly unaffected by the additional verb marking, the impersonalised impersonal is interpreted as marked and therefore contributing extra information. If its function can be described as agreement, it is not "just" grammatical agreement, at least not at present in its development.

The impersonal auxiliary has a pragmatic function, that of restoring the bleached impersonal argument to a position of salience and interpretability. This may also be why, despite being a form of agreement, the impersonal auxiliary has not become obligatory. On the contrary, there is a good deal of variation, and the additional impersonal marker is often not used.

A context in which it is most likely to be used is where ambiguity results from *not* using it. The ambiguity between the impersonal perfect and the personal passive has been discussed. However, it has not been underlined that in the interpretation of a clause, this ambiguity can lead to processing difficulty. A nominative NP followed by an auxiliary will initially be given the most likely interpretation of functioning as a subject. If the auxiliary does not agree with the NP, then the NP will be analysed immediately as an object. However, if the nominative NP is 3SG, and the adjacent auxiliary is also 3SG, then the most natural interpretation is that of verb concord, and of the grammatical relation 'subject' with an agreeing verb. Now the garden-path reading takes the listener far enough along that a reanalysis of the construction as an impersonal, and of the argument as an object poses more of a problem.

(7.11) a. kartul   oli…
            potato.NOM.SG be.PRS.3SG

        b. kartul   oli   keedetud
            potato.NOM.SG be.PRS.3SG pick.2PTC
            the potato was boiled/one had boiled the potato

(7.10)   kassapidajad   tahab/tahavad   pidevalt   kontrollida
         cashier.NOM.PL want.PRS.3SG/3PL constantly control.INF
         the cashiers constantly need to be checked/the cashiers constantly want to check ∅

After hearing only the first word in the above clause, a nominative singular noun, a hearer does not necessarily assign it any grammatical relation, and it is open to analysis as a subject or an object. After hearing all of (7.11a) above, with the 3SG form of the copula, it is still not obvious what grammatical relation the singular noun is assigned. Verb agreement with the nominative noun can be taken as an indication that the NP is functioning as a subject, but equally, Estonian allows subjectless clauses and constructions which lack any verb concord. The full clause in (7.11b) is more likely to be interpreted as the personal passive given in the first translation above, if the first two words have been interpreted as subject and agreeing verb. The other possible interpretation, that of the impersonal given in the second translation, involves the singular NP being reanalysed as an object. In this instance it may not seem like a particularly relevant difference, but at times it is precisely the impersonal actor which is meant to be conveyed. In those cases, analysis of the singular NP and singular verb as subject-verb with concord must be blocked, or reanalysis must be forced by some overt signal of impersonalisation.

Furthermore, Estonian resists allowing concord between any non-subject nominative nominal and the verb, as this is ordinarily not allowed in the grammatical system. Singular objects normally take nominative case only when the verb form allows no ambiguity, as with imperatives, shown in example (7.12).

(7.12) korja   kaardipakk   üles!
        gather.IMV card-deck.NOM.SG up
        gather up the deck of cards!

Hence, many pressures, both on formulating a construction and on processing the construction, lead to re-emphasising the impersonal nature of the construction, and ridding the auxiliary of its ambiguous unmarked status. The following example reiterates and drives home this point, demonstrating the different options for expression.

(7.13) a. kartulid   oli   korjatud
            potato.NOM.PL be.PST.3SG gather.2PTC
            there had been gathering of the potatoes[12]

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[12]Pihlak (1993:15), citing Must (1987:284)

b. kartulid   olid   korjatud

    potato.NOM.PL be.PST.3PL gather.2PTC
    the potatoes were gathered

c. kartuleid   oldi   korjatud

    potato.PAR.PL be.IMP.PST gather.2PTC
    there had been gathering of potatoes

In example (7.13a), there is a sense of ungrammaticality before the construction is resolved by the passive participle. Even after parsing the passive participle, most contemporary speakers of standard Estonian find this example unacceptable, although the grammars theoretically allow it. The adjacency of the nominative plural noun and singular auxiliary signals—or at least threatens—ungrammaticality, and it occurs so rarely that it seems to have acquired a sense of deviancy, although it is reported to be attested in dialects (Must 1987). In fact, all native speakers consulted have far preferred the plural agreement in (7.13b), some claiming that (7.13a) is ungrammatical (similar judgments are reported in Torn 2002:99, fn 15). Example (b), on the other hand, with verb concord, is clearly passive and resultative, but this is not necessarily the intended meaning of (7.13a). Example (c), then, is a resolution of the two. The jarring adjacent non-agreeing noun and verb are done away with, and the impersonal agent is clearly present, carrying with it a dynamic, non-resultative reading. This non-resultativity is reinforced by partitive case-marking of the patient.

However, note that the impersonal marker on the auxiliary is optional, while the impersonal lexical verb must be passive in form. The passive participle is central to this construction, and is not optional, even when the impersonal voice information is given on the auxiliary. Recall that example (7.7b), with an impersonal auxiliary and an active participle, although judged to be logically acceptable by some linguists, is unanimously rejected by all other Estonian speakers interviewed. An equivalent is given in (7.14).

(7.14)   *kartulid   oldi   korjanud

        potato.NOM.PL be.IMP.PST gather.1PTC

This seems to be an effect of an agreement-type phenomenon. The 3SG auxiliary is unmarked. The impersonalised auxiliary is clearly marked. Once the construction is interpreted as an impersonal, then an active participle is perceived as incongruous. The lexical verb is the controller, and the auxiliary, the target of this form of agreement, when it occurs.

From the viewpoint of the ambiguity which results from semantic bleaching of a construction, there is ample motivation for marking this construction with additional concord which does not occur in other constructions. An example of a construction without this sort of concord is provided by the defective modal verb *pidama* 'must'. Although the case-marking of its arguments is canonical, it has no impersonal form. However, the semantics encoded by this modal are not inaccessible to the impersonal voice, but must be expressed with a bare third person singular form of the modal and an impersonal infinitive: the impersonal affix is marked on the supine infinitival form of the lexical verb, as in (7.15a). Example (7.15b) provides a contrasting construction with the modal verb *võima* 'can', demonstrating how the impersonal can be marked in a canonical modal construction, on the modal verb itself.

(7.15) a. peab   rohkem tööd   **teh-ta-ma**
            must.PRS.3SG more   work.PAR do.IMP.INF
            one has to do more work[13]
        b. võidakse   rohkem tööd   teha
            can.IMP.PRS more   work.PAR do.INF
            one can do more work

With both the modals *pidama* and *võima*, the impersonal voice information is given in a compound predicate on only one of two verbal elements without any ambiguity or lessened accessibility of an implicit impersonal argument. No agreement is possible, nor is it necessary. In this case, the impersonal semantics are strongly present without needing reinforcement. The contrasting case of the 3SG auxiliary also has two verbal elements, but when only one is marked, then the impersonal actor is not always clearly interpreted. This suggests that the impersonal perfect has undergone semantic bleaching before the development of the impersonalised impersonal. The category of voice uses the unmarked 3SG auxiliary for several different constructions. It is not surprising that some of these should overlap and cause some confusion, and that speakers should find ways of overcoming this confusion in the event of processing costs becoming too high, or communication being impeded.

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[13]Erelt et al. (1995:74)

The notion of attraction and proximity in agreement phenomena may also play a role in the development of the impersonalised impersonal. First of all, it should be noted that singular number is unmarked. In Estonian, the 3SG verb form is not always morphologically unmarked, but its function clearly shows an unmarked form.

> The claim that marked lexical items possess a property that un-marked items lack implies a dual function for the unmarked form (Greenberg 1966, Jakobson 1957): It can occur in contexts where it ex-plicitly signals a contrast with the marked item, and it can also occur in contexts where the contrast is suspended or neutralized. (Eberhard 1997:148)

As this thesis has noted, although the 3SG form of the verb does bear an inflection (in present but not past tense), and so is morphologically marked, it is used in many contexts where the singular/plural contrast is neutralised. In both the impersonal perfect and apersonal constructions, for instance, the 3SG verb form is used not for a singular referent, but rather for a generalised—and more often plural—referent. It is safe to say that here the contrast is entirely neutralised, and that the 3SG verb form is unmarked for purposes of processing. I turn now to some evidence from a more psycholinguistic perspective, speculating on an additional motivation for the development of the impersonalised impersonals.

It has been well documented that in attraction errors in verb agreement, interfer-ence is caused by the marked element of a pair, rather than the unmarked one. The use of an unmarked singular noun, for instance, has a low-level activation, whereas the use of a marked plural activates a marked number contrast, and therefore results in agreement errors more often than errors in singular agree-ment. Bock & Miller report that "across all of the corpora available..., plurals accounted for 82% of the 83 recorded cases of attraction," supporting the obser-vation "that attraction occurred primarily between plural local nouns and the subsequent verb" (1991:53). To relate this to the constructions under investiga-tion, then, it is essential to consider how proximity and attraction play a part in the nonstandard use of verbal inflection. The 3SG auxiliary is unmarked, and therefore susceptible to attraction errors. Furthermore, the effect of its typical

adjacency to various types of nominals may affect the reading of the unmarked 3SG.

(7.16) männipuust   oli   uued   lauad   lõigatud
        pinewood.ELA be.PST.3SG new.NOM.PL board.NOM.PL cut.2PTC
        new boards had been cut out of pine wood[14]

One more basic fact about the Estonian verbal paradigm must be emphasised here. The 3SG and 3PL forms of *olema* 'be' happen to be syncretic in the present tense. This fact, although seemingly tangential, may actually have influenced both the development of the personal passive and the impersonalised impersonal. Consider the following examples. The question of verb agreement is moot in the present tense with both singular and plural nouns (7.17a–b), in contrast to the examples in past tense (c–d).

(7.17) a. maja   **on**   ehitatud
            house.NOM.SG **be.PRS.(3SG/PL)** build.2PTC
            the house is (has been) built

        b. majad   **on**   ehitatud
            house.NOM.PL **be.PRS.(3SG/PL)** build.2PTC
            the houses are (have been) built

        c. maja   **oli**   ehitatud
            house.NOM.SG **be.PST.3SG** build.2PTC
            the house was (had been) built

        d. majad   **oli**   / **olid**   ehitatud
            house.NOM.PL **be.PST.3SG** / **be.PST.3PL** build.2PTC
            the houses were (had been) built

Out of all the above constructions, it is only the final one, in the past tense with a plural noun, where the verbal inflection disambiguates between the dynamic impersonal reading and the stative passive reading. These constructions, then, give syntactic reanalysis a strong base to build on. In the event of (a–c), above, the auxiliary can either be interpreted as a default 3SG form, or just as easily as agreeing with the undergoer noun. This provides one additional factor which facilitates syntactic reanalysis.

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[14]Pihlak (1993:15), citing Must (1987:284). As with (7.13a), this construction without agreement seems to be dispreferred in modern standard Estonian. Must's (1987) data comes from a northeastern dialect of Estonian.

The grammatical situation created by this syncretism is that in most cases, the undergoer noun can be read to trigger concord in the following auxiliary, even when the intended construction does not involve concord. This effects a reverse proximity effect, so to speak. If the intended reading is precisely that of a dynamic impersonal and no agreement, then to ensure correct parsing, this needs to be disambiguated from the personal passive which has verb agreement and stative semantics. Also, auxiliaries may be particularly liable to "attract" some sort of agreement with the lexical verb, as they tend to be the carriers of information which characterises the construction as a whole, including tense information.

Proximity concord is the phenomenon where the "verb agrees in number with the proximal or local noun phrase rather than the more distant head noun" (Bock & Miller 1991:46). The development discussed here might instead be referred to as proximity discord, or disagreement. Because the noun is followed by an ambiguously interpretable auxiliary, a clearly non-agreeing affix is inserted to rule out the interpretation of the construction as a personal passive with verb agreement. An unmarked element becomes marked, for the purpose of disagreement rather than agreement: call it 'deterrence' rather than attraction. This marking can be read as emphasising the impersonal nature of the clause, signalling that the verb is not agreeing with the noun, or agreeing with the lexical verb in a sort of impersonal concord. Most likely all three of these factors function together to bring about the existence and the acceptability of the construction.

However, as constructions like this are attested with monovalent and intransitive verbs as well as with verbs with objects, the claim cannot be that this always results from a need to disambiguate between an agreeing auxiliary and a non-agreeing one. It is likely that the original motivation for the use of this sort of construction comes from disambiguation and deterrence, and that other uses develop by analogy. As the construction with a 3SG auxiliary becomes more bleached and generalised, the insertion of an impersonal affix is warranted even in intransitive impersonal constructions, where no ambiguity actually arises.

7.6 Conclusion

The answer to why the impersonal construction is sometimes doubly marked comes from the semantic bleaching of the construction, which has resulted from the development of a personal passive and the partial syncretism of the passive and impersonal paradigms. The syncretism creates a situation where it is

sometimes unclear, with bivalent aspectual verbs, whether the construction is in fact passive or impersonal. Recalling the Actor Demotion Hierarchy, the passive actor argument is deleted, while the impersonal has a semantically present, suppressed argument (i.e. not deleted actor). The use of the impersonal construction is not merely a means of demoting the actor or leaving the actor unspecified: rather, the use of the impersonal conveys information about the actor argument, and satisfies the argument slot. It is particularly problematic, then, for the interpretation of the construction that this most salient element of the construction should be bleached. The construction becomes ambiguous between a demotional passive and an agentive impersonal interpretation. In a sense, the perfect tenses of the impersonal paradigm become defective, or are in danger of becoming defective. The true impersonal reading is weakened because of syncretism with the truly demotional passive construction. The reintroduction of the impersonal affix affords a means of reintroducing the impersonal reading. However, this reintroduction of the impersonal affix is not seen as introducing another argument, nor as changing the semantics of the impersonal construction. Rather, the impersonal affix is meant to ensure the correct parsing of a perfect impersonal *as* impersonal and not passive. Hence, no change is effected in the argument structure nor is any difference marked in the semantic representation. The solution is not to be found in the mapping of semantic to syntactic arguments. Rather, the semantic bleaching of impersonal A to passive $\emptyset$ means that an impersonal agreeing auxiliary merely re-establishes the impersonal A, which is threatened by both bleaching and processing difficulty caused by ambiguity.

Yet the explanation by way of semantic bleaching also casts a new light on the question of interaction among constructions. If the impersonal semantic component is bleached from the construction before it is reestablished, then the reintroduction of the impersonal affix is indeed more like agreement, and less like a combined voice phenomenon. I do not see a reason to include the impersonalised impersonal in the voice domain, as this is most straightforwardly read as functionally equivalent to an unmarked impersonal. Nor do I include the impersonalised passive as a basic voice construction (*pace* Pihlak 1993), as the use of this construction is a straightforward application of the canonical impersonal operation to a canonical passive operation. The availability of interaction between the two enriches the voice domain, but the availability of the construction falls out of the analysis of the uses of the basic voice constructions, the impersonal and the personal passive.

8

Summary and Conclusions

This thesis provides an account of the varied voice domain in Estonian through an analysis of valency-reducing constructions. Estonian, with its four different operations of valency reduction, provides a range of options for leaving the actor argument unexpressed. As this thesis shows, the process of removal of the actor argument is not a unitary operation. Rather, the valency reduction operations function on different levels of linguistic structure, and effect different degrees of demotion with different interpretative results.

The anticausative operation occurs on the most fundamental lexical level, consisting in a verb-forming derivation and outputting a lexical entry with a distinct logical structure. Impersonalisation is also lexical in nature, involving the suppression of the actor and a marked morphosyntactic realisation of arguments, whereas passivisation is a syntactic process, occurring in the linking of semantic arguments to syntactic roles. Finally, apersonalisation is formally indistinguishable from several construction types which do not derive from voice operations, but rather from the lack of a semantic actor. The apersonal interpretation comes about not in the syntax to semantics linking procedure, but rather in the pragmatic interpretation of the clause, wherein the construction is interpreted as having a modal meaning of potentiality, and as having a generic, human actor.

The analysis is implemented within Role and Reference Grammar using event semantics, making the event accessible for reference by grammatical phenomena. The semantic representation proposed here expands the informational load of the logical structure of voice constructions without adding additional machinery to the representational mechanisms employed by the RRG framework. The

theory is thus able to capture the various processes of demotion within the semantic representation, despite the fact that the demotion operations occur on various levels. Theories conceiving of actor demotion as a binary operation of removal are not easily able to capture these distinctions without stipulations.

The impersonal and apersonal actors are shown to be 'a-definites', and these are both represented by an arbitrary term a. The impersonal construction gives the impersonal actor semantic content, represented by the capital A, whereas the apersonal actor (a) is entirely generic. Both a-definites satisfy an argument position, and both are demoted semantically: the impersonal is intentionally unspecific, but it contains the information that the actor is generic, human, and has a broad-scope interpretation. The apersonal actor argument referent is also associated with the property of humanness, but this information is not carried by the actor argument itself, but is conveyed rather in the pragmatic interpretation of an apersonal clause. The analysis is thus extendable to other constructions which use the same formal structure as the apersonal, the default 3SG verb inflection, but which carry non-personal semantics, such as weather predicates and physiological predicates. The apersonal is demoted to a potential actor, embedded in a state-of-potential clause with the apersonal interpretation.

The personal passive and the anticausative operations both require bivalent input, and both reduce the valency not only semantically, but also syntactically. This syntactic demotion on bivalent input results in both cases in a promoted undergoer, unlike the a-definites, which do not involve promotion of any undergoer argument. The anticausative reduces the valency of a lexical verb, whereas the passive reduces the valency of a predicate, while still containing an understood actor in the logical structure of the verb. The passive actor does not introduce a discourse marker, nor does it fill an argument position. The acceptability of agentive adverbials and lack of restrictions on agents is explained by the semantically empty and unassigned actor argument position in passives. This is contrasted with the actor argument of impersonals, which is only partially demoted, and has semantic content. That semantic content is carried over into restrictions on possible agentive adverbials, allowing only those agents whose semantics are compatible with impersonal semantic properties. The extent of demotion of the actor effected by the different valency-reducing operations is examined through the availability of the actor referent for anaphoric reference and the possibility of expression by means of agentive adverbials.

The Hierarchy of Actor Demotion proposed in Chapter 5 reflects the nuances of semantic demotion of the actor argument. This can be read directly from the semantic representation of the predicates in question, developed in Chapter 4. The apersonal is the least demotional of all voice constructions, with its actor argument phonologically unexpressed but present for syntactic purposes. Semantically, however, the apersonal actor is entirely generic and void of information other than its being human. The apersonal is followed by the impersonal, which suppresses the actor, the syntactically and semantically demotional passive, and finally the anticausative, which entirely deletes the actor argument. The anticausative actor argument does not exist for any grammatical or conceptual purposes. This Demotion Hierarchy directly feeds into the Undergoer Promotion Hierarchy, which reflects syntactic distinctions but also involves degrees rather than a binary operation of promotion or non-promotion. The degrees of promotion are reflected in a partial display of some subject properties: the impersonal undergoer argument in a bivalent clause, for instance, takes nominative coding as the only overt macrorole argument, but shows no syntactic effects of promotion. Indeed, the impersonal undergoer cannot be promoted, as the impersonal actor argument is not fully demoted.

The potential combinations of voice constructions examined can also be directly related to the Demotion Hierarchy. The impersonal and apersonal both have implicit, unexpressed actor arguments, which are present in both the semantic and syntactic representations of a clause, but which are expressed through non-standard means, the impersonal through distinct impersonal verbal inflection and the apersonal through a default verb inflection and pragmatic interpretation. Neither of these are amenable to further valency reduction, in that the particular a-definite interpretations of these constructions depend on their morphosyntactic idiosyncrasy. Both of these have semantically restricted referents because of the peculiar status of the implicit actor.

The passive and the anticausative, on the other hand, have fully promoted undergoer subjects. The morphosyntax of the verb carries information about the derived nature of these subjects, and the argument itself is much less restrictive about which type of referent it picks out. Hence, both the passive and anticausative are amenable to impersonalisation and apersonalisation. The apersonal cannot apply to the passive merely because of morphosyntactic limitations: the 3SG inflection cannot simultaneously express the passive voice and apersonal semantics, particularly because in this case the construction would be

indistinguishable from a canonical impersonal. Other than this limitation, it is the a-definites which can apply to any predicate, being insensitive to argument structure and input type, and it is a-definites which mark their argument in a peculiar way so as to block any predicate applying to them. The impersonalised impersonal is shown to result from semantic bleaching of the impersonal perfect. It is left out of the combined voices, as it is not an impersonalisation of a true impersonal construction, but rather a re-impersonalisation of a construction which is no longer a reliable carrier of impersonal semantics.

The thesis demonstrates that it is fruitful to account for the voice phenomena of Estonian with a semantics-based model. Differences between the various constructions involve both the extent of argument demotion and the level of linguistic structure on which the argument modulation occurs. The constructions investigated each derive from different levels: the lexical (anticausatives), lexical-semantic (impersonals), syntactic (passives) and pragmatic (apersonals).

The analysis assumes a two-tiered semantic representation. The information stored in the lexicon with a verb includes valency information in that it specifies the number of arguments required by a verb as part of the verb's logical structure. However, before the semantic information is translated into a syntactic structure, the RRG model provides the arguments with referents, as well as macrorole assignment.[1] This is the stage at which the logical structure of a verb is modified to represent various voice options, the default being active voice. If tense and mood operators are called upon at this level, it is consistent that passivisation and impersonalisation take place here as well, as they influence macrorole assignment and argument linking.

I consider the two semantic tiers to be psychologically realistic, and to represent the information which is acquired in the acquisition of language: knowledge of lexical items such as verbs includes knowledge of the contexts of their appropriate use (which requires knowledge of semantic valency). Knowledge of a linguistic system includes the knowledge of how to map lexical items onto syntactic forms. Voice operations function on the semantics-syntax interface. Their

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[1]The order of operations is not taken to be a psychologically accurate model, but rather a logical order not necessarily reflecting actual production. This would need to be supplemented with a left-to-right model of production and parsing such as that used in Dynamic Syntax (Kempson, Meyer-Viol & Gabbay 2001) in order to achieve a psychologically realistic description.

interpretation clearly involves both syntactic parsing and semantic role information. It is striking that the valency-reducing constructions, which all involve the demotion of an actor, occur at such different levels of linguistic structure.

One central aspect of voice which is marginalised to some extent in this thesis is the pragmatic perspective, the use and interpretation in context of voice constructions. Although voice can be defined apart from pragmatics (as I claim in Chapter 1), voice constructions are most centrally used for pragmatic purposes. I include the pragmatic information that is directly implicated by the voice constructions in the actual semantic representation of the construction, as semantics and pragmatics function together.

However, in limiting the pragmatic aspects of this study to that which can be included in the logical structure of valency reduction, I leave out relevant information regarding pragmatics. Discourse cohesion and discourse functions determine the use of voice to a large extent. Constituent order itself can topicalise elements, and it can also interact with voice constructions to create a rich pragmatic structure. Leaving this out of the picture gives only a partial story. Nevertheless, with the semantic underpinnings provided by this thesis, it should be easier to examine the effects of discourse status on the arguments of voice constructions and constituent order. This is an important, relatively unexplored area in Estonian.

Beyond the basic pragmatics of voice constructions, there are many possible directions suggested by the work presented here. Much more corpus work needs to be done to provide modification or corroboration of the proposals in this thesis. Corpora also contain a wealth of data to analyse regarding information structure, constituent order, discourse and voice.

Dialectal differences reflect interesting variation in impersonalisation, passivisation, and also agreement and verb-inflection paradigms. Many dialects are extinct, but a good deal of documentation has been carried out regarding dialectal differences, with points of contrast to the standard language system described here. The Leivu dialect of South Estonia, for instance, is reported to have a synthetic impersonal form which differs from personal forms but also agrees with the undergoer: a half-way construction between personal passives and impersonals, and perhaps an additional degree of demotion for the Demotion Hierarchy (Pihlak 1993, Niilus 1936). Võru, a closely related dialect alive

today in South Estonia, is also reported to feature a synthetic multi-personal passive/impersonal (Wiedemann 2002 [1864]).

Chapter 7 itself suggests the need for further study of the diachronic development of the impersonal and the passive. In addition, the anticausative is said to have developed from an old passive formed with *u*, which seems to have developed into a middle marker in Estonian and Finnish (Laakso 2001). This is an interesting area to compare with other branches of the Finnic language family and beyond. One question concerns the division of the functional burden of the voice domain: comparing the use of the impersonal construction in Estonian with other languages which also contain multiple voice constructions would be telling for the pragmatic functions of voice.

The question of the psychological salience of the implicit arguments in all of the voice constructions provides motivation for psycholinguistic experimentation. Reaction-time experiments of the sort reported in Koenig & Mauner (2000) would provide more information regarding the accessibility of the implicit actors in voice constructions. Likewise, a more thorough study of grammaticality judgments of anaphoric reference to implicit arguments should be carried out, to provide more data, investigate the effects of different types of predicates, and to examine the various factors which contribute to the accessibility of implicit arguments, not all of them included in the semantic representation. Investigations of event structure and the mental representation of events ought to provide data to test the adequacy of the semantic representation in this thesis. This representation does not purport to directly reflect a presumed mental representation, but a theoretical objective is that it should be adapted to do so. Psycholinguistic evidence regarding both the status of the implicit actor and the discourse salience of all arguments in active and marked voice constructions would provide a beginning to testing the semantic representation for psychological adequacy, and toward building a theory of language structure which would more directly reflect cognitive structure.

Finally, the approach taken in this thesis to valency change and voice is extendable to languages beyond Estonian and Finnic. The actual representations of the voice constructions are intended to reflect precisely the characteristics of voice in Estonian, and are not intended to be universal. However, valency operations and voice constructions in other unrelated languages ought to be compared to Estonian and others with a range of voice options to identify cross-linguistic

characteristics of the operations in question, and to identify the universal functions of voice distinctions. I do not intend the semantic representations to reflect universal distinctions, but I do claim that the Demotion Hierarchy ought to be testable against other languages. The particular constructions represented on it vary from language to language, but the semantics of demoted arguments, and the relation described between demoted actors and promoted undergoers, should have cross-linguistic validity in languages with marked voices.

APPENDIX A

Anaphoric Reference: Grammaticality judgments

Data on grammaticality judgments were collected from a sample of native speakers presented with complex sentences involving purpose clauses controlled by implicit actor arguments in various demotional constructions.

A.1   Method

A.1.1   Participants

A dozen native Estonian speaker informants participated in this study. They included nine females and three males between the ages of 24 and 40, six from northern Estonia and six from southern Estonia. The main dialectal divide in Estonian is between the north and the south, but all informants speak a similar standard variety of Estonian.

A.1.2   Materials

The informants were presented with the sentences in (A.1), each sentence followed by the purpose clause with null subject given in (A.1g).

(A.1)   a.   laev   uppus...
             ship.NOM.SG sink.ANTC.PST.3SG
             the ship sank...

b.   laev   uputati…

ship.NOM.SG sink.CST.IMP.PST

the ship was sunk…

c.   laev   oli   uputatud…

ship.NOM.SG be.PST.3SG sink.CST.2PTC

the ship was sunk…

d.   laev   oli   kapteni   poolt uputatud…

ship.NOM.SG be.PST.3SG captain.GEN.SG by   sink.CST.2PTC

the ship was sunk by the captain…

e.   laev   läks   põhja…

ship.NOM.SG go.PST.3SG bottom.ILL

the ship drowned…

f.   alati   võib   laeva   uputada…

always can.PRS.3SG ship.PAR.SG sink.CST.INF

one could always sink the ship…

g.   …selleks, et   kindlustusraha   ∅ kätte   saada

this.TRL   that insurance-money.NOM.SG ∅ hand.ILL get.INF

…in order to get the insurance money

A.1.3   Procedure

The respondents were asked to judge the acceptability of the sentences. The answers were in written form, and included both binary yes/no judgments and longer comments which categorised the constructions in relation to each other, explicitly stating that one is more or less acceptable than another. These longer comments were taken into account in compiling the results.

A.1.4   Analysis

Each respondent's comments were analysed separately by respondent. The sentences judged fully grammatical were placed in the YES category, and those judged ungrammatical were placed in the NO category. All others were ordered according to three intermediate steps of grammaticality for each informant, relative to that informant's other responses. These clines were translated into the results depicted in Figure A.2.

A.2 Results

The sample of responses is too small to merit statistical analysis. The analysis is also subjective to a certain extent, given the need to translate from respondents' comments to categories of grammaticality. However, it is clear from the graphs in Figure A.2 that judgments of most and least grammatical are robust, and that those in between on the cline fall into a clear ordering. The gradience in the results derives from variability between respondents.

The two constructions with implicit arguments available for control of the purpose clause are the impersonal and apersonal, the top two graphs in Figure A.2. The short passive is relatively acceptable, but several respondents classify it as less grammatical than the impersonal. This is followed by the agentive passive. Finally, the bottom two graphs both show judgments of ungrammaticality, though the intransitive is clearly more acceptable than the anticausative. These responses are further discussed in Chapter 5.

The cline resulting from the responses indicates the same ordering of constructions as is discussed in Chapter 5, and shown in Figure A.1, also included in the discussion in Chapter 5.

Most Grammatical

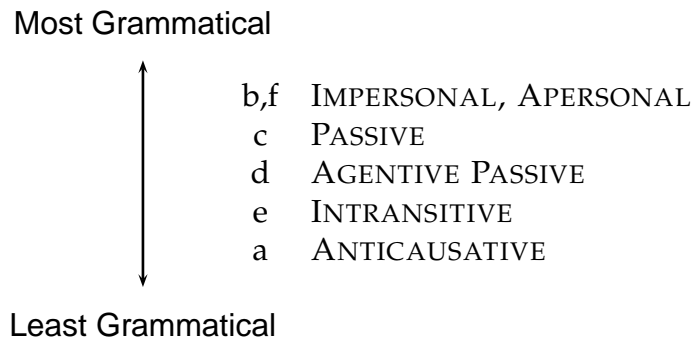|	
b,f	IMPERSONAL, APERSONAL
c	PASSIVE
d	AGENTIVE PASSIVE
e	INTRANSITIVE
a	ANTICAUSATIVE

Least Grammatical

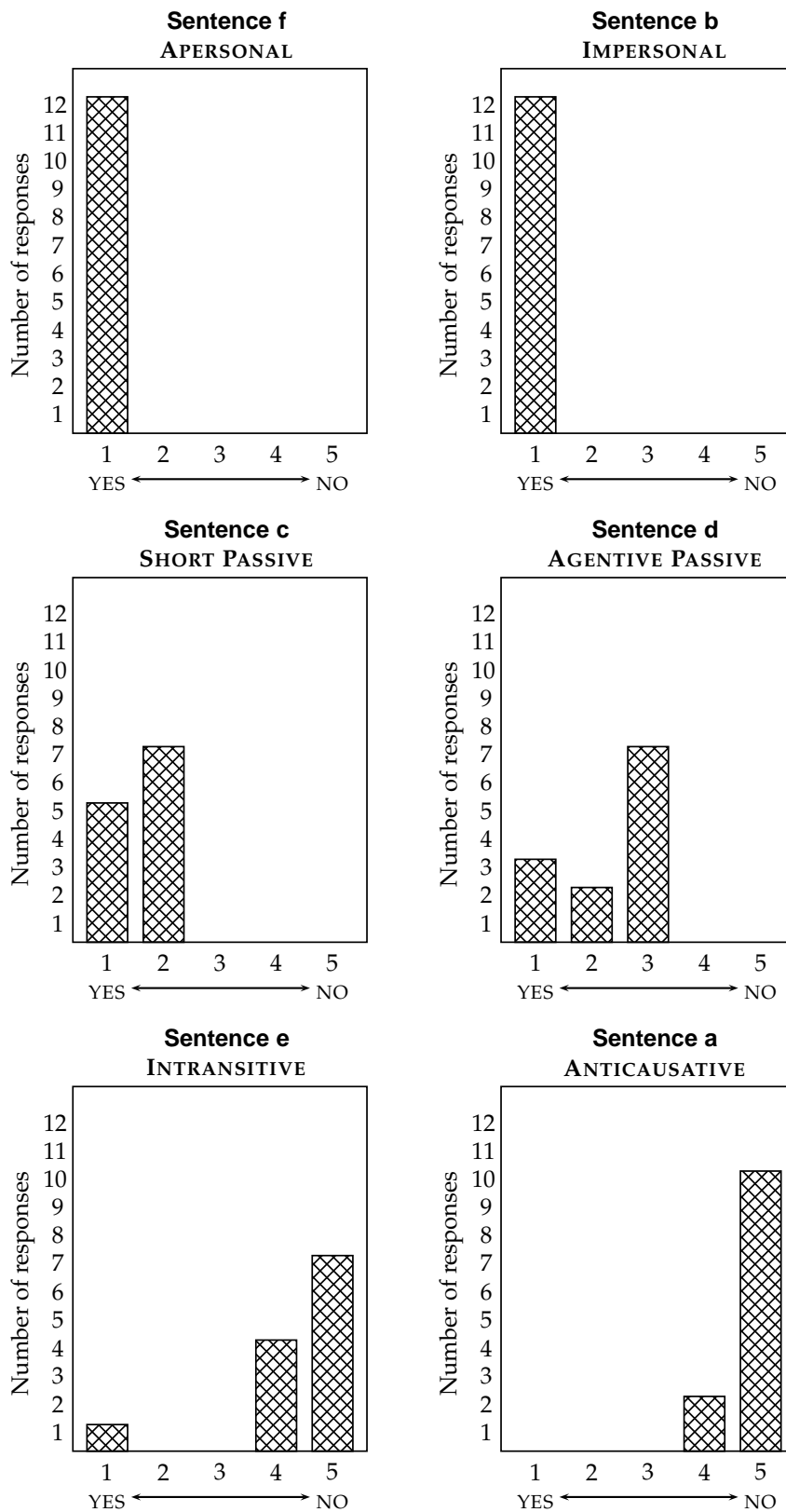Figure A.1: **Grammaticality Judgment Results: Reference to Implicit Arguments with Zero Anaphora**

Figure A.2: **Grammaticality Judgment Data:** Graphs show responses to PRO anaphoric reference to the implicit argument in each construction. Responses are graded between YES (fully grammatical) to NO (ungrammatical), with a cline of more to less acceptable in between.

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