

The Value of Cognitive Grammar in Typological Studies: the Case of Norwegian and Russian Passive, Middle and Reflexive¹

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This paper shows that Cognitive Grammar is valuable for typological studies. The Norwegian and Russian reflexive-middle-passive systems are analysed comprehensively and compared. Whereas Cognitive Grammar is compatible with the typological tradition (represented by Kemmer), it needs amendment in certain important respects. The main theoretical contribution of the paper is that the Cognitive Grammar notions of “instantiation”, “prototype”, “entrenchment” and “extension” are useful; without these notions, interesting generalizations about the Norwegian and Russian systems are inexpressible. The main empirical contribution of the paper is that a full-fledged analysis of the Russian system is presented. In addition, Kemmer’s analysis of Norwegian is improved upon, partly because findings from the generative tradition are incorporated.

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1. INTRODUCTION

In this paper we explore the value of Cognitive Grammar (CG) (Langacker 1987, 1991a, 1991b) for typological studies on the basis of an extensive analysis of the passive-middle-reflexive systems of Norwegian (Bokmål) and Russian (Contemporary Standard Russian). In addition to this theoretical objective, the paper also has the empirical aim to provide full-fledged analyses of the Norwegian and Russian systems. In this respect, we draw heavily on the typological tradition represented by Geniušienė (1987), Pederson (1991) and especially Kemmer (1993).

The theoretical contribution of the present paper is that we demonstrate that CG is compatible with the conceptual apparatus employed in the typological tradition represented by Kemmer and others, but that in several respects it goes beyond what is offered by the typological tradition. CG thus proves highly useful in typological research. In particular, we argue:

- Without the notion of “instantiation”, the relation between situation types and notions like “reflexive”, “middle” and “passive” is not precisely captured (section 5).
- Without the notion of “prototype”, different encodings of one and the same situation type in different languages are not accounted for (section 6).
- Without the notion of “entrenchment”, the relationship between marginal and productive markers is not captured satisfactorily (section 7).
- Without the notion of “extension”, relationships of similarity (not identity) are not accommodated in a fully satisfactory way (sections 7 and 8).

Our contribution to the empirical study of Norwegian and Russian may seem more modest, given the excellent analysis of Norwegian presented by Kemmer (1993). However, the paper

- provides a more comprehensive analysis of Russian than is available in the literature, including Kemmer’s monograph (sections 3–5).
- incorporates the distinction between Norwegian *seg* and *seg selv*, which is not treated by Kemmer (sections 3–5 and, especially, 6).
- offers a more detailed investigation of Norwegian *-s* as a marker of middle voice than does Kemmer (section 7).
- provides arguments for treating the indirect reflexives with recipient and beneficiary arguments as two distinct situation types (section 3).

The second point has been amply studied in generative work on Scandinavian syntax (cf. e.g. Hellan 1988, Hestvik 1992, Dalrymple 1993), but has not been sufficiently heeded in the typological tradition closer to our theoretical stand. In this respect our paper attempts to bridge the gap between two theoretical traditions, and this allows us to suggest an improvement on Kemmer’s terminology (cf. section 3).

The decision to juxtapose Norwegian and Russian is well motivated, not only because it leads to theoretically interesting observations. The often noted similarity between Russian and Scandinavian reflexive-middle-passive systems may be due to a Sprachbund around the Baltic Sea (Ureland 1977, Dahl & Koptjevskaja-Tamm 1992:17ff.). Although we do not deal with the actual diachronic and areal linguistic problems here, a fine-grained and full-fledged synchronic analysis of all languages in the area is a prerequisite for the study of these problems. In this respect the value of the present paper lies in presenting an extensive analysis of relevant Norwegian and Russian data.

The paper is organized as follows. We first present the theoretical background for this study (section 2) and the relevant data (section 3).

In section 4 we outline an analysis to be expanded and commented upon in the following sections, which focus on the notions of “instantiation” (section 5), “prototype” (sections 6 and 7), “entrenchment” (section 7) and “extension” (sections 7 and 8). Section 9 provides a conclusion.

2. THEORY – COGNITIVE LINGUISTICS AND COGNITIVE GRAMMAR²

The term “cognitive linguistics” subsumes a number of “broadly compatible theoretical approaches that share a common basis: the idea that language is an integral part of cognition” (from the homepage of the International Cognitive Linguistics Association). In its mentalistic orientation, cognitive linguistics differs from (but is not necessarily in conflict with) so-called “instrumentalistic linguistics”, i.e. approaches where no connection with cognition is assumed, e.g. Generalized Phrase Structure Grammar (GPSG) (Gazdar et al. 1985:5). On the other hand, the mentalistic orientation unites cognitive linguistics with Chomskyan linguistics. Nevertheless there is a conflict, because the working hypothesis in cognitive linguistics, that language is an integral part of cognition, is at variance with the assumption that there is a language faculty that constitutes an autonomous module in the mind (Fodor 1983, Chomsky 1986).

Cognitive Grammar (CG for short) is the name of a particular framework within cognitive linguistics (hence the use of capitals). We shall not attempt a full presentation of CG, but rather delimit ourselves to a brief introduction of the theoretical issues to be addressed in the present study. CG is non-modular not only in the sense that language is seen as an integral part of cognition, but also in its assumption that grammar and lexicon form a continuum. In CG, “lexical” and “grammatical” information is represented in the same way, viz. in terms of networks. This feature of CG will prove important in section 7.

The notion of “network” is pivotal in CG, and we shall explicate some characteristics of CG networks that will figure prominently in the present study. The nodes in the networks, called schemas, are essentially Saussurean signs, i.e. pairings of meaning and form. In the over-simplified network in Figure 1, which is for illustrative purposes only, each schema is represented as a box, where the upper part represents meaning and the lower form. Meanings are rendered as simple English glosses and form is represented in a broad phonetic transcription, although CG is of course compatible with more sophisticated modes of representation.

Schemas are interconnected in terms of categorical relationships, of which Langacker (1987:369ff.) assumes two types: instantiation and extension. An instantiation relation holds between two schemas, which are fully compatible, but one schema is more specific than the other. In

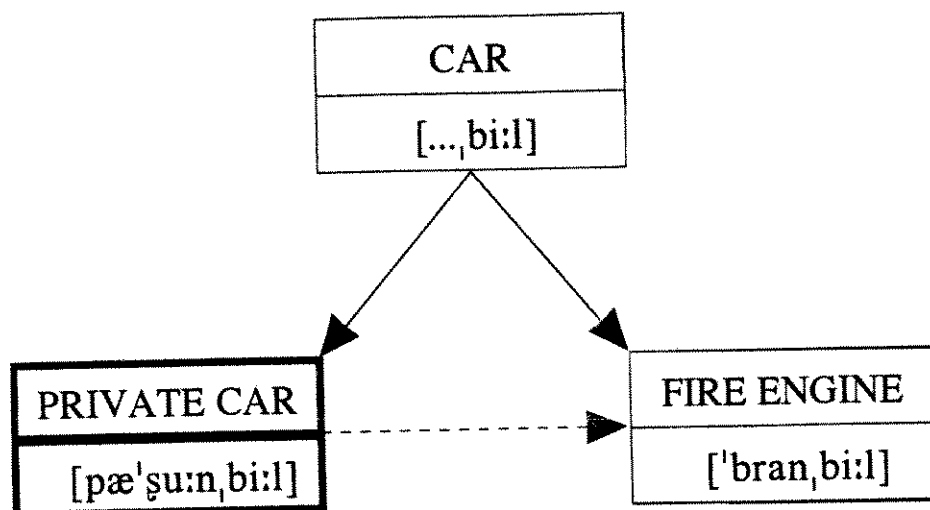


Fig. 1. Networks in Cognitive Grammar. Instantiation, extension, and entrenchment.

Figure 1, instantiation relations, marked with solid arrows, connect the lower-level schemas for Norwegian *personbil* 'private car' and *brannbil* 'fire engine' on the one hand, with the upper schema on the other, since the latter is less specific, given that private cars and fire engines are both cars and that they share the phonetic material $[_bi:l]$. The suspension points in the upper schema indicate that this phonetic material is preceded by an arbitrary string of segments. Instantiation relations will be central in section 5 below.

The relation of "instantiation" allows us to model criterial-attribute categories, i.e. categories defined by necessary and sufficient conditions. For instance, private cars and fire engines are both cars because they display a number of attributes (four wheels, motors, etc.) which together delineate the category of cars. The relevance of criterial-attribute categories for language and cognition is undisputed, but in CG categorization in terms of prototypes is also considered important.³ The schemas for *personbil* and *brannbil* do not enjoy equal status. Given that private cars are used less specifically and much more frequently than fire engines, the schema for *personbil* may be regarded as a prototype. Categorization based on prototypes involves classification of elements as more or less similar to the prototype. In networks, such relationships of similarity are accounted for by extension relations, which hold between schemas that are partially compatible, i.e. similar, but not identical. Relations of this type are marked as dotted arrows from the prototype to the peripheral schema. The ability of extension relations to model similarity will prove valuable in sections 7 and 8.

As mentioned, one of the features that correlates with prototypicality is high frequency. Frequency is also reflected more directly in the networks in terms of what Langacker refers to as "entrenchment". The more often a schema is activated in the mental lexicon/grammar, the higher its degree of entrenchment. In the networks, entrenchment is marked by heavy lines. Thus, the schema for *personbil* in Figure 1 is surrounded by heavy lines. Entrenchment is another illustration of the non-modularity of CG, insofar as Langacker's decision to let frequency be directly reflected in the grammar implies that distinctions like Sausure's *langue* and *parole* or Chomsky's competence and performance are not seen as clear-cut divisions. As Langacker (1991a:261ff.) puts it, CG is a "usage-based model", where language use affects language structure directly. Entrenchment will figure prominently in section 7.

To summarize this section, grammar and lexicon form a continuum in CG in that both "lexical" and "grammatical" information is accommodated in the same networks. Section 2 has also illustrated central properties of networks, *viz.* instantiation, extension and entrenchment. From this brief sketch of the theory, we now turn to the data.

3. THE NORWEGIAN AND RUSSIAN SYSTEMS – SITUATION TYPES AND MARKERS

In what follows we shall explore 18 situation types and see how they are marked in Norwegian and Russian. The comparison of the two systems/languages allows us to make two points of more general interest for typology. First, we shall improve on Kemmer's (1993) terminology by advancing the term "superheavy marker". Secondly, we shall argue that reflexives with beneficiary and recipient markers represent different situation types, a question that is left open by Kemmer.

We shall discuss the functions of the Norwegian and Russian pronouns *seg* (*selv*) and *sebja* and the related affixes *-s* and *-sja*.⁴ We shall refer to them jointly as "reflexive-middle-passive markers". In keeping with Kemmer's (1993) terminology, we shall label the pronouns "heavy markers" (H) and the affixes "light markers" (L), since the pronouns display more phonological body (cf. Kemmer 1993:25). The inventory of forms is set out in Table 1. As indicated in the table, Norwegian *seg* is in some sentences (e.g. (1) below) accompanied by *selv*, whereas in other cases it occurs in isolation (cf. e.g. (7) below). In what follows we

Table 1. Markers in Norwegian and Russian.

	Heavy marker (H)	Light marker (L)
Norwegian	<i>seg</i> (<i>selv</i>)	<i>-s</i>
Russian	<i>sebja</i>	<i>-sja</i>

shall refer to both *seg* and *seg selv* as “heavy markers”, but when it is necessary to distinguish between them, the former will be referred to as a “bare heavy marker” and the latter as a “superheavy marker”. We believe this to be a significant improvement on the existing terminology. Kemmer (1993), who does not treat the distinction between Norwegian *seg* and *seg selv*, lacks appropriate terminology. Admittedly, she discusses e.g. Surselvan *sesez* under the heading “emphatic reflexive”, but this term is unfortunate from a methodological point of view. In trying to clarify the various meanings or functions of certain forms, it is essential to apply terminology that itself refers to form only. Otherwise, one runs the risk of circularity in taking the relation for granted before it is established on independent grounds. The term “superheavy” has the advantage of being consistent with Kemmer’s “heavy” and “light marker”.

Our analysis relies on the notion of “situation type”, which Kemmer (1993:7) defines as “sets of situational or semantic/pragmatic contexts that are systematically associated with a particular form of expression”. Kemmer (*ibid.*) emphasizes that “semantic/pragmatic contexts” are not to be equated with

...simple “real-world contexts” existing independently of the language user; situational contexts include real-world information, but that information is necessarily filtered through the conceptual apparatus of the speaker. This conception of situational contexts thus allows for the obvious role of the language user in *construing* particular “real-world” situations in different ways (cf. [...] Langacker (1987)). (original emphasis)

Table 2 summarizes the situation types and markers to be discussed in the present study. The list of situation types is adapted from Geniušienė (1987), Pederson (1991) and Kemmer (1993), but we exclude types not attested in either language. We shall not discuss the characteristics of each situation type here, as they are already covered in the works cited above (see especially Kemmer 1993: chs. 3 and 4). A familiar problem is how to delimit one situation type from another. We endorse Kemmer’s (1993:5ff.) approach, which is to let cross-linguistic data decide. Thus, if one wonders whether what Kemmer refers to as “grooming” and “reflexive” represents one or two situation types, one should examine whether they are marked differently in some languages. Given that they are in e.g. Russian (*Ivan moetsja* ‘Ivan washes’ vs *Ivan nenavidit sebja* ‘Ivan hates himself’), one may conclude that one is dealing with different situation types. There may be practical problems involved in applying Kemmer’s criterion, but it nevertheless provides a principled basis.

Examples for the attested situation types are given in (1) through (18).⁵ Notice that the numbering of the examples corresponds to the

Table 2. The uses of Norwegian *-s* and *seg* and Russian *-sja* and *sebja*.

Situation types	Norwegian	Russian
1. Prototypical reflexive	HH	H
2. Indirect reflexive (recipient)	HH	H
3. Indirect reflexive (beneficiary)	H	H
4. Natural collective	H	L
5. Natural reciprocal	—	L
6. Autocausative	H	L
7. Grooming	H	L
8. Reflexive causative	H	L
9. Converse reflexive	H	L
10. Mental events	H	L
11. Spontaneous events	H	L
12. Modal-deagentive	—	L
13. Subject demotion	—	L
14. Object demotion	—	L
15. Absolutive	—	L
16. Quasi-passive	L	L
17. Reflexive passive	L	L
18. Impersonal	L	—

HH: Superheavy marker (*seg selv*). H: Heavy marker (*seg, sebja*). L: Light marker (*-s, -sja*). —: No marker attested.

numbering of situation types in Table 2. Consider first situation types 1 to 3, prototypical and indirect reflexives, the only situation types where Russian has the heavy marker *sebja*. Norwegian evinces the superheavy marker in 1 and 2, but the bare heavy marker in 3. In the typological literature, indirect reflexives with recipient and beneficiary participants are normally regarded as subtypes of one and the same situation type. However, Kemmer (1993:74f.) notes that recipients and participants are normally typologically distinct, and hints at the possibility that “[c]loser typological investigation may result in the necessity of treating these two situation types as distinct”. For the purposes of her study, however, Kemmer treats the two as one type. Given that recipient and beneficiary NPs are marked differently in indirect reflexives in Norwegian, we submit that they must be considered different situation types according to the criterion for delimiting situation types discussed above. Thus our analysis allows us to answer a question left open by Kemmer (1993). We believe this to be a significant result for typology. We will return to indirect reflexives in section 6.

(1) Prototypical reflexive

- a. Jeg elsker meg selv og har ingen rivaler.
 I love seg selv:1.SG and have no rival:PL
 ‘I love myself and have no rivals.’ (Fredrik Stabel)

- b. On *nenavidit* *sebja.*
 He:NOM hate:3.SG *sebja*.ACC
 'He hates himself.' (Haiman 1983:804)

(2) Indirect reflexive (recipient)

- a. Han *gav* *seg selv* *en* *bok.*
 He gave *seg selv* a book
 'He gave himself a book.'
- b. On *podaril* *sebe* *knigu.*
 He:NOM gave:MASC.SG *sebja*.DAT book.ACC.SG
 'He gave himself a book.'

(3) Indirect reflexive (beneficiary)

- a. Jeg *vil* *bygge* *meg* *en* *gård.*
 I will build *seg.1.SG* a farm
 'I shall build myself a farm.' (children's song)
- b. On *kupil* *sebe* *dom.*
 He:NOM bought:MASC.SG *sebja*:DAT house.ACC.SG
 'He bought himself a house.'

We now turn to situation types 4 through 11, which differ from the previous ones in that Russian evinces the light marker *-sja* instead of the heavy *sebja*. Norwegian has the bare heavy marker in these situation types.

(4) Natural collective

- a. *Slektingene* *samlet* *seg* *rundt* *bruden.*
 Relative.the:PL gathered *seg* around bride.the
 'The relatives gathered around the bride.'
- b. *Sobralos'* *mnogo* *znakomych.*
 Gathered:3.SG.*sja* many acquaintance:GEN.PL
 'A lot of acquaintances gathered.' (Ušakov 1935)

(5) Prototypical reflexive

- a. (not attested)
- b. *Korabli* *vstrečajutsja* *u vchoda* *v gavan'.*
 Ship:NOM.PL meet:3.PL.*sja* at entrance:GEN.SG in harbour:ACC.SG
 'The ships meet at the entrance of the harbour.' (Ušakov 1935)

(6) Autocausative

- a. Jon reiste seg motstrebende.
Jon arose seg reluctantly
'Jon arose reluctantly.' (Hellan 1988:114)
- b. On ložilsja v postel'.
He.NOM lay:MASC.SG.sja in bed.ACC.SG
'He lay down on the bed.' (Ušakov 1935)

(7) Grooming

- a. Jeg vasker meg.
I wash seg:1.sg
'I wash.'
- b. Ja každyj den' brejus'.
I.NOM every.ACC.SG day:ACC.SG shave.1.Sg.sja
'I shave every day.'

(8) Reflexive causative

- a. Har du klippet deg hos Nilsen Frisør?
Have you:SG cut seg:2.SG at Nilsen Frisør
'Have you had your hair cut at Nilsen Frisør?'
- b. Ona operirovalas' v novoj klinike.
She:NOM operated:3.SG.sja in new:LOC.SG clinic:LOC.SG
'She had an operation at the new clinic.' (Janda 1993:313)

(9) Converse reflexive

- a. Trærne speiler seg i vannet.
Tree:PL mirror seg in water.the
'The trees are mirrored in the lake.'
- b. Nebo otryžaetsja v ozere.
Sky:NOM.SG mirror:3.SG.sja in lake:LOC.SG
'The sky is reflected in the lake.' (Geniušiene 1987:228)

(10) Mental events

- a. Alle barn gleder seg til jul.
All children look-forward seg to Christmas
'All children look forward to Christmas.'

- b. I vot teper' my vse raduemsja i veselimsja.
 And here now we:NOM all:NOM.PL are-happy1.PL.sja and enjoy1.PL.sja
 'And now we are happy and enjoy ourselves.' (Ušakov 1935)

(11) Spontaneous events

- a. Døren åpnet seg langsomt.
 Door.the opened seg slowly
 'The door opened slowly.' (Hellan 1988:113)
- b. Dveri zakryvajutsja.
 Door:NOM.PL close:3.PL.sja
 'The doors are closing.' (Janda 1993:313)

As in the previous examples, Russian displays the light marker in examples (12) to (15). In Norwegian no marker is attested, thus illustrating that the Russian reflexive-middle-passive system is somewhat more elaborate. Notice the dative case in the experiencer in (12) and (13), and the use of genitive in (13) and instrumental in (14).

(12) Modal-deagentive

- a. (not attested)
- b. Mne ne rabotaetsja.
 I:DAT not work:3.SG.sja
 'I cannot work.' (Geniušiene 1987:289)

(13) Subject demotion

- a. (not attested)
- b. Mne chočetsja orechov.
 I:DAT want:3.SG.sja nuts:GEN.PL
 'I want nuts.'

(14) Object demotion

- a. (not attested)
- b. On brosaetsja kamnjami.
 He:NOM throw:3.SG.sja stone.INST.PL
 'He throws stones.' (Geniušiene 1987:48)

(15) Absolute

- a. (not attested)
 b. Sobaka kusaetsja.
 Dog.NOM.SG bite:3.SG.sja
 'The dog bites.' (Isačenko 1982:460)

In situation types (16) through (18), Norwegian shifts from heavy to light marker. In the following examples, then, both languages evince light markers. As can be seen from (18), however, the impersonal is not attested in Russian.

(16) Quasi-passive

- a. Det høres musikk fra nabohuset.
 It:NOM hear.s music from house-next-door.the
 'Music is heard from the house next door.' (Berkov 1989:154)
 b. Naša mašina chorošo zavoditsja.
 Our:NOM car:NOM well start:3.SG.sja
 'Our car starts well.' (Janda 1993:314)

(17) Reflexive passive

- a. Lederen skrives av redaktøren.
 Editorial.the write.s by editor.the
 'The editorial is written by the editor.' (Dyvik 1980)
 b. Takie knigi čitajutsja širokimi massami.
 Such:NOM.PL book:NOM.PL read:3.SG.sja broad:INST.PL mass:INST.PL
 'Such books are read by the broad masses.' (Janda 1993:313)

(18) Impersonal

- a. Det dances.
 It dance.s
 'It is danced.'
 b. (not attested)

4. NETWORKS FOR NORWEGIAN AND RUSSIAN

We shall now accommodate the data considered above in CG networks

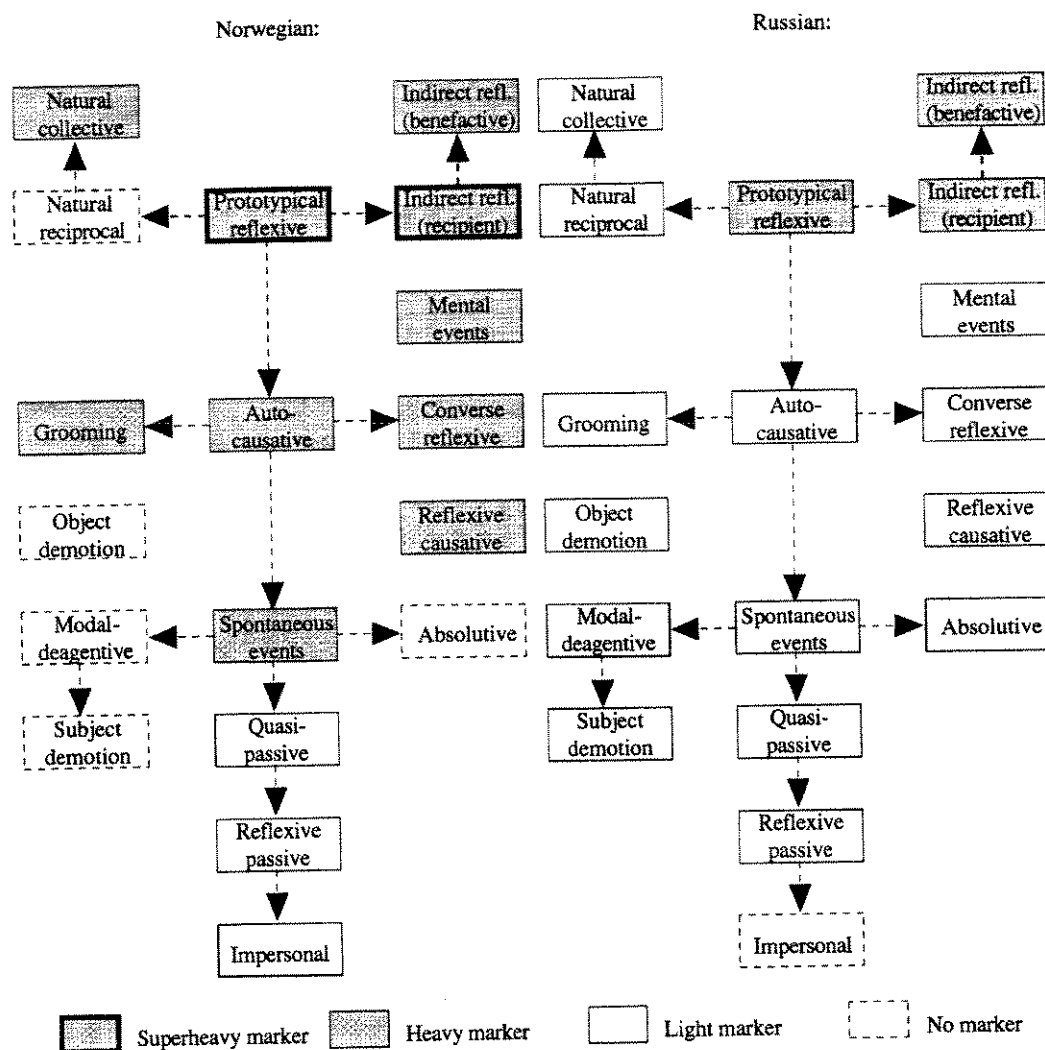


Fig. 2. Networks for Norwegian and Russian.

of the type presented in section 2. We shall see that the networks are very similar to the kind of semantic maps employed in the typological tradition (cf. e.g. Pederson 1991, Kemmer 1993), which lends support to our general claim that CG is by and large compatible with the notional apparatus used in typology. We shall also emphasize the heuristic value of CG networks.

The networks in Figure 2 are based on semantic maps from Kemmer (1993:202) and, especially, Pederson (1991:92). The network to the left represents Norwegian and the right one Russian. Each node in the networks corresponds to one situation type. The nodes are connected by extension relations symbolized by dotted arrows. Three boxes are not connected to any other box because they are either not included or represented as unconnected in Pederson's (1991:92) network.

Given the obvious similarity between semantic maps from typology and CG networks, one may well ask whether there are any interesting differences. In principle both typological maps and CG networks of the type presented in Figure 2 may be interpreted either diachronically or synchronically. In the former case they represent a complex of grammaticalization chains, whereas in the latter they represent the relations between linguistic categories at a certain point in time. Since the synchronic facts emerge as a result of the process of grammaticalization, there is an intimate relationship between a diachronic and a synchronic interpretation. However, the synchronic categorization need not mirror the diachronic processes exactly, and (importantly) we have intended the networks in Figure 2 as representations of synchronic categorization. In fact, our CG analysis should not be given a diachronic interpretation, because in section 5 we shall extend it so as to include relationships of instantiation which, unlike extension relations, lack a direct diachronic interpretation.

Now, the mentalistic orientation of CG (cf. section 2) suggests that networks such as the one in Figure 2 are psychologically real. Admittedly we have no concrete psycholinguistic evidence in support of the networks proposed in Figure 2, and there may well be problems concerning the psycholinguistic status of such networks. Relevant problems are discussed in some detail by Sandra & Rice (1995). Be that as it may, we would like to emphasize the heuristic value of CG networks. First, they are valuable in achieving fine-grained semantic analyses. Secondly, networks like the one in Figure 2 enable us to formulate empirical hypotheses about the conceptual structure of the reflexive-middle-passive category. The Norwegian collective is a case in point. As can be seen from Figure 2, it is not directly related to the rest of the reflexive-middle-passive category, because the intermediate situation type of reciprocals arguably does not display the heavy marker *seg* in Norwegian. Given that the network is a potential model of the conceptual structure of a category, one would expect *seg* to occupy a spatially coherent area in the network. But, as we have seen, this is not the case for the collective. One might then think of various possibilities. For example, the spatial incoherence might in principle indicate a situation where a diachronic change is likely to occur, although this is improbable, since similar patterns are attested in other languages with no signs of diachronic instability (Kemmer 1993:100). An alternative might be to alter the network proposed in Figure 2, e.g. by assuming a direct connection between collective and reflexive situations. We shall not pursue this issue; our point is to illustrate the heuristic merits of the networks of CG – they force us to reconsider linguistic data and improve on our analyses.

Table 3. Characterization of reflexive, middle and passive.

	Reflexive	Middle	Passive
(a) Direct affectedness of chief participant	+	+	+
(b) Degree of elaboration of events	intermediate	low	intermediate
(c) External agent	–	–	+
(d) Volitionality of chief participant	+	+	–
(e) Salience of originator of event	high	low	low

5. REFLEXIVE, MIDDLE AND PASSIVE – THE NECESSITY OF INSTANTIATION

Having noted the compatibility of CG networks with semantic maps, we shall now see that CG goes beyond the typological tradition, in that the instantiation relation allows us to integrate the cover terms “reflexive”, “middle” and “passive” in the networks. This backs up our general claim that CG is valuable in cross-linguistic comparison.

It is useful to base further discussion on sentences (19) to (21) (also listed as (1b), (7b) and (17b) above), which provide good examples of reflexive, middle and passive voice. Following Kemmer (1993:201ff.), we may characterize these three cover terms by means of five features listed in Table 3. The three situation types are similar in that the chief participant is directly affected by the verbal action. In the case of reflexives and middles like (19) and (20), the affectedness is due to the agent subject being identical to the patient of the action, whereas in the case of the passive in (21), the patient is the subject of the sentence.⁶

(19) Prototypical reflexive

On nenavidit sebja. ‘He hates himself.’ (Haiman 1983:804)

(20) Middle (grooming)

Ja každyj den’ brejus’. ‘I shave every day.’

(21) Passive

Takie knigi čitajutsja širokimi massami. ‘Such books are read by the broad masses.’ (Janda 1993:313)

Kemmer (1993) introduces the second feature, “degree of elaboration of events”, in order to distinguish between middle and reflexive voice. The intuition behind this feature is that reflexive situations like *hating* are situations that are normally directed towards other persons or entities, whereas for middle situations like *shaving* direction towards oneself is

expected. Since in middle situations the action is normally directed towards oneself, the two participants involved are distinguished to a lesser degree. The less the participants are distinguished, the less the situation is elaborated. Kemmer arranges reflexive and middle situations on a cline ranging from transitive two-participant events to intransitive one-participant events. Reflexive situations are placed in the middle of the cline and are accordingly assigned intermediate degree of elaboration, while middle situations are placed between reflexive and intransitive situations and hence show low degree of elaboration of events. (Kemmer (1993:205) considers the passive to be "midway between a two- and a one-participant event", and we have therefore assigned the value "intermediate" as far as the degree of elaboration of events is concerned.)

Features (c) and (d) (Table 3) set the passive apart from the middle and reflexive. As opposed to these voices, the passive has an external agent insofar as the subject and the adjunct in the instrumental case are not co-referential in (21). Carrying a patient role, the subject of passive sentences like (21) is obviously not volitional. The last feature, which concerns the salience of the participant that "might be conceived of as the originator of the event" (Kemmer 1993:205), unites the passive and middle as opposed to the reflexive. Passive sentences like (21) involve demotion of the agent from subject to adjunct, and at least certain middle situations, e.g. those of emotion and spontaneous events, defocus the originator of the event in a similar way (cf. Kemmer 1993:205).

If we apply the features to the data in Table 2 in section 3, situation types 1–3 represent reflexive voice, 4 through 15 middle, and 16–18 passive.⁷ Thus we are in a position to relate the use of heavy and light markers in the two languages to the functions of reflexive, middle and passive. This is done in Table 4. On the basis of this table, generalizations about the relation between meaning and form can be made. If we take *meaning* as the starting point, we can state that both languages mark reflexive by the heavy marker and passive by the light marker, but that the languages differ in the marking of the middle voice, insofar as Norwegian displays the heavy and Russian the light marker. If we take *form* as the starting point, we can say that in Norwegian the heavy marker is a reflexive and middle marker and the light marker a passive

Table 4. The marking of reflexive, middle and passive.

	Norwegian	Russian
Reflexive	HH	H
Middle	H	L
Passive	L	L

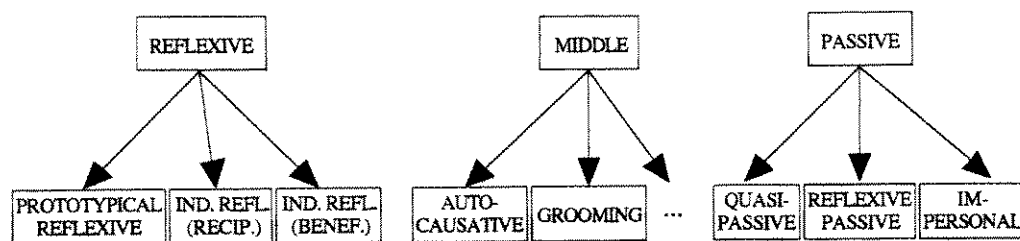


Fig. 3. Instantiations of reflexive, middle and passive.

marker, whereas in Russian the heavy marker is a reflexive marker and the light a middle and passive marker.

Having considered the relationship between situation types and cover terms, we must ask how this relationship can be modelled. The typological approach represented by Pederson (1991), Kemmer (1993) and others does not address this question, insofar as their semantic maps do not include explicit reference to the cover terms. CG, on the other hand, offers a simple and straightforward answer to the question: the cover terms can be related to the situation types by means of *instantiation*, and thus can be incorporated in the networks. Figure 3, in which the instantiation relations are represented as solid arrows, shows this. In this network, "reflexive", "middle" and "passive" represent schemas that each subsume a number of functions from the networks given in Figure 3. The figure is simplistic in that the schema "middle" subsumes more than the two schemas ("autocausative" and "grooming") and that the extension relations are excluded in order to avoid crossing lines. The latter problem would not arise in a three-dimensional representation, where situation types and cover terms would constitute different planes connected by instantiation relations. However, the simplified two-dimensional Figure 3 suffices to illustrate that CG offers a straightforward modelling of the relationship between situation types and the terms "reflexive", "middle" and "passive". In this way CG provides a welcome addition to the notional apparatus employed in the typological tradition.

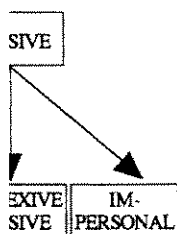
The instantiation relation also allows us to explicate the differences in the distribution of the heavy and light markers in Norwegian and Russian with regard to the schemas of "reflexive", "middle" and "passive". If we let these notions be represented by the properties given in Table 3, we are in a position to characterize the two systems in terms of the networks in Figures 4 and 5. The middle level in the networks brings out the differences between the Norwegian and the Russian reflexive-middle-passive systems: in Norwegian, the middle goes with the reflexive, whereas in Russian it goes with the passive.⁸ What we see, then, is that not only does the instantiation relation provide a means for modelling the relationship between "reflexive", "middle" and "passive" and situ-



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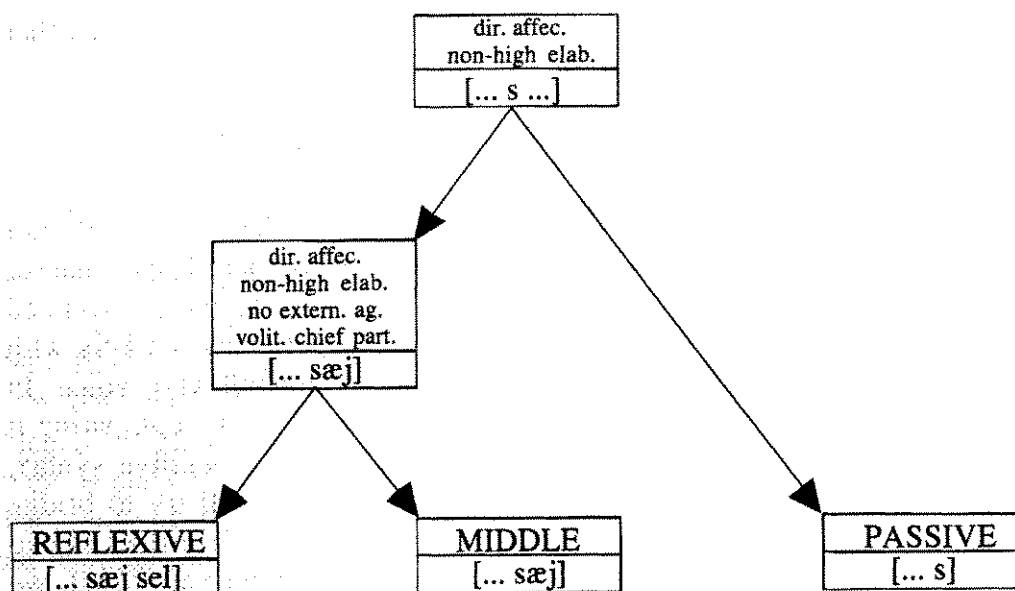


Fig. 4. Reflexive, middle and passive in Norwegian. dir. affec.: direct affectedness of chief participant. non-high elab.: non-high degree of elaboration of events. low sal. of orig.: Low salience of originator of event. no extern ag.: no external agent. volit. chief part.: volitional chief participant.

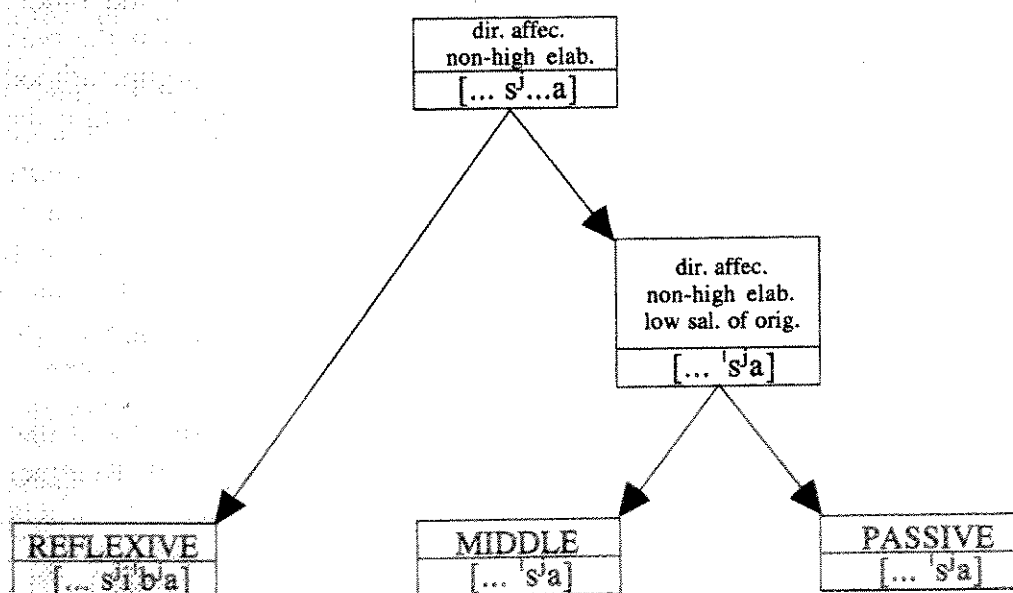


Fig. 5. Reflexive, middle and passive in Russian. dir. affec.: direct affectedness of chief participant. non-high elab.: non-high degree of elaboration of events. low sal. of orig.: Low salience of originator of event. no extern ag.: no external agent. volit. chief part.: volitional chief participant.

ation types, it also facilitates cross-linguistic comparison. This is another piece of evidence for the value of CG in typological studies.

6. NORWEGIAN *SEG* VS *SEG SELV* – THE NECESSITY OF PROTOTYPES

Although Kemmer (1993) deals with Norwegian in depth, she does not treat the distinction between what we have called the bare heavy marker *seg* and the superheavy marker *seg selv*. In section 5 we have correlated the formal distinction between bare heavy and superheavy markers with Kemmer's semantic distinction between middle and reflexive voice. In what follows we shall explore the merits of this analysis by comparing it to Hellan's (1988) classical account, couched within generative syntax, to which Kemmer does not refer.⁹ In doing this, we shall try to bridge the gap between what is often (perhaps even too often) described as two diametrically opposed "paradigms". Two points are important. First, we shall show that Kemmer's terminology is broadly compatible with Hellan's analysis, but nevertheless we argue that the semantic perspective of our analysis allows us to go beyond the scope of Hellan's analysis. Our second main point will be that our analysis supports the theoretically important notion of "prototype".

Informally stated, the central idea in Hellan's (1988:69) analysis is that *seg selv* occurs whenever the anaphor and its binder are co-arguments, i.e. arguments of the same head, whereas *seg* occurs elsewhere.¹⁰ Thus, in (22) *seg selv* is obligatory, because both anaphor and binder (*Jens*) are arguments of the verb *hate* 'hate'. By contrast, *seg* is the only option in (23); in this sentence, the requirement of co-argumenthood is not met, since the anaphor is an argument of *hate* 'hate', while the binder (*Jens*) is not.

(22) *Jens hater *seg/seg selv*. 'Jens hates himself.'

(23) *Jens_i ba Ola hate seg_i/*seg selv_i*. 'Jens asked Ola to hate him.'

The question now arises as to how this analysis handles sentences like (24), which represent middle voice in the terminology of Kemmer (1993).¹¹ On the basis of the (superficially) parallel sentence (25), where the subject and object are obviously both arguments of *barbere* 'shave', the occurrence of *seg* in (24) seems mysterious. Hellan's (1988:107ff.) analysis, which is elaborated in great detail, is to assume a lexical process that deletes the theta role of the object. While in (25) the verb is associated with two arguments, then, it has only one argument in (24), as the object has lost its theta role. Since there is only one argument pre-

er sent in (24), the criterion of co-argumenthood is not met, and the occurrence of *seg* (not *seg selv*) is predicted.

(24) Jens barberer seg/*seg selv. 'Jens shaves.'¹²

(25) Jens barberer Hans. 'Jens shaves Hans.'

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At first glance, Hellan's syntactic analysis in terms of co-argumenthood may seem very different from the analysis we have proposed, but in fact the difference is less drastic than one might think. Recall that the distinction between reflexive and middle depends on Kemmer's criterion "degree of elaboration of events" (cf. Table 3). In the middle voice the event is elaborated to a low degree in that the participants are less clearly distinguished, since in the relevant situations the action is normally directed towards the self. This seems to correspond to Hellan's co-argumenthood requirement, according to which middle voice sentences do not have two full-fledged arguments. Given this correspondence, we are dealing with a case where two very different traditions have independently produced very similar analyses, spelt out in very different terms. Hopefully, the present study may contribute to bridging the gap.

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he Despite the similarity, there is a clear difference in perspective between Hellan's analysis and the analysis we propose. Whereas Hellan's main concern seems to have been a maximally precise statement of the syntactic distribution of *seg* and *seg selv*, we have focused on the semantics of middle voice verbs. In keeping with general assumptions in CG, we believe the syntactic distribution to be motivated by semantic properties. Thus, we think that only by relating syntactic distribution to meaning do we come close to an explanation of the observed patterns. Central to our analysis are questions like what kinds of verbs are involved in middle voice sentences, what kinds of meanings they signal and how the meanings are interrelated. Importantly, CG allows us to interrelate the relevant meanings in terms of networks like those we proposed in section 4. Against this background, it seems that our analysis enriches the classical analysis of *seg* vs *seg selv* by introducing a more elaborate semantic perspective.

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Notwithstanding this advantage, the value of our analysis nevertheless depends on its ability to yield correct predictions about the distribution of *seg* vs *seg selv*. In fact, as the analysis stands, one empirical problem is pressing. In section 5 we made the generalization that Norwegian reflexives have the superheavy marker *seg selv*. However, sentences that represent what we have referred to as "indirect reflexives with a beneficiary marker" are at variance with this generalization, since they evince the bare heavy marker *seg*, as can be seen from the examples in (26).

- (26) a. Jens bygde seg/*seg selv en gård. 'Jens built himself a farm.'
 b. Jens lagde seg/*seg selv middag. 'Jens cooked himself dinner.'
 c. Jens kokte seg/*seg selv et egg. 'Jens boiled himself an egg.'
 d. Jens fant seg/*seg selv en kone. 'Jens found himself a wife.'

One possible way out of this dilemma is to analyse Norwegian sentences like those in (26) as middle voice, not reflexive. At first glance, this move may appear completely *ad hoc*, but in fact there is independent empirical evidence that supports it. In Kemmer's (1993) terms, the reflexive voice involves a contrast, in that it denotes actions that in the unmarked case are directed towards other entities than the self. If this were the case for situations like those in (26), one would expect an object not co-referential with the subject to be possible. However, as can be seen from (27), this is generally not the case.¹³ This suggests that indirect reflexives with a beneficiary marker denote actions that are normally directed towards the self. If this is true, it might be taken as an argument that we are dealing with middle rather than reflexive voice.

- (27) a. *Jens bygde meg en gård. 'Jens built me a farm.'
 b. *Jens lagde meg middag. 'Jens cooked me dinner.'
 c. *Jens kokte meg et egg. 'Jens boiled me an egg.'
 d. *Jens fant meg en kone. 'Jens found me a wife.'

In order to make the sentences in (27) acceptable, the indirect objects can be replaced by prepositional objects, as in (28). Since these sentences allow a non-co-referential object, one would expect a co-referential prepositional object to take the form of the superheavy marker *seg selv*, not the bare heavy *seg*. As can be seen from (29), this prediction is borne out. Consequently, it seems that substitution by non-co-referential objects allows us to draw the subtle distinction between reflexive and middle voice in these Norwegian cases on a principled basis.

- (28) a. Jens bygde en gård til meg. 'Jens built a farm to me.'
 b. Jens lagde middag til meg. 'Jens cooked dinner to me.'
 c. Jens kokte et egg til meg. 'Jens boiled an egg to me.'
 d. Jens fant en kone til meg. 'Jens found a wife to me.'

- (29) a. Jens bygde en gård til seg selv/*seg. 'Jens built a farm to himself.'
 b. Jens lagde middag til seg selv/*seg. 'Jens cooked dinner to himself.'
 c. Jens kokte et egg til seg selv/*seg. 'Jens boiled an egg to himself.'

- d. Jens fant en kone til seg selv/*seg. 'Jens found a wife to himself.'

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Arguments based on the (im)possibility of substitution of non-co-referential objects are well established, e.g. the same reasoning is used by Hellan (1988:106ff.). Nevertheless, its implications for our analysis are not trivial, because the treatment of indirect reflexives with a beneficiary marker as middle voice does not carry over to Russian. Russian treats them as reflexive, not middle, since they take the heavy marker and accept an object that is not co-referential with the subject (cf. (30)). Our analysis, then, suggests that one language may treat a certain situation type as middle, whereas in another language the same situation type is construed as reflexive. As a consequence, the terms "reflexive" and "middle" acquire slightly different meanings for each language. In terms of Kemmer's criterion of elaboration of events, "reflexive" in Norwegian presupposes a higher degree of elaboration than in Russian. This arguably makes cross-linguistic comparison difficult. It might even look like we are changing the rules before the game is over: having started out with universal definitions of "reflexive" and "middle", we are now assuming somewhat different definitions for each language.

- (30) Ivan postroil sebe/mne fermu. 'Ivan built himself/me a farm.'

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However, we would argue that this problem is less fatal than it might seem; it is, in fact, a commonplace problem in typology. It has been felt to be particularly pressing for notions like "subject", "object", "noun" and "verb", for which no universally valid definitions are easily given. The commonly accepted solution to the problem seems to be in terms of prototypes. Although categories like "subject" may cover slightly different entities in different languages, there is a prototypical core meaning of the notion, which is universal and makes cross-linguistic comparison possible (cf. e.g. Comrie 1989:106ff., Croft 1990:11ff.). It is not surprising that complex categories like "reflexive" and "middle" behave in the same way as e.g. "subject". What is important is to distinguish carefully between the universal and language-specific uses of a term.

Although the problem is classical, it is nevertheless especially interesting in the theoretical context of the present study. As pointed out in section 1, categories organized around prototypes have received immense interest in cognitive linguistics, and CG networks offer a simple, straightforward and well-integrated way of representing prototypicality in terms of extension relations. This makes CG particularly well suited to handle problems of the type discussed in this section. Indeed,

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provided that the analysis we have pursued in this section is correct, it offers a neat illustration of the necessity of prototypes in linguistics.

7. COMPETITION AND MARGINAL CASES: THE NECESSITY OF PROTOTYPICALITY, EXTENSION AND ENTRENCHMENT

According to Table 4, each voice displays a heavy marker, a light marker or no marker, but never both a heavy and a light marker. This is somewhat simplified; there is at least one case where light and heavy markers compete, *viz.* the middle in Norwegian. Thus, as a marker of middle voice, the light marker *-s* is fairly marginal, compared to the heavy marker *seg*. On this point, our analysis is in harmony with Kemmer (1993), but in 7.1. we shall add some arguments and two qualifications to the picture she presents. In 7.2, we go on to argue that such marginal cases are quite interesting theoretically, because the CG notions of “prototypicality”, “extension” and “entrenchment” allow us to represent the relationship between the marginal and the central marker in a straightforward way which is not easily matched by other models.

7.1. *Light Marker and Middle Situations in Norwegian*

Though quite peripheral in comparison to the heavy marker *seg*, the light marker *-s* is attested in middle functions. Several relevant verbs are listed in Table 5. In compiling this list, we have tried to make it as long as possible. The list is important to the following argument, and it is important that the list should be at least nearly exhaustive. We include all the *-s*-verbs listed in Landrø & Wangensteen (1986) and in Kemmer (1993:111, 190). We also draw on our own native speaker competence.¹⁴ Kemmer (1993:191) characterizes examples like the ones listed in Table 5 as relics that are “fossilized on a small, and decreasing, number of middle verbs”. This statement may look surprising, given that the table contains 49 verbs. Therefore, we shall add some further support for Kemmer’s view, although we shall also add two qualifications. Even if 49 items may at first glance appear to be a considerable number, one must bear in mind that this is an essentially closed list (whereas the construction with *seg* as a middle marker is productive), and that Landrø & Wangensteen (1986) list some 4800 verbs. More importantly, however, we would like to advance the following three arguments for the marginality of *-s*. First, most of the examples where *-s* does function as a middle marker are stylistically marked, *i.e.* they have a literary or archaic flavour, according to our intuition. For example, *gantes* and *munnhogges* are hardly possible in our speech, except, perhaps, in jest. In fact, even a dictionary more than 40 years old (Knudsen & Sommerfelt 1937–1957) characterizes half of the verbs in Table 5 as stylistically marked, using such labels as “literary”, “dialectal”, “archaic” or “rare”.¹⁵

Table 5. -s as a middle marker in Norwegian.

Situations and examples of verbs

- (a) Natural collective situations
enes 'agree', *forenes* 'join', *flokkes* 'flock', *følges* 'accompany each other', *omgås* 'meet with (socially)', *samles* 'gather'
- (b) Natural reciprocal situations
gantes 'joke with, flirt with', *kappes* 'compete', *kives* 'quarrel, fight', *munnhogges* 'quarrel', *møtes* 'meet', *ses* 'meet; see each other socially', *skilles* 'part, divorce', *skjennes* 'quarrel', *slåss* 'fight', *snakkes* 'see each other socially', *strides* 'fight', *tales* (ved) 'talk', *treffes* 'meet (by chance)'
- (c) Autocausative
ferdes 'travel'
- (d) Mental events
blyges 'be shy, be ashamed', *føles* 'feel', *høres* 'sound, appear', *kjennes* (ved) 'know, be willing to accept as one's own', *leies* 'be fed up with', *lenges* 'long for', *less/lest* 'pretend', *minnes* 'remember', *skjemmes* 'be ashamed', *synes* 'think, consider', *tekkes* 'please', *trives* 'thrive' (*stortrives* 'thrive, enjoy oneself a lot', *mistrives* 'feel uncomfortable', *vantrives* 'feel uncomfortable'), *undres* 'wonder', *vemmes* 'feel disgusted', *ynkes* 'pity'
- (e) Spontaneous events
aldres 'become older', *dages* 'become day', *eldes* 'grow old', *grønnes/grønkes* 'become green', *modnes* 'become mature, ripen', *somres* 'become summer', *times* 'happen', *vintres* 'become winter', *våres* 'become spring', *ynges* 'become younger', *åres* '(of corn) become ripe'

Secondly, most of the examples listed in Table 5 are of very low token-frequency. Heggstad (1982) gives frequency figures for Bokmål, based on journalese. In his list of the 10,000 most frequent words in Bokmål, 31 of our 49 verbs are simply absent.¹⁶ In an additional couple of cases, the word forms listed by Heggstad, who does not distinguish between homographs, should probably not be interpreted as verbs.¹⁷ To the extent that the verbs in Table 5 are literary, their frequency should be higher in journalese than in spoken language. If there is such a thing as "natural speech", then, the frequency of -s as a middle marker ought to be even lower there than Heggstad's figures indicate.

Thirdly, even with the few verbs in Table 5, -s is not totally dominant. In some cases, alternative expressions with the heavy marker *seg* are possible, e.g. (with collective meaning) *flokke seg* 'flock', *samle seg* 'gather' are possible alongside *flokkes*, *samles*. In some other cases, expressions without any marker of middle voice are possible. For example, *dage* 'become day', *modne* 'become mature, ripen' and *våre* 'become spring' are possible along with *modnes*, *dages*, *våres*. Synchronic variation is a standard symptom of diachronic change, and we take this variation to be a sign of the instability of the middle marker -s in present-day Norwegian. By contrast, in the central domain of the light marker in Norwegian, viz. the passive, where -s is productive, no compe-

tition between *-s* and *seg* is found: there, *-s* is productive, and *seg* is not found at all.

In short, Kemmer's characterization of *-s* seems basically correct. As a middle marker, it is a "relic" in the sense that it is an element that is being lost. Nevertheless, Kemmer's characterization may need some qualification, as it may obscure the interesting differences found within the group listed in Table 5. Not all these verbs are infrequent or stylistically marked. In fact, some are of high frequency, belong to everyday colloquial language and show no sign of losing ground. Examples include *slåss* 'fight', *synes* 'think, consider' and *trives* 'thrive'. Interestingly, these verbs display many of the standard criteria of lexicalization. Some do not correspond to any morphologically simplex verb without *-s* (e.g. *synes*), or, if a corresponding simplex verb is found, the verb with *-s* may have an irregular phonological relationship with the simplex (e.g. *slåss* has a short vowel where *slå* has a long one), or an irregular semantic relationship with the simplex (e.g. *trives* 'thrive'; the semantic link to *trive* 'catch, grasp' is obscure). Productive markers, by contrast, are well-known cross-linguistically to make a fairly regular phonological and semantic contribution to a simplex (see e.g. van Marle (1988:147), who argues that "semantic coherence" should be considered a requisite for morphological productivity).

There is another qualification to be made as regards the label "relic". It seems, somewhat surprisingly, that the middle marker *-s* displays some productivity. Consider the following quotation from a novel from 1911:

- (31) Vi traff sammen på Mysusæter for tre år siden 'We met at M.
(place-name) three years ago'.¹⁸

Today, *treffe sammen* seems obsolete – the idiomatic expression would be *treffes*. Assuming that what gains ground is productive, we must conclude that even the middle marker *-s* in Norwegian has displayed some productivity in this century. The verb *treffes* is certainly not becoming obsolete today; it is quite frequent and stylistically unmarked. But it does not show any signs of lexicalization, either. Its phonological relation to the simplex *treffe* is quite straightforward, and there is nothing opaque in the semantics. Thus, this is a sign of some productivity on the part of the middle marker *-s*.

To conclude, we support Kemmer's analysis that *-s* is becoming a "relic" as a middle marker, but with two qualifications. We have argued that the case of *treffes* suggests some productivity for *-s* as a middle marker. Moreover, we have shown that the development towards relic status goes along two very different paths: the majority of verbs in Table

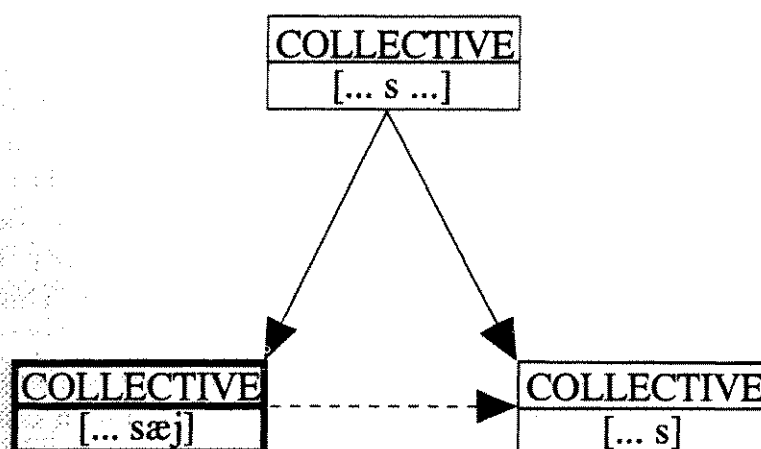


Fig. 6. Norwegian collective.

5 is growing obsolescent. A minority, by contrast, is on the verge of lexicalization. These verbs are becoming simplexes, morphologically speaking. This means that *-s* will cease to be a marker of middle voice, synchronically.

7.2. Marginality: prototypes, extension and entrenchment

We have seen in 7.1. that light markers are attested in middle situations in Norwegian, but only marginally; the middle area is dominated by the heavy marker. However, in saying that one marker is found in an area dominated by another one (such as the Norwegian light marker in the middle area), we have begged an important methodological question, namely how many instances it takes for a language to “have” a category. By traditional structuralist principles, one instance is enough; as soon as there is one single example of a certain form–meaning pair in a language, this language posits a certain category. There is much to be said for this view, but we still wish to distinguish between productive and widespread patterns, on the one hand, and relics on the other. The CG notions of entrenchment and prototypicality are useful here. Again, the Norwegian collective provides an illustrative example.

The main pattern in Norwegian is to mark collective situations by the heavy marker *seg* as in *flokke seg* ‘flock’, *samle seg* ‘gather’ and *blande seg* ‘merger’, but the light marker is attested on a small and restricted set of verbs, e.g. *flokkes* ‘flock’ and *samles* ‘gather’. This situation is not reflected in the network proposed in Figure 2 in section 4 above, but it can be accounted for in CG. One might consider the heavy marker the prototypical subcategory of the Norwegian collective, and the most entrenched one. One might then assume an extension relation to hold between it and the peripheral subcategory of the light marker. The situa-

tion is depicted in Figure 6. The representations are admittedly simplistic, but they suffice to show that CG posits means for accounting for the different status of productive and widespread patterns, on the one hand, and relics on the other. The CG analysis not only shows that the two Norwegian middle markers are of unequal status; their similarity is also depicted in a relatively straightforward way. Extension, as defined in section 2, may be referred to as a relation of partial similarity. Phonologically, *-s* and *seg* are similar, but they are not identical. This will be important in what follows.

Having considered how the relation between the two Norwegian middle markers can be captured in CG, we may now ask how it can be captured in other models. More specifically, how can the difference in productivity be captured without losing the generalization that the two markers are somehow related? In order to capture the intuition that some markers are peripheral and others central, one common strategy within contemporary linguistics is to assign marginal cases (like the middle marker *-s*) to the lexicon and central cases (like the middle marker *seg*) to the grammar. Normally, the lexicon–grammar distinction is thought to be absolute. There are different conceptions of the lexicon; one extreme is represented by Di Sciullo & Williams (1987), who take the lexicon to be a mere list of irregularities. By such assumptions, it becomes a contradiction in terms to look for generalizations covering both what belongs in the grammar (*seg*) and what belongs in the lexicon (middle *-s*). The reason is that by the above definition, the lexicon should not be amenable to any generalization. In other words, once *-s* has been relegated to the lexicon, it is outside the grammarian's scope, and the similarity to *seg* cannot be stated.

In order to rectify this problem, one might relax Di Sciullo & Williams's (1987) strict definition of the lexicon by introducing some sort of lexical redundancy rules. Verbs like *treffes* and *møtes* would still have to be listed in the lexicon, then, but lexical redundancy rules would allow us to capture the generalization that a number of verbs in *-s* have middle semantics. However, it still remains to accommodate the fact that the light and heavy markers are phonologically similar, and it is far from clear how this can be done. By contrast, the CG solution looks relatively straightforward. In CG, we do not postulate an absolute split between grammar and lexicon. Rather, the model allows us to operate with different degrees of entrenchment (compare section 2): *seg* is a much more entrenched middle marker than is *-s*. However, we need not assume that the two belong to different "modules"; the difference of entrenchment is one of degree and not of kind. Thus, CG can at the same time show both the difference in status, and what the two elements have in common.

It is the notion of entrenchment that enables us to avoid a sharp dis-

inction between lexicon and grammar. This is useful in cases where productivity appears to be a gradient and not a simple binary dichotomy. Now, the view that productivity is a cline is common in the literature (e.g. Bauer 1988: ch. 5), and the Norwegian middle marker *-s* looks like a case in point. Recall from section 7.1. our discussion of example (31), *vi traff sammen på Mysusæter for tre år siden* 'we met at M. (place-name) three years ago'. As pointed out there, the fact that *treffe sammen* has been replaced by *treffes* shows some productivity of middle *-s*. This fact cannot be accommodated if productivity is seen as a simple binary dichotomy, since other criteria indicate that as a middle marker, *-s* is losing ground. If what is lexical should be totally unproductive, middle *-s* does not belong squarely in the lexicon.¹⁹ If what is grammatical should be productive, middle *-s* clearly does not belong there, either. We avoid such problems in CG: it does not follow from the fact that some particular linguistic unit has a low degree of entrenchment that the productivity must be zero.

To summarize, we have argued that within CG, we may capture the different status of the two Norwegian middle markers without losing the generalization that the two are formally similar. The notion of similarity will be important in the following section as well, though there we shall turn from the relationship between central and marginal markers of the *same* voice to the relationship between central markers of *different* voices. The perspective will shift from the issue of grammar and lexicon to that of morphological theory.

8. SIMILARITY – THE NECESSITY OF EXTENSION IN A MORPHOLOGICAL PERSPECTIVE

The Russian heavy reflexive marker *sebja* and the light middle marker *-sja* are similar in both form and meaning, but they are identical in neither. This can be captured by the CG notion of extension relations, analogous to Figure 6 in section 7.2. The same holds for the Norwegian heavy middle marker *seg* and passive light marker *-s*. We shall now argue that more well-established morphological models do not do justice to the relation between Russian middle marker *-sja* and reflexive *sebja*. The reason is that many models lack anything equivalent to the notion of "extension". Thus, we find another argument in favour of CG in general, and the notion of "extension" in particular.

Given the current wealth of models in the morphological marketplace, it is impossible to discuss this issue in light of each and every one. Accordingly, we shall restrict ourselves to two main types, viz. "morpheme-based" and "word-based" ("realizational") models. In morpheme-based accounts, Russian middle *-sja* and reflexive *sebja* are sometimes described as two allomorphs of the same morpheme (e.g. Croft

1990:226). Unfortunately, this description looks untenable. The reason is that morphemes, being minimal signs, are minimal "sames" of form and meaning.²⁰ As for form, *-sja* and *sebja* may perhaps be described as "sames" if one assumes an extremely powerful phonological framework in which *-sja* can be derived from *sebja* synchronically. This move would be controversial, to say the least. What is even worse is that the semantic problem remains: the reflexive and middle simply are not "sames" with respect to meaning. Thus, *-sja* and *sebja* cannot be considered allomorphs of the same morpheme.

The obvious alternative in a morpheme-based model is to consider *-sja* and *sebja* different morphemes, but the equally obvious problem is that *-sja* and *sebja* then emerge as completely unrelated. In other words, any similarity between *-sja* and *sebja* becomes accidental under this analysis. Therefore, this alternative must be abandoned. Thus, a morpheme-based model does not allow us to capture the relationship between *-sja* and *sebja*, or, more generally, relations of similarity.

In a word-based model, one might try to model the relationship by analysing *-sja* and *sebja* as different exponents of one and the same morphosyntactic feature (like, for example, different present tense endings). The problem is that exponents of one and the same morphosyntactic feature are normally assumed to mean the same thing. As noted above, *-sja* and *sebja* do not mean the same thing. Consequently, they are not analogous to different exponents of one and the same morphosyntactic feature.

There is no need to discuss any other word-based alternatives. The reason is that *-sja* is an affix, *sebja* is a word. In consequence, they can hardly be adequately related in a word-based model, as word-based models presuppose that words and affixes are fundamentally different.²¹ (Morpheme-based models actually fare better in this respect.) In a word-based model, an affix such as *-sja* must be introduced by a morphological rule.²² But one cannot claim, within a word-based model, that a full word such as *sebja* is introduced by a morphological rule; full words are introduced by the syntax. The upshot of this is that the relationship between *-sja* and *sebja* cannot be captured in a word-based model, either.

Needless to say, the relation between the heavy reflexive marker *sebja* and the light middle marker *-sja* has long been acknowledged in Russian grammars. Our point is that neither morpheme-based nor word-based models seem useful when it comes to capturing the relationship explicitly. The reason is that the relationship between *-sja* and *sebja* is one of similarity: we are dealing with elements that are similar in both form and meaning, but identical in neither. Traditionally, both morpheme-based and word-based models restrict themselves to the notion of iden-

tity, although this restrictiveness is seldom made explicit (see, however, Wurzel 1989:209, 1990:87). Consequently, cases like Russian *-sja* and *sebja* are difficult to capture within both "morpheme-based" and "word-based" models. However, our discussion of *-sja* and *sebja* suggests that relations of similarity are also important in the grammar, and we have shown that such relations can be captured adequately by means of a CG apparatus.²³

9. CONCLUSION

In conclusion, we would like to reiterate the main theoretical and empirical contributions of the present study. As for theory, we have argued that CG is valuable in typological research. CG is broadly compatible with the notional apparatus employed in the typological tradition represented by Kemmer (1993) and others, but in several respects CG goes beyond what the typological tradition has to offer:

- The notion of "instantiation" allows us to capture the relation between situation types and notions like "reflexive", "middle" and "passive" in a more explicit way (section 5).
- The notion of "prototype" allows us to account for different encodings of one and the same situation type in different languages (section 6).
- The notion of "entrenchment" allows us to capture satisfactorily the relationship between marginal and productive markers (section 7).
- The notion of "extension" allows us to accommodate relationships of similarity (not identity) in a fully satisfactory way (sections 7 and 8).

Our contribution to the empirical study of Norwegian and Russian is to produce an inclusive analysis of the reflexive, middle and passive voices in the two languages. Much of the data have been discussed earlier in terms of generative syntax or typology, but in drawing on both traditions we have tried to get the best of two different worlds. In particular, the present study

- provides a more comprehensive analysis of Russian than is available in current literature (sections 3–5).
- offers a more detailed investigation of Norwegian *-s* as a marker of middle voice than does Kemmer (1993) (section 7).
- incorporates the distinction between Norwegian *seg* and *seg selv*, which is not treated by Kemmer (1993). We have coined the term "superheavy marker" for the latter, and thereby offered an improvement on the existing terminology (sections 3–5 and, especially, 6).
- provides arguments for treating the indirect reflexives with recipient and beneficiary arguments as two distinct situation types (section 3).

Many linguists are sceptical towards CG for various reasons, and this paper may not have convinced them all. However, if we are right in claiming that the notions of "instantiation", "prototype", "entrenchment" and "extension" are necessary, these linguists will have to consider whether their own theoretical and descriptive apparatuses offer anything equivalent and equally useful.

NOTES

- 1 This paper was presented at the 16th Scandinavian Conference of Linguistics in Åbo/Turku, Finland, November 1996, and at the seminar "The verb in Cognitive Grammar" in Gran, Norway, June 1998. We are grateful to the audiences at both conferences for many valuable comments. We also thank Östen Dahl, Staffan Hellberg, Ron Langacker, Tomas Riad, Jan Svanlund, Trond Trosterud and two anonymous NJL referees for stimulating remarks on earlier versions of the article. Needless to say, none of these persons carry any responsibility for the contents of the article.
- 2 Readers well versed in Cognitive Grammar may skip this section and go straight to section 3.
- 3 The relevant psychological and linguistic literature is discussed at length by Lakoff (1987). See also Taylor (1995).
- 4 Whether *-sjå* is an affix or a clitic is disputed. We follow Schoorlemmer (1997) and Nessel (1998a, b) who conclude that *-sjå* is best regarded as an affix. It is worth mentioning that *-sjå* shows some allomorphy, but since allomorphy is irrelevant for present purposes, the affix will be referred to as *-sjå* throughout the paper. The Norwegian heavy marker is inflected for number and person, but in the table we give only the 3rd person singular/plural form. There is also a possessive form, *sin*, which will not be discussed in the present paper. Full paradigms are given in Hellan (1988:60).
- 5 When no reference is given, Russian examples have been checked with a native consultant. Some of the Norwegian examples are taken from the literature, but in most cases we rely on our own native speaker competence. In some examples the Norwegian heavy marker is *meg* (1st person singular) and *deg* (2nd person singular). The Russian light marker in some examples occurs in its post-vocalic form *-s'*. Throughout the paper, Russian examples are cited in orthography transliterated according to the Scando-Slavica system.
- 6 It is debated in the literature whether affectedness is really an appropriate label. Dimitrova-Vulchanova (1996:162f.) is sceptical about Kemmer's notion of affectedness in connection with the reflexives: "It is highly disputable whether being affected by the act in question can be assumed for the elements encoded as subject". However, Dimitrova-Vulchanova accepts Kemmer's point about "low elaboration".
- 7 As far as indirect reflexives with beneficiary markers are concerned, we shall modify this statement in section 6 below and argue that they are in fact construed as middle situations in Norwegian. At this point, however, this modification is of no relevance.
- 8 Our analysis in Figure 5 of *-sjå* as signalling low salience of the originator of the event is in harmony with an analysis presented by Adger Williams, who characterizes *-sjå* as "a device that enables the speaker to bring an entity into focus; i.e. to talk about it, without having to be distracted by the mention of other entities" (Williams 1993:181).
- 9 The distribution of *seg* vs *seg selv* is a much debated problem in generative treatments of Scandinavian syntax (cf. e.g. Hellan 1988, Hestvik 1992, Dalrymple 1993 and references therein). We shall restrict ourselves to Hellan's (1988) classical analysis.
- 10 We here ignore other anaphors in Norwegian like *ham* and *ham selv*, which are irrelevant for the present discussion.
- 11 Hellan (1988:107) refers to cases like (24) as "non-argument reflexives".
- 12 The superheavy marker is possible if a contrast is involved: *Frisøren barberer seg selv, ikke kunden* 'The barber shaves himself, not his customer'. In sentences like this, the action is directed towards the self, contrary to our expectations. Therefore they show a

high degree of elaboration of the event in Kemmer's (1993) terminology, and are accordingly examples of reflexive rather than middle voice. Hence, they are not counterexamples to the generalization that the Norwegian reflexive has the superheavy marker *seg selv* and the middle the bare heavy *seg*. Notice that Russian has the heavy marker *sebja* in sentences involving a contrast, thus behaving in the same way as Norwegian: *Parikmacher breet sebja, a ne klienta* 'The barber shaves himself, not his customer'. This pattern seems to be common across languages (Haiman 1983, Kemmer 1993, Manney 1998).

- 13 There may be some exceptions to this generalization, since *skaffe seg* 'acquire' combines with an object that is not co-referential with the subject. There is both idiolectal and dialectal variation on this point (Faarlund et al. 1997:729). However, we shall not go into this, as the dialect presently under study is standard Bokmål.
- 14 One of the authors of this study had never even encountered the verb *less/lest* in Bokmål before this study was undertaken; yet we have included it for the sake of completeness. The verb *gledes* 'be, become glad', mentioned by Kemmer (1993:190), is not included in the list, however, because this verb cannot be given a middle interpretation in present-day Bokmål, in our opinion. The following four verbs are not easily placed in any group mentioned in Table 5: *hanskes* 'deal with', *dras* 'have to deal with', *lykkes* 'succeed' and *mislykkes* 'fail'. Notice that in some cases it may be difficult to distinguish between collective and natural reciprocal situations, but for present purposes this problem is irrelevant. For the purposes of a larger syntactic study, it might be interesting to consider all the verbs in Table 5 in whole sentences. However, our list is a background for morphological and (lexical) semantic discussion, and we consequently disregard syntactic contexts.
- 15 To wit, the following verbs: *aldres, blyges, dages, eldes, ferdes, flokkes, forenes, følges, gantes, grønnes, kives, leies, less, minnes, munnhugges, skjennes, somres, strides, tales ved, tekkes, times, undres, ynges, and åres*. It may seem odd that our claims about these verbs being archaic are supported by an old dictionary (Knudsen & Sommerfelt 1937–1957), and not by a fairly recent one (Landrø & Wangensteen 1986). The reason is certainly not that these verbs have become more common, but that (as Wangensteen informs us (pers. comm.)) the editors of Landrø & Wangensteen (1986) have chosen to use fewer stylistic labels in general.
- 16 To be precise, the following: *aldres, blyges, dages, eldes, flokkes, forenes, gantes, grønnes/grønkes, kappes, kives, kjennes, leies, lenges, less/lest, mistrives, modnes, munnhogges, omgås, skilles, skjennes, somres, stotrives, strides, tales, tekkes, vantrives, vemmes, vintres, ynkes, ynges, and åres*.
- 17 This holds for *enes* and *times*, which are probably combination nouns and clitics. In a more comprehensive frequency dictionary for Nynorsk, Vestbøstad (1989), where homographs are distinguished if they belong to different word-classes, the cognates of *enes* and *times* are not listed.
- 18 The example is from Sigrid Undset's breakthrough novel, *Jenny*, part 1, ch. 1. Undset is often praised for her life-like dialogue, from which this example is taken.
- 19 One might try to dismiss this argument by assuming that there are two homonymous -s suffixes, one productive (as in *treffes*), and one unproductive (as in *gantes*). If both suffixes are middle markers, however, it is implausible to treat them as homonyms, and it is equally implausible to distinguish between them only on the basis of their productivity (which is the very fact the distinction is supposed to explain).
- 20 Admittedly, there are many definitions of morphemes. Mugdan (1986) finds at least thirteen different ones in the literature, and Matthews (1993:51–110) shows at great length how the term has been used in various ways in the American tradition. While we cannot do justice to this issue, the definition we use is classical and reasonably close to most understandings.
- 21 The idea that there is a fundamental difference between words and affixes has also been questioned by Carstairs-McCarthy (1994) on semantic grounds.
- 22 It is immaterial whether this rule is called "morpholexical rule", "rule of exponence" or something else.
- 23 On the importance of similarity in grammar, see also Enger (1998).

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