ON SWEDISH FUTURE CONSTRUCTIONS

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This paper is a corpus-based investigation of three Swedish constructions that are used to express futurity. The method of collostructional analysis (Gries and Stefanowitsch 2003) is applied to constructions with the auxiliaries ska 'will', skall 'shall', and komma 'come', which are future markers that have grammaticized to varying degrees. The aim of this paper is to investigate semantic differences between constructions with these auxiliaries. By analyzing the main verbs that co-occur with a given auxiliary, it can be statistically assessed what verbs are significantly attracted to the construction. It thus becomes possible to analyze the constructional semantics in terms of co-occurring lexical material. Conversely, it is also insightful to consider what verbs occur significantly less often than chance frequency with a given auxiliary. These procedures allow a fine-grained semantic description in both positive and negative terms.

1. INTRODUCTION.

This paper is a corpus-based investigation of Swedish constructions that are used to express futurity. In her monograph on Swedish future constructions, Christensen (1997:9) characterizes her own approach as purely theoretical, but suggests that an empirical study would be useful. The present work is intended to fulfil this function.

It is common for a language to have several grammaticized future constructions (Bybee et al. 1994:243). Swedish is no exception to this tendency. There is no morphological future construction, but futurity can be expressed periphrastically by means of the present tense in conjunction with a time adverbial, as well as with a range of auxiliaries, such as *ska* 'shall', *komma* 'come', and *tänka* 'think'.

(1) *Lena åker till Paris nästa år.*
Lena drives to Paris next year
'Lena will drive to Paris next year.'

(2) *Om några minuter ska han åka iväg.*
in some minutes will he drive away
'He will drive away in a couple of minutes.'

(3) *Blomberg kommer att inviga museet.*
Blomberg comes to inaugurate museum.the
'Blomberg will inaugurate the museum.'

(4) *Men först tänker vi bjuda er på middag!*
but first think we invite you for dinner
'But first we are going to invite you for dinner.'

A steady source of controversy in the literature on tense has been the question whether a given form actually qualifies as a future construction (Comrie 1989:51). Usually, a construction expressing futurity has a number of different uses as well. To illustrate this, a possible alternate reading of example (2) would be 'He shall drive away in a few minutes', which in some English dialects carries the meaning of obligation. In example (4), the meaning of futurity is coupled with a strong sense of intention on the part of the subject. The fact that a given language does not have a grammatical form with the sole function of future time reference could lead the researcher to deny that the language has future tense at all (see, e.g., Fleischman 1982). Linguists with a wider definition of future tense tend to arrive at the opposite conclusion, namely that there are several expressions of future tense (e.g., Bybee et al. 1994).

To avoid this controversy, the present analysis does not aim at a full explanation of the grammatical category of future tense in Swedish. Instead, it will explore meaning and use of three Swedish constructions which express, among other things, futurity. The investigated constructions consist of a future-marking auxiliary in conjunction with a main verb. The auxiliaries in question are *ska* 'will', *skall* 'shall', and *komma* 'come'. It is clear that these constructions are not an exhaustive list of future expressions in Swedish. The future markers *ska*, *skall,* and *komma* were chosen because they are generally viewed as the most common future constructions in Swedish (Teleman et al. 1999).

This paper takes the viewpoint of CONSTRUCTION GRAMMAR (Goldberg 1995) and GRAMMATICIZATION THEORY (Hopper and Traugott 1993). Within these frameworks, constructions are understood as polysemous units that have a number of conceptually interrelated functions. The present study uses the recent corpus linguistic methodology of COLLOSTRUCTIONAL ANALYSIS (Stefanowitsch and Gries 2003). Collostructional analysis measures the strength of association between lexical items and grammatical constructions, thus allowing a fine-grained semantic description of such constructions. The corpus used is the Stockholm-Umeå Corpus (SUC), which is a one-million word corpus that has been compiled in analogy to the English Brown and LOB corpora.

The aim of this paper is to investigate semantic differences between the Swedish future constructions. It has been argued on theoretical grounds that syntactic constructions, such as the English ditransitive construction, are meaningful in themselves (Goldberg 1995). Collostructional analysis allows this claim to be empirically refined. By examining the lexical items that occur within a given grammatical construction, it can be shown that some of these occur with much greater frequency than chance. On the basis of these statistical preferences, it is possible to empirically investigate the meaning of a given construction.

This paper uses the main verbs that are associated with Swedish future constructions as a basis for a semantic description of these constructions. Hopper and Traugott (1993) observe that grammaticized auxiliaries still carry some of their original meaning, a phenomenon which is called PERSISTENCE in the grammaticization literature (Hopper 1991:22). Persistence of lexical meaning can be observed in the Swedish future constructions through constructional polysemy. Besides 'futurity', these constructions frequently express 'obligation', 'volition', 'intention', or 'epistemicity'. While the polysemy of auxiliaries is a phenomenon that often evades objective description, co-occurring main verbs provide empirical evidence to flesh out the claim made by Hopper and Traugott (1993). If an auxiliary has grammaticized out of a verb of obligation, we expect it to co-occur with main verbs that semantically relate to this lexical source, even in present-day usage.

2. METHODOLOGY.

Collostructional analysis (Stefanowitsch and Gries 2003) situates itself in the framework of construction grammar (Fillmore et al. 1988, Goldberg 1995) while being a corpus-driven analysis of collocations (Sinclair 1991, Stubbs 1995, Hunston and Francis 1999).

The starting point of a collostructional analysis is the exhaustive extraction of all tokens of some grammatical construction from a corpus, such as Swedish *ska V* 'will V'. Chunks, such as an auxiliary in conjunction with a main verb, qualify as constructions in the technical sense of Goldberg (1995:4), because their meaning is not fully predictable from the meaning of their parts. But whereas Goldberg tries to characterize the meaning of constructions largely independently of the actual verbs that occur in the construction, collostructional analysis uses the collocating verbs to analyse the meaning of a given construction.

With an exhaustive concordance of a construction, it can be determined what verbs occur most frequently in that construction. Counting the examples will generate a list of verbs, which may already give a rough indication of the constructional semantics. However, a second step is necessary to establish whether a verb is actually attracted to a given construction. The overall frequency of any given verb needs to be taken into account to calculate its expected frequency inside the *ska V* construction. As some verbs are highly frequent even outside that construction, these verbs will be less distinctive for the construction than some other, less frequent verbs.

To calculate the expected frequencies of the verbs in the investigated constructions, all of their forms are extracted from the Stockholm Umeå Corpus. The observed frequencies of all verbs in the SUC and all verbs in the construction concordances can be interpreted through a statistical test of association strength, such as the FISHER EXACT test. Table 1 exemplifies the crosstabulation necessary for such a test with the main verb *vara* 'be' in the *ska V* construction.

	vara	¬ vara	ROW TOTALS
ska	108	1353	1461
¬ ska	23,986	149,807	173,793
COLUMN TOTALS	24,094	151,160	175,254

TABLE 1. CROSSTABULATION OF *SKA* AND *VARA*.

To provide the statistical test with the necessary information, all cells in the crosstable need to be filled with the respective token figures. Four pieces of information are essential. One necessary piece of information is how many instances of *ska vara* there are. A corpus search yields 108 tokens. In addition, the test needs to be told how many instances of *ska* and *vara* respectively there are in the corpus. In the SUC we find 1461 tokens of *ska*, and 24094 instances of *vara*. The fourth piece of information is the total number of verbs in the corpus. As the SUC as a whole contains 175255 verb tokens, it follows that it contains 175254 sequences of two verbs, allowing for intervening elements. These pieces of information account for the four figures in the outer corners of Table 1, and the remaining five figures can be arrived at by subtraction.

To calculate collocation strength, the four inner fields of Table 1 are fed into the Fisher Exact test. This test is more appropriate for the matter at hand than are other measures of association strength, because it does not make the assumption of normal, bell-shaped distribution. That has been identified as a shortcoming of tests such as CHI-SQUARE, as elements

in natural language data tend not to be normally distributed (Manning and Schütze 2000:175). Another advantage of the Fisher Exact test is that it can operate on very small sample sizes. When dealing with verbs in a given construction, frequencies below five are often encountered.

The methodology produces a list of verbs for each construction that are ordered according to their attraction to the construction. It thereby identifies not only those verbs that are most typical of a construction, but also verbs that are atypical of that construction. Taking into account both attracted and repelled verbs, we can characterize the construction in both positive and negative terms. It is of course possible to take these lists as input for more sophisticated statistical processing such as e.g. cluster analysis (Gries and Wulff 2005). This paper aims at a qualitative description of the Swedish future constructions which is informed by the results of a collostructional analysis.

3. SWEDISH FUTURE CONSTRUCTIONS.

In this section, the methodology outlined in the last section is applied to three Swedish constructions. Bybee and Pagliuca (1987) identify the concepts 'desire', 'obligation', and 'movement' as the most common lexical sources of future markers. Two of these sources are found in the investigated constructions.

The common modal *ska* 'will' is a shortened form of *skall* 'shall'. Both forms derive from the verb of obligation *skola*, which is etymologically related and close in meaning to English 'shall'. As will be shown, *ska* and *skall* differ semantically and pragmatically in present-day usage. The form *skall* is usually viewed as belonging to an elevated register which is used in written Swedish, while *ska* is associated with conversational register. The future auxiliary *komma* derives from the homograph motion verb *komma* 'come'. Table 2 illustrates the token frequencies of the different constructions. Expressions with *ska* constitute the most frequent type. Expressions with *skall* are almost as frequent, while the construction with *komma* is less frequently used.

auxiliary	*ska*	*skall*	*komma*
tokens	1461	1324	953

TABLE 2. TOKEN FREQUENCIES OF SWEDISH FUTURE CONSTRUCTIONS.

The following sections discuss each construction in detail, address previous work, and go through the steps of the collostructional analysis.

3.1 *SKA.*

The verb *ska* 'shall' derives from the older root *skola*. Christensen (1997: 170) characterizes *ska* as a polysemous verb which can express 'futurity', 'intention', 'obligation', and 'epistemicity', as illustrated in the following examples.

(5) *Om några minuter ska han åka iväg.*
in some minutes will he drive away
'He will drive away in a couple of minutes.'

(6) *Vad ska du göra i Berlin då?*
what want you do in Berlin then
'So what are you going to do in Berlin?'

(7) *Att patienten gett tillstånd ska antecknas i journalen.*
that patient.the gave permission shall note.PASS in journal.the
'It must be noted in the journal that the patient gave permission.'

(8) *Tony Blair ska ha gjort sin frus bästa vän, Carole Caplin, med barn.*
Tony Blair shall have done his wife's best friend Carole Caplin pregnant
'Tony Blair is said to have gotten his wife's best friend, Carole Caplin, pregnant.

The notions of 'futurity', 'intention', and 'obligation' are closely interrelated by CONCEPTUAL METONYMY. World knowledge tells us that intentions and obligations may eventually lead to future actions. Panther and Thornburg (2003:4) point out the OBLIGATION TO ACT FOR ACTION metonymy in examples like (9), which overtly expresses only an obligation but implies that the obligation actually led to action.

(9) *General Motors had to stop production.*

Similarly, the OBLIGATION TO ACT FOR ACTION metonymy may have led to the grammaticization of Swedish *ska* into a future modal, yielding examples like (5), which mainly code futurity but imply obligation.

Epistemic modality, as in example (8), is not a source of future meaning, but a development out of future meaning (Bybee et al. 1991:26ff). As future events are uncertain by nature, the semantic shift from future to probability occurs naturally in a wide variety of languages. For obligation-based lexical sources, Bybee et al. suggest a cline of semantic development with four stages. As examples (5) – (8) show, all of these meaning components are present in actual usage.

(10) OBLIGATION > INTENTION > FUTURE > PROBABILITY

There are 1461 examples of *ska* followed by another verb in the corpus. Table 3 shows the raw frequencies of the twenty most frequent verbs in this construction.

While Table 3 presents the verbs that speakers are most likely to hear in the *ska V* construction, it does not indicate whether these verbs are distinctive of the *ska V* construction. Table 4 lists the verbs that occur in the *ska V* construction according to their collostructional strength. The p-value shows strength of association, as computed with the Fisher Exact test. The lower the p-value of a given verb, the stronger it is associated with the construction. The table includes all verbs with a p-value of $p < 0.01$.

Swedish	*English*	*tokens*	*percentage*	*Swedish*	*English*	*tokens*	*percentage*
vara	be	108	7.39%	komma	come	20	1.37%
kunna	could	87	5.95%	ske	happen	19	1.30%
ha	have	66	4.52%	ge	give	16	1.10%
få	get	58	3.97%	finnas	exist	15	1.03%
bli	become	56	3.83%	försöka	try	14	0.96%
göra	do	49	3.35%	använda	use	13	0.89%
gå	go	37	2.53%	betala	pay	12	0.82%
ta	take	35	2.40%	stå	stand	12	0.82%
se	see	32	2.19%	behöva	need	11	0.75%
säga	say	21	1.44%	gälla	concern	10	0.68%

TABLE 3. RAW FREQUENCIES OF VERBS IN THE *SKA V* CONSTRUCTION.

Swedish	*English*	*p*	*Swedish*	*English*	*p*
bli	become	0.000000	åka	drive	0.000655
ske	happen	0.000000	gå	go	0.000780
göra	do	0.000001	kunna	could	0.000945
spara	save	0.000003	få	get	0.002219
betala	pay	0.000008	klara	cope	0.002333
gifta	marry	0.000015	ta	take	0.003456
försöka	try	0.000199	presentera	present	0.004402
hjälpa	help	0.000634	sluta	stop	0.009377

TABLE 4. COLLOSTRUCTIONAL STRENGTH OF VERBS IN THE *SKA V* CONSTRUCTION.

A comparison of Table 3 and Table 4 shows that the highly frequent verbs *vara* 'be', and *ha* 'have' occur in fact less often in the construction than expected, given their overall frequency. The three verbs that are most distinctive for the *ska V* construction are *bli* 'become', *ske* 'happen' and *göra* 'do', general verbs that are unspecific with regard to the event that is denoted. Unlike *göra*, the verbs *bli* and *ske* strongly prefer inanimate subjects, thus ruling out the interpretations of intention and obligation. Consider Table 5.

bli – 'become'		*ske* – 'happen'		*göra* – 'do'	
animate	*inanimate*	*animate*	*inanimate*	*animate*	*inanimate*
9	47	-	19	40	9
16.07%	83.93%	0.00%	100.00%	81.63%	18.37%

TABLE 5. ANIMATE SUBJECTS IN EXAMPLES WITH *BLI*, *SKA*, AND *GÖRA*.

The fact that the two most distinctive verbs exclusively code futurity suggests that the *ska V* construction is first and foremost a future marker, despite its pervasive polysemy. This contradicts a claim made in the literature that the meaning of *ska* is always modal and that future meaning is a secondary phenomenon (Törnudd-Jalovaara 1991:527). It is the case that many examples have modal overtones, but the data strongly suggest that future usage is not a marginal phenomenon. However, the third verb on the list, *göra* 'do', favors animate subjects and thus gives rise to interpretations in the way of intention and obligation. Of the remaining verbs, *spara* 'save money', *betala* 'pay' and *hjälpa* 'help' are strongly linked to the notion of obligation. The examples with *gifta* 'marry' all express the intention to get married. Likewise, *försöka* 'try' always conveys a future intention.

The verbs *vara* 'be' and *ha* 'have' occur in the *ska V* construction, albeit significantly less often than expected on the basis of their overall frequency. It is adequate to say that these general, highly frequent verbs are repelled by the construction.

3.2 *SKALL*.

The verb form *skall* 'shall' also derives from *skola*. The etymological relation has led researchers to reduce the difference between *ska* and *skall* to a matter of style and register (Christensen 1997:34). While the divergence of *ska* and *skall* is likely to have started as a purely stylistic difference, the corpus data suggest that these pragmatic issues have developed into substantial semantic differences. It is therefore warranted to treat *ska* and *skall* as distinct auxiliaries. Like its shortened counterpart *ska*, *skall* expresses 'futurity', 'intention', and to an even stronger degree 'obligation'. Consider the following examples.

(11) *Deng Xiaoping skall dö.*
Deng Xiaoping shall die
'Deng Xiaoping shall die.'

(12) *Skall vi åka, Kommissarien?*
shall we drive detective.the?
'Shall we drive, detective?'

(13) *Vi skall inte blint acceptera en filosofisk eller religiös tradition.*
we shall not blindly accept a philosophical or religious tradition
'We shall not blindly accept a philosophical or religious tradition.'

As in the examples with *ska*, it often cannot be unambiguously decided whether the primary meaning of an example in question is futurity, intention, or obligation. There are 1324 examples of *skall* followed by another verb in the corpus. Table 6 shows the raw frequencies of the twenty most frequent verbs in this construction.

Swedish	*English*	*tokens*	*percentage*	*Swedish*	*English*	*tokens*	*percentage*
vara	be	98	7.40%	bli	become	19	1.44%
kunna	could	82	6.19%	se	see	19	1.44%
ha	have	50	3.78%	betala	pay	18	1.36%
få	get	39	2.95%	tillämpa	apply	16	1.21%
anse	consider	31	2.34%	gå	go	15	1.13%
ta	take	26	1.96%	göra	do	15	1.13%
ske	happen	24	1.81%	komma	come	14	1.06%
finnas	exist	21	1.59%	anmäla	report	12	0.91%
ge	give	20	1.51%	pröva	prove	12	0.91%
lämna	leave	20	1.51%	använda	use	11	0.83%

TABLE 6. RAW FREQUENCIES OF VERBS IN THE *SKALL V* CONSTRUCTION.

Again, these figures have to be compared against the overall frequencies of the verbs to determine collostructional strength. Table 7 lists the verbs that occur in the *skall V* construction significantly more often than elsewhere (Fisher Exact, $p < 0.01$).

Swedish	*English*	*p*	*Swedish*	*English*	*p*
anse	consider	0.000000	vidta	begin	0.000004
ske	happen	0.000000	ordna	organize	0.000009
lämna	leave	0.000000	meddela	communicate	0.000033
betala	pay	0.000000	fördela	divide	0.000057
tillämpa	apply	0.000000	besluta	decide	0.000094
anmäla	report	0.000000	föra	lead	0.000397
pröva	examine	0.000000	avgöra	decide	0.001682
upphöra	stop	0.000000	behandla	deal with	0.001862
belasta	charge	0.000000	innehålla	contain	0.002246
gravsätta	bury	0.000000	bestämma	decide	0.003678
underrätta	inform	0.000000	ange	declare	0.005807
beakta	consider	0.000000	hjälpa	help	0.007369
avlämna	deliver	0.000000	ge	give	0.007448
avvisa	reject	0.000004	fungera	function	0.009213

TABLE 7. COLLOSTRUCTIONAL STRENGTH OF VERBS IN THE *SKALL V* CONSTRUCTION.

Taking collostructional strength into account reveals that the three most frequent verbs *vara* 'be', *ha* 'have', and *kunna* 'could', are in fact actively repelled by the construction. The most distinctive verb of the *skall V* construction is the mental verb *anse* 'consider'. The examples with *anse* all constitute legal definitions from legal and commercial texts. Like (14), all examples are in the passive voice.

(14) *I vilka fall en verksamhet skall anses som yrkesmässig anges i kap. 4.*
in what case an activity shall consider.PASS as professional declare.PASS in ch. 4
'In what case an activity is considered professional is discussed in chapter 4.'

While this usage appears highly specific and not prototypical, it is highly distinctive for the *skall V* construction. The collostructional analysis corroborates conclusions of previous accounts (Ewerth 1996, Christensen 1997) that speakers associate the construction with a formal register, in this case a legal setting. Additional evidence comes from examples with the synonym *beakta* 'consider', which behave similarly.

The second verb on the list is *ske* 'happen'. As in *ska V*, this verb tends not to occur with animate subjects. But whereas *ska* with inanimate subjects mainly codes futurity, *skall* usually expresses obligation on the part of some unexpressed agent, as in (15).

(15) *Betalning skall ske före månadens slut.*
payment shall happen before month.GEN end
'Payments must be made before the end of the month.'

The third verb is *lämna* 'leave'. Eighteen out of nineteen examples in the data display ditransitive usage. These examples are semantically very similar, coding the obligatory exchange of information. In example (16), a report must be sent from one institution to another. In the same vein, *anmäla* 'report', *underrätta* 'inform', *meddela* 'communicate' and *ange* 'declare' code communication in a formal setting.

(16) *Före den första december skall fonden lämna en årsredovisning till regeringen.*
before the first December shall foundation.the leave a year report to government.the
'The foundation shall deliver a yearly report to the government before December 1st.

As in *ska V*, we find *betala* 'pay' being attracted to the construction. A verb from the same semantic field is *belasta* 'charge'. Both verbs express the obligation of some financial transaction in the *skall V* construction. The verb *tillämpa* 'apply' also evokes a legal register when used in this construction.

3.3 *KOMMA.*

The auxiliary *komma* 'come' is regarded as the most fully grammaticized future marker in Swedish grammar, although the first attested examples are no older than the 17th century (Dahl 2000:320). Consider example (17) from 1636 (Christensen 1997:48).

(17) *Hvadh skeppen medh behörlig stycken [...] och ammunition kommer till att kosta [...]*
what ships.the with equipment and ammunition comes to INF cost
'What the ships with equipment and ammunition will cost [...]'

The meaning of the lexical source has been bleached out thoroughly, so that *komma att V* future in present day Swedish primarily codes prediction (Christensen 1997:190). Despite the high level of grammaticization, Christensen (1997:45) finds that the *komma att V* construction is

less frequent than *skola*-based futures or futurate uses of the present tense. The figures from the corpus data for *ska* and *komma att* corroborate this claim (cf. Table 1).

English *going to* future is a similar example of a motion verb grammaticizing into a future marker, but the deictic centre is reversed in the two constructions. Whereas the English construction is egocentric, the deictic centre of Swedish *komma att V* future is on the event that is going to happen. Another difference between *going to* and *komma att V* is the fact that early uses of *going to* required intention on the part of the subject. Dahl compares several European futures with verbs of coming and finds that none of these involve the notion of intentionality (2000:321). This poses a problem for a claim made in Bybee et al. (1994:270) that "all modal and movement future sources begin with human agents and move from the expression of the intentions of that agent to the expression of prediction". Even in example (17), which is a very early example, the subject is inanimate.

The *komma att V* construction does not imply either intention or obligation on the part of the subject. Neither is there an epistemic reading. The absence of the implicature of obligation can be explained through the fact that the meaning of the lexical source verb *komma* is about self-propelled motion towards some goal. The action of coming does not presuppose a physical or social force that obliges the agent to act.

There are 953 examples of *komma att V* in the corpus. Consider Table 8 for the twenty most frequent verbs and Table 9 for significantly attracted verbs (Fisher Exact, $p < 0.01$).

Swedish	*English*	*tokens*	*percentage*	*Swedish*	*English*	*tokens*	*percentage*
bli	become	59	6.19%	ge	give	13	1.36%
få	get	43	4.51%	öka	increase	12	1.26%
kunna	could	33	3.46%	ske	happen	12	1.26%
vara	be	29	3.04%	tänka	think	12	1.26%
se	see	19	1.99%	finnas	exist	10	1.05%
göra	do	17	1.78%	behöva	need	9	0.94%
påverka	influence	17	1.78%	kalla	call	9	0.94%
ta	take	17	1.78%	spela	play	9	0.94%
gå	go	15	1.57%	innebära	imply	8	0.84%
ha	have	14	1.47%	stå	stand	8	0.84%

TABLE 8. RAW FREQUENCIES OF VERBS IN THE *SKALL V* CONSTRUCTION.

Swedish	*English*	*p*	*Swedish*	*English*	*p*
bli	become	0.000000	kalla	call	0.000804
påverka	influence	0.000000	klara	cope	0.000970
öka	increase	0.000008	diskutera	discuss	0.001728
dominera	dominate	0.000020	omfatta	contain	0.001827
förändra	change	0.000025	skilja	differ	0.002510
ske	happen	0.000052	tänka	think	0.004715
spela	play	0.000220	glömma	forget	0.005444
överleva	survive	0.000273	bilda	form	0.005885
äga rum	happen	0.000415	ställa	put	0.008851
få	get	0.000710	ingå	enter	0.010884

TABLE 9. RAW FREQUENCIES OF VERBS IN THE *SKALL V* CONSTRUCTION.

Again the most frequent verb *bli* 'become' is also the most distinctive verb. As pointed out before, *bli* disprefers animate subjects. This tendency holds for the six most distinctive verbs of the *komma att V* construction. Table 10 illustrates the frequency of animate and inanimate subjects with these verbs.

bli – 'become'		*påverka* – 'influence'		*öka* – 'increase'	
animate	*inanimate*	*animate*	*inanimate*	*animate*	*inanimate*
11	52	0	17	0	12
17.46%	82.54%	0.00%	100.00%	0.00%	100.00%
dominera – 'dominate'		*förändra* – 'change'		*ske* – 'happen'	
animate	*inanimate*	*animate*	*inanimate*	*animate*	*inanimate*
2	4	0	5	0	12
33.33%	66.67%	0.00%	100.00%	0.00%	100.00%

TABLE 10. ANIMATE SUBJECTS IN EXAMPLES WITH DISTINCTIVE VERBS.

Along with the preference of inanimate subjects, we observe semantic similarities between these and other verbs in Table 9. A first group clusters around the verb *ske* 'happen'. The verbs *bli* 'become', *ske* 'happen', *äga rum* 'happen', and *hända* 'happen' form a group of general verbs denoting some event. All of these favor inanimate subjects. Example (18) illustrates this group.

(18) *All försäljning kommer därför att ske via bolaget i Tyskland.*
all sale come therefore to happen via company.the in Germany
'All sales will be handled by the company in Germany.'

A second group codes ‘change’. The verbs *påverka* ‘influence’, *öka* ‘increase’, and *förändra* ‘change’, likewise favor inanimate subjects, as they denote abstract processes developing over time. See example (19).

(19) *Datoriseringen kommer att påverka arbetsinnehållet.*
computerization.the comes to influence work.content
‘Computerization will influence the content of our work.’

A third group is about mental activity. The verbs *tänka* ‘think’ and *glömma* ‘forget’ code cognitive processes. Examples such as (20) hence require animate subjects.

(20) *Sent kommer jag att glömma en scen vid en besinstation i Skellefteå.*
late come I to forget a scene at a filling station in Skellefteå
‘I will never forget a scene at a filling station in Skellefteå.

A single verb that is distinctive of the *komma att V* construction is *spela* ‘play (a role)’. In all examples, *spela* is complemented by *en ADJ roll*, which makes it similar to the verbs in the ‘happen’ group. Similar to the examples in that group, the examples express abstract events with inanimate subjects.

(21) *Alexandria skulle därför komma att spela en underordnad roll.*
Alexandria would therefore come to play a minor role
‘Alexandria would therefore get to play a minor role.’

Interestingly, only half of the subjects in the examples with the verb *överleva* ‘survive’ are actually animate in the first place. Again, this fits with the constructional meaning of some abstract process happening.

(22) *Några av dessa plan kommer till och med att överleva sekelskiftet.*
some of these plans come even to survive century.turn.the
‘Some of these plans will survive the turn of the century.’

As for the repelled verbs, *vara* ‘be’ and *ha* ‘have’ are found significantly less often in the *komma att V* construction than expected. These highly frequent verbs express states, which clashes with the dynamic constructional meaning. The core meaning of the *komma att V* construction refers to an abstract process developing over time.

4. DISCUSSION.

The collostructional analysis has brought to light some distributional differences between the three Swedish future constructions.

The *ska V* construction typically goes along with the general verbs *bli* ‘become’ and *ske* ‘happen’, which favor inanimate subjects. These examples mainly code futurity. So despite the many modal uses of *ska*, it has to be conceded that it has become a fully grammaticized future marker. Another highly distinctive verb is *göra* ‘do’, which goes along with animate subjects and thus communicates modal meanings of obligation and intention. The verbs *betala* ‘pay’ and

spara ‘save money’ also point to the fact that the meaning of obligation, which derives from the lexical source *skola* ‘shall’, strongly persists in the *ska V* construction. It is thus inadequate to say that the meanings of intentionality and obligation have been bleached from the verb, since we find them present in a large number of examples. Rather, these meanings remain inactive when they are semantically incompatible with the subject in question.

The *skall V* construction occurs most distinctively with verbs that are used in a formal setting. The verbs in question are *anse* ‘consider’, verbs of communication, verbs of exchange of money and goods, *tillämpa* ‘apply’, and verbs of handling things that are used in a formal register, such as *vidta* ‘begin’, *ordna* ‘organize’, and *behandla* ‘deal with’. The *skall V* construction has an undertone of obligation which is also found in *ska V*, but which is much more pervasive with *skall V*. Another fact pointing to the formal register of the *skall V* construction is the high percentage of passive constructions (32.48%), which is much higher than with the other constructions, as shown in Table 11.

	ska	skall	komma
active	80.15%	64.88%	74.40%
middle	3.49%	2.64%	5.56%
passive	16.36%	32.48%	19.73%

TABLE 11. DISTRIBUTION OF VOICE IN THE FUTURE CONSTRUCTIONS.

The *komma att V* construction occurs most distinctively with a group of general verbs that require inanimate subjects and denote abstract events. A large group of co-occurring verbs describe abstract developments over time. The only coherent group of verbs that require animate subjects consists of the mental verbs *tänka* ‘think’ and *glömma* ‘forget’. The constructional meaning *komma att V* is that something abstract is going to happen, usually not planned but spontaneously. Independent evidence for this characterization is that the *komma att V* construction displays the highest percentage of middles of the three future constructions in Table 11. In examples such as (23), an event happens by itself, without any force exerted by an agent.

(23) *90-talet kommer att skilja sig betydligt från 70-talet.*
90-decade comes to differ self much from 70-decade
‘The 90s will differ a lot from the 70s.’

The main finding of this paper is hence that the investigated Swedish future constructions display an intricate division of labor. The *ska V* construction is the most general and unbiased construction with respect to animacy and state of mind of the subject. The *skall V* construction is used in formal contexts, and whenever obligation is strongly in focus. The *komma att V* construction is used for abstract processes and spontaneous events happening in the future. These characterizations largely corroborate previous findings on future constructions in Swedish (Christensen 1997, Dahl 2000), but also challenge some positions (Törnudd-Jalovaara 1991), thus demonstrating the viability of collostructional analysis as a useful empirical approach to grammaticization.

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