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The interaction between passive constructions and lexical verb constructions in Swedish

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Abstract

In this study I approach the question of passive choice in Swedish from a lexical perspective. Swedish has two types of passive, a morphological passive formed with the ending *-s* and a periphrastic passive formed with an auxiliary and the past participle of the verb. The latter passive has two variants, the *bli*-passive and the *vara*-passive with different auxiliaries (*bli* 'become', *vara* 'be'). The *s*-passive is the unmarked passive, whereas the periphrastic passive is subject to restrictions of use. The overall reasons for the choice between the two passives is well known, but a great deal of variation can be detected behind the neat general patterns. Searches in a corpus of about 40 million words reveal that only a few verbs are frequently used in more than one passive type, but even so, there are such verbs. Factors turning up behind the alternation – additional to verb meaning and type of subject – are text type, genre, semantic frame, and the dimension known–unknown for the subject. Moreover, many collocational patterns appear, and to some extent, no clear reason for a choice can be found. On the basis of these variable patterns I discuss the problems of describing constructions. What factors belong to which level of generality of the description? Is the text type or frame, for instance, a general factor or is it verb specific? Do statistical data need to be accounted for? In my study I present more questions than I have answers for. For me, with a background in lexicography, Construction Grammar is an appealing theory since it takes meaning into account; but the ambition to describe "everything" through the same formality and to include all phenomena between syntax and lexicon is a challenge.

1. Introduction

Swedish has two types of passive, a morphological passive formed with the ending *-s*, and a periphrastic passive formed with the past participle in combination with a copula verb, either *bli* 'become' or *vara* 'be' (1). The examples in (1) are not authentic, but they are created on the basis of typical occurrences. The abbreviation *Pcp* will be used for past participle in formal notations in this paper.

(1) a Hus-et bygg-de-s 1916.
house-DEF build-PRET-PASS 1916
'the house was built in 1916'

b Huset blev bygg-t
house-DEF become-PRET build- PCP-NEU
tio år senare.
ten years later
'the house was built ten years later'

c Huset var bygg-t i trä.
house- DEF be-PRET build-PCP-NEU in wood
'the house was built of wood'

The periphrastic passive consists of two variants, the *bli*-passive (1 b) and the *vara*-passive (1 c), and since this study is concerned with how the passives are used, I will – for the sake of simplicity – treat them as three different types. Two – or three – ways of expressing passives may seem redundant, but according to several studies there is (not unexpectedly) a certain distribution between the types (Laanemets 2004, 2012; Engdahl 1999, 2001, 2006; the large Swedish descriptive grammar Svenska Akademiens Grammatik 1999 [henceforth SAG]).

The passive can be described as a very general construction (cf. Fried & Östman 2004). In a language such as Swedish, where different types of passives exist, there must be several general passive constructions. The passive constructions share most of the same characteristics, but they also differ from each other to some extent. The different general passive constructions interact with the lexical constructions of the verbs that merge with them. In this interaction we can find patterns of different generality as well as constructions with certain slots filled; Stefanowitsch & Gries (2003, 2004) call these *collostructions*.

The Swedish passive has been studied quite thoroughly. Recent studies include Laanemets (2004, 2012), Engdahl (2001, 2006) and Lyngfelt (2011). In this paper I will approach the syntactic construction(s) from a lexicological point of view and look at how different verbs interact with general passive constructions. The study is corpus-based and represents a bottom-up approach (Boas 2008) to the Swedish passives. By looking at concrete instances I confront Construction Grammar with the large variety of actual use. By extracting patterns out of the variety, I can say something about constructions of different generality, not only about the more general constructions but also about those that do not fit into neat general patterns.

In the next section I introduce the three types of passive in of Swedish. I then present some aspects of Construction Grammar that are relevant for this study. After that I turn to my corpus material. The empirical corpus study presents the most frequent verbs for each type of passive and compares the verbs and the patterns of use that the corpus reveals. In terms of the patterns of use presented, I discuss the difficulties that a constructional description encounters. The last section summarizes my results.

The corpus I have used consists of 41.6 million tokens, 28.2 million from newspaper texts (1999–2001) and 13.4 million from modern literature (1976–1999).

2. The passive voice in Swedish – an overview

As mentioned, there are two types of the passive in Swedish: a morphological passive (1 a) above and a periphrastic passive of which there are two variants (1 b) and (1 c). This section briefly presents the different types and how they are used according to earlier research.

2.1. Forming of the passive voice in Swedish

The morphological passive, the *s*-passive, is formed by adding an *-s* to the corresponding active form. In the present form the ending *-(e)r* (*bygg-er* 'builds') is dropped. The perfect and pluperfect forms consist of the auxiliary verb *ha* 'have' and the so-called supine form of the main verb. The supine is inflexible for gender but takes the passive ending –s. Table 1 shows the different forms of the *s*-passive of the verb *bygga* 'build'.

	***s*-passive**	**Eng. translation**
Infinitive	byggas	be built
Present	byggs	is being built
Preterite	byggdes	was built
Perfect	har byggts	has been built
Pluperfect	hade byggts	had been built

Table 1. The tense forms of the *s*-passive of the verb *bygga* 'build'

The periphrastic *bli*-passive consists of the copula *bli* 'become' showing the tense and the past participle of the main verb. The past participle agrees with the subject (common gender, neuter and plural). Table 2 shows the different tense forms of the verb *bygga* 'build'.

	bli-passive	Past participle common/neuter/pl.	Eng. translation
Infinitive	bli	bygg-d/-t/-da	be built
Present	blir	bygg-d/-t/-da	is being built
Preterite	blev	bygg-d/-t/-da	was built
Perfect	har blivit	bygg-d/-t/-da	has been built
Pluperfect	hade blivit	bygg-d/-t/-da	had been built

Table 2. The *bli*-passive forms of the verb *bygga* 'build'

The other variant of the periphrastic passive, the *vara*-passive, is formed with the copula *vara* 'be' instead of *bli* 'become'. As table 3 shows this passive can also be inflected in all tenses.

	vara-passive	Past participle common/neuter/pl.	Eng. translation
Infinitive	vara	bygg-d/-t/-da	be built
Present	är	bygg-d/-t/-da	is built
Preterite	var	bygg-d/-t/-da	was built
Perfect	har varit	bygg-d/-t/-da	has been built
Pluperfect	hade varit	bygg-d/-t/-da	had been built

Table 3. The *vara*-passive forms of the verb *bygga* 'build'

The correspondences between the tenses of the *vara*-passive and the two other passives depend on the telicity of the verb. For telic verbs the present form corresponds to the perfect form of the *s*-passive (2 a), and for atelic verbs it corresponds to the present form (2 b) (SAG 4: 393–395).

(2)

a är bygg-d/-t/-da har byggts is built/has been built

b är älska/-d/-t/-de älskas is loved/is being loved

The *vara*-passive can be used for expressing certain time relations that cannot be expressed with the other passives (3) (Sundman 1987: 423–426, SAG 4: 393–397).

(3) Bro-n borde ha varit byggd för länge sedan
bridge-DEF should have be-SUP build-PCP-UTR long ago

'the bridge should have been built long ago'

The English translation of (3) corresponds equally well to the *s*- and *bli*-passives (*borde ha byggts; borde ha blivit byggd*). The topic for the latter alternatives is the building process, whereas (3) emphasizes that there should be a bridge already, that a bridge has been planned. For further information on time relations see e.g. Sundman (1987), SAG (4: 393–397).

After this brief presentation of the formal aspect I

will turn to the distribution of the forms in use by referring to earlier studies.

2.2. The Swedish passives in use

Tables 1 and 2 in section 2.1 may give the impression that the *s*- and *bli*-passive forms are mutually interchangeable; SAG (4: 382) actually says, that there is a high conformance syntactically and semantically between the two forms, whereas the use of the *vara*-passive is much more limited. This is not true, however, when it comes to actual usage, and as a matter of fact SAG itself illuminates the differences later in its descriptions (SAG 4: 397–401).

The *s*-passive shows a much higher frequency than the *bli*-passive in authentic material, but in fact the *vara*-passive is also more common than the *bli*-passiv. According to Laanemets (2004: 91), the proportion between the three types (in a sample of 562 sentences from newspaper articles from 2003) is 91.3 % for the *s*-passive, 1.2 % for the *bli*-passive and 7.1 % for the *vara*-passive. A comparison of different genres in larger corpora renders about the same figures for newspaper texts but a higher (but in no way high) proportion of *bli*-passive for other genres (Laanemets 2012: 92). This is shown in Table 4. The *vara*-passive was not accounted for in that study.

		s-passive	*bli*-passive
Written	Newspapers	97.0	3.0
	Literature	90.4	9.6
Spoken	Debate	93.9	6.1
	Conversation	85.5	14.5

Table 4. The distribution of the *s*- and *bli*-passive in different genres according to Laanemets (2012).

From the quantitative distribution we turn to the functional side. Although there is much to be said on the topic a summary of the main points is presented here. Further and more detailed descriptions can be found in the literature that this short description is based on (Engdahl 1999, 2000, 2006; Laanemets 2012; SAG 4: 359–404; Sundman 1987).

- The *s*-passive is the unmarked passive in Swedish.
- The *bli*-passive cannot be used in general statements, instructions, rules and so on.
- There are syntactic restrictions to the *bli*-passive. It cannot be used in raising constructions and impersonal passives.
- Earlier it was assumed that the choice between the *s*- and *bli*-passive is a matter of emphasizing either the action or the result. Aktionsart also plays a role, but it seems to be a matter of animacy and control: verbs that have a high frequency of animate object in active form show a higher tendency for the *bli*-passive, even if the *s*-passive is also dominant for them.
- For polysemous verbs, there are often connections between meaning and preferred passive form.
- The *s*-passive occurs with verbs that are frequent and have a wide and general meaning, whereas verbs in the *bli*-passive have a concrete meaning (Laanemtes 2012: 194)
- Such tendencies exist, but the patterns are not quite as clear as has been claimed in syntactic literature (Laanemets 2012)

The *vara*-passive is formed with the help of the static copula *vara* ‘be’ and the focus is on the state that is the result of a verb action. Past participles of telic verbs have a high tendency for adjectivization (Sundman 1987: 417–419).

3. Theoretical assumptions

Constructions are pairings of form and meaning. For very general syntactical constructions the notion *meaning* is slightly problematic; in fact Goldberg (2006: 3) for example, uses *function* instead: “conventionalized pairings of form and function”.

The passive construction can be described as a very general construction. The semantic function of the construction is to express that an entity is affected by a potentially undefined cause, while pragmatically it expresses the discourse prominence of the result of an action (Fried & Östman 2004: 49).

If the semantic and pragmatic functions for all three Swedish passives were the same they could be described as in (4) (following the type of notation used in Lyngfelt (2007:119)). The short form *Pcp* is used for Past participle, since the other Swedish participle, the present participle, does not come into question in a discussion of the passive.

(4)

(a)	(b)	(c)
S-PASSIVE	*Bli*-PASSIVE	*Vara*-PASSIVE
[Pat/Exp V (Agent)]	[Pat/Exp V (Agent)]	[Pat/Exp V (Agent)]
<Subj V-s (PP_{av})>	<Subj Aux_{bli} V-Pcp (PP_{av})>	<Subj Aux_{vara} V-Pcp (PP_{av})>
[Sem Pass]	[Sem Pass]	[Sem Pass]
[Prag Pass]	[Prag Pass]	[Prag Pass]

However, the previous section (2.2) stated that the *s*-passive is the general passive for Swedish, whereas the *bli*-passive is submitted to several restrictions. The Sem-part in (4 b) must be specified, as, for

example [Sem Pass no-general utterances, Pat/Exp Animate].

Earlier studies have shown that different meanings of a verb tend to be connected to different passive alternatives (cf. section 2.2). In a study of argument structure Boas (2003) introduces the concept *mini-construction*. Verbs with multiple meanings can be split up in lexical mini-constructions. Each mini-construction is a conventional pair of a form with a meaning, and it entails syntactical information on how the frame elements may be realized syntactically.

Croft (2003) and Barðdal (2011) question the dichotomy between lexical rules and syntactic constructions and assume patterns of different generality. Boas (2008) also points out the importance of the lexicon-syntax continuum. Boas (2008) discusses how Construction Grammar is supposed to handle the interactions between lexical entries and grammatical constructions and states that further research should be done with a corpus-based bottom-up approach. This study is a small step in that direction.

Stefanowitsch & Gries (2003, 2004) have introduced the concept *collostructions* for collocations consisting of structural patterns with certain slots filled. An example of a collostruction is the *into*-causative where the causative verb can vary (for example *trick, fool, force*). An instance of the construction is: *He tricked me into employing him*. The Swedish passives can be assumed to form collostructions.

4. Verbs used frequently in passive voice – corpus survey

This study of Swedish passives has a quantitative approach. It presents verbs that appear frequently in the passive voice and shows that verbs have a strong tendency for certain passive forms. Only a few verbs appear frequently in more than one passive.

4. 1. Verbs used in s-passive

As established above (section 2.2), the *s*-passive is the dominant type of passive in Swedish. A list that simply shows verbs with a high frequency of the *s*-passive does not necessarily show which verbs typically appear in the s-passive, since verbs with an overall high frequency tend to emerge on such a list. An example is the verb *göra* 'do, make', with an *s*-passive frequency of 137.6 per 1 million words. If the share of *s*-forms of all the forms of the verb is calculated it turns out to be only 5.2 %, i.e. *göra* is not a verb that is typically used in the *s*-passive.

Table 5 shows a list of verbs with the highest share of s-forms. The criteria for the list are a high frequency in the passive (over 1000 hits in the corpus used, i.e. a relative frequency of over 24 hits per one million words). Moreover the share of *s*-passive forms should be over 40 % of all forms of the verbs. These criteria are filled by eight verbs.

In Table 5, verbs representing so-called deponent verbs (verbs ending in *-s* without being passive forms) have been excluded (cf. SAG 4: 401–403, SAG 2:554–557, Lyngfelt 2007, 2010).

Swedish verb	Eng.translation (for active form)	*S*-form frequency		*S*-form share (%)
		Relative	Absolute	
beräknas	estimate	28.9	1 204	60.6
drabbas	strike; afflict	79.2	3 295	55.1
tvingas	force	132.1	5 497	47.0
gripas	seize; move	59.9	2 494	43.4
införas	introduce, insert	27.3	1 136	40.6
dömas	judge; sentence	40.1	1 670	40.4
behandlas	treat; handle	27.8	1 156	40.2
ersättas	compensate;replace	24.4	1 015	40.2

Table 5. High frequency verbs with a high share of *s*-passive forms of all verbs

The only verb the list in Table 5 has in common with the top 15 list of *s*-passives in Laanemets (2012: 193) is *tvingas*. The explanation is that Laanemets lists verbs according to high passive frequency, and thus verbs that are frequent all in all are placed high up on the list. Laanemets' material is also much smaller; the verb *använda* 'use', which tops her list, has 98 (absolute) hits.

4.2. Verbs used in periphrastic passive

Extracting periphrastic passive forms from the corpus is more complicated than extracting *s*-passives. Grammatical tagging has been done for participles in the corpus but not for periphrastic passive forms, so I have searched for the different forms of the two auxiliary verbs *bli* 'become' and *vara* 'be', respectively, in combination with past participles (common gender, neuter, plural),

allowing up to four elements between the auxiliary and the participle.

The past participle can, like in English, be used adjectivally (e.g. *intresserad* 'interested'). With the help of the coding done for the participle lexemes in the corpus I have excluded all the participles that are coded as adjectival or as both adjectival and verbal, since purely verbal uses are of interest here. The result is lists of verbs used frequently in the *bli*-passive (Table 6) and *vara*-passive (Table 7).

Verb	Eng. translation	bli PCP		bli [0-4] PCP	
		R	A	R	A
skjuta	shoot	4.5	189	5.3	221
se	see	4.1	169	5.6	233
kalla	call, name; send for	3.7	154	6.4	265
skada	injure, damage	3.7	152	6.4	267
miss-handla	assault	3.4	143	4.5	189
mörda	murder	3.4	143	4.1	170
köra på	run over	3.0	124	3.7	154
lura	cheat	2.8	118	3.8	160
erbjuda	offer	2.6	110	2.9	120
döda	kill	2.6	110	3.5	146

R = Relative ; **A** = Absolute

Table 6. Verbs used frequently in *bli*-passive.

It can be noticed that the frequency figures for the *bli*-list are considerably lower than for the *vara*-list, which is to be expected according to earlier research (Laanemets 2004: 91). We can further see that only one verb is common for both lists, i.e. *skada* 'injure, damage'. The frequency numbers for the two lists of periphrastic passive cannot be compared directly to those of the *s*-passive in Table 5, since the searches could not be done in the same way.

There are three verbs in common for Table 6 and the list of *bli*-passives in Laanemets (2012: 193), i.e. *kalla* 'call, name; send for', *skada* 'injure, damage' and *lura* 'cheat'. Laanemets has included participles that can be either verbal or adjectival.

Table 7 shows the 10 verbs with the highest frequency of *vara*-passive.

Verb	Eng. translation	vara PCP		vara [0-4] PCP	
		R	A	R	A
göra	do; make	9.1	378	33.7	1 401
tänka	think	8.6	360	24.7	1 029
skriva	write	8.5	352	14.0	584
avse	intend; concern	6.6	276	10.8	450
försvinna	vanish	4.9	206	10.5	438
skada	injure, damage	4.7	194	10.0	415
hämta	fetch	4.3	177	8.7	362
planera	plan	4.0	167	10.2	424
bygga	build	4.0	165	10.6	443
döma	judge	4.0	165	7.7	320

Table 7. Verbs used frequently in the *vara*-passive.

4.3. Comparison of verbs used in the different passives

The two lists of periphrastic passives (Tables 6 and 7 above) contain only one verb in common, *skada* 'injure, damage'. The verb also shows a reasonably high share of *s*-passive forms (28.1 %), although not enough to get on the *s*-passive top-list.

Table 8 the two lists of periphrastic passive verbs have been collapsed; the new list is compared to the frequency numbers for the *s*-passive of the verbs and arranged in descending order according to the *s*-passive share of all verb forms.

Verb	Eng. trans-lation	Ordinal No. (t.6&7)	Type of periph. pass	*S*-passive freq.	*S*-passive share
döma	judge	10	vara	40.1	40.4
skada	injure, damage	4, 6	bli, vara	30.5	28.2
döda	kill	10	bli	25.3	28.1
kalla	call, name; send for	3	bli	103.5	26.4
erbjuda	offer	9	bli	20.7	21.0
bygga	build	9	vara	61.6	20.3
skjuta	shoot	1	bli	26.3	16.0
skriva	write	3	vara	29.8	5.4
göra	do; make	1	vara	137.6	5.2
se	see	2	bli	57.0	2.5

Table 8. Verbs used in all three passives.

A comparison extended to the 30 most frequent verbs for all three passive forms (for the *s*-form according to the high proportion of passive in relation to active) strongly indicates that verbs are highly differentiated as to forming the passive. Out of the 30 most frequent verbs for the three different passives, only six verbs occur on more than one list. Only two verbs, *döma* 'judge' and *skada* 'injure, damage', are common for all three lists (Table 9).

Verb	**Eng. translation**	***s*-passive**	***bli*-passive**	***vara*-passive**
behandla	treat	x	x	
bjuda in	invite		x	x
döda	kill	x	x	
döma	judge	x	x	x
kalla	call, name; send for	x	x	
skada	injure	x	x	
	damage	x	x	x

Table 9. Verbs occurring frequently I more than one of the passive forms (out of top 30).

Although these comparisons show that the verbs are strongly differentiated as to which passive they prefer, the result concerns frequent use. Most of the verbs are also used in the other passives as well as in the one they prefer. Laanemets (2012) has also shown that the passive patterns are not quite as clear as has been claimed in syntactic literature.

5. *S*-passive patterns

In this section I will look more closely at some of the verbs with a high share of *s*-passive forms to see what kind of patterns they seem to be part of.

5.1. Distribution of the paradigm forms of the s-passive

Laanemets (2012) has examined the overall distribution of the different tense forms of the *s*-passive in written (newspaper) language. In Table 10 the absolute numbers given by Laanemets (2012) have been turned into percentage numbers and the proportion of tense forms is compared to the overall proportion for the top-eight *s*-passive verbs of my study.

	Infinitive	Present	Preterite	Supine	Future
Laane. (2012)	24.1	32.5	31.9	9.8	1.8
The top-8 *s*-verbs	19.1	35.8	25.3	19.7	(–)

Table 10. The overall proportion of tenses for eight verbs in comparison with Laanemets' (2012) numbers.

As we can see, there is a good correlation between Laanemets' numbers and the overall numbers for the verbs in my study. The greatest deviation is in the supine.

However, when we turn to the distribution of tense forms for individual verbs we can, not unexpectedly, establish that there are clear deviations from the average. The proportions for the different verbs are shown in Table 11. The most striking example is *beräkna* 'estimate' with almost 90 % of the *s*-forms in the present tense and a very low share of infinitive and supine forms. We can assume that there are different reasons for the different patterns. In a thorough description of the language these differences should be accounted for.

Verb	Eng. trans-lation	Infini.	Present	Preter.	Supine
behandlas	treat; handle	33.5	37.0	14.3	14.5
beräknas	estimate	2.7	89.9	4.8	2.7
drabbas	strike; afflict	16.1	32.9	22.4	28.4
dömas	judge; sentence	14.9	17.9	44.7	22.5
ersättas	compen-sate; replace	27.7	30.7	20.9	20.7
gripas	seize; move	8.7	33.2	46.8	11.3
införas	introduc e, insert	16.6	31.3	41.9	10.2
tvingas	force	10.8	41.6	31.2	16.4

Table 11. The proportion of tenses per verb in the *s*-passive.

The verbs *tvinga* 'force' and *beräkna* 'estimate' differ from the other verbs by having a strong tendency to appear in the structure V-s + V-inf. In the next section we shall take a closer look at them.

5.2. The verb beräkna

Two of the top-eight verbs in the corpus, *tvinga* 'force' and *beräkna* 'estimate', have a strong tendency to appear in the structure V-s + V-inf as in (5) and (6). The latter (6) represents the Subject Raising Construction discussed by e.g. Lyngfelt (2011).

(5) Han tvinga-de-s komma
he force-PRET-PASS come-INF

'he was forced to come'

(6) De beräkn-a-s kunna
they estimate-PRES-PASS can-INF

komma först om några dagar.
come-INF first in a few days

'presumably they will not be able to come for several days'

In the passive use 78 % of the instances of the verb *tvinga* are of the type *tvinga*s + V-INF without the infinitive marker *att* 'to', whereas 13 % have an *att*, *tvingas* + *att* + V.INF.

In the active voice *tvinga* is normally connected to another verb with the infinitive marker *att* 'to' as connector (7). Over 80 % of 103 random hits are of this type and only two are hits without an *att.*

(7) De tvinga-de honom att komma
they force-PRET-ACT he-OBJ to come.INF

'they forced him to come'

The infinitive marker *att* is optional both in the active and passive voice but there is a marked difference in the tendency of the *att* to appear.

For the verb *beräkna* 'estimate', 71 % of all passive instances (of a sample of 117) represent the structure V-s V-INF as in (6) above.

There are only two occurrences in the active voice where the infinitive lacks the *att* (of a sample of 148). Six have an *att* (8). In 80 % of all occurrences *beräkna* is a single main verb, in 45 % it has an NP as object, in 36 % it governs a subordinate clause with *att* 'that', and in 8 % it governs other subordinate clauses.

(8) GN AB beräknar att
GN Inc. estimate-pres-act to-inf.m.

om en vecka lämna
in a week hand-INF

'GN Inc. estimate that they will be able to hand in their application in a week'

in sin ansökan
in-particle their-refl application

The two verbs *tvinga* and *beräkna* show considerable differences in how they combine with other verbs and with the marker *att* in the active and passive. In the passive they behave somewhat like auxiliary verbs. The question is whether statistical tendencies ought to be included in the descriptions of constructions. That would be complicated, though, since the figures would not be stable. Different genres, for example, may give different statistical results.

Engdahl (1999) mentions that control verbs such as *tvinga* 'force' can be used in both the *s*- and *bli*-passive even if the *s*-passive is much more common. Raising verbs such as *anse* 'consider' and *anta* 'assume' can only be used in the *s*-passive. The verb *beräkna* 'estimate' belongs to the latter group. In Lyngfelt (2011) the Subject Raising Construction and related constructions are discussed thoroughly, and *beräknas* is one of the verbs mentioned. I shall not go further into the topic, but I want to point out the problem of description again. To which construction does that type of information belong: the general passives, the Raising Construction and the like, or to the lexical constructions for the verb?

5.3. Occurrence of the av*-phrase (agent-PP)*

One of the characteristics of the passive construction is the optional Agent expressed through a PP. In Swedish the agent preposition is *av*. The top-eight verbs of *s*-passives in my material show considerable differences in the tendency to take an agent-PP. Table 12 presents three verbs, *drabba* 'strike; afflict', *gripa* 'seize; move' and *ersätta* 'compensate; replace', that stand out. The table shows the numbers for hits where the preposition stands next to the verb (*beräknas av, drabbas av* etc.). A search allowing up to five elements between the verb and the preposition *av* and with the dependency relation for the PP defined as Agent gives a very similar pattern even if the percentage figures for the top three items are somewhat lower. The *av*-phrase does not always, however, express Agent but rather Cause. (I will not go into a discussion of how to handle semantic roles in metaphoric sentences; I consider intentional actors as Agent in this study.)

Swedish verb	**English translation** (for active form)	**Absolute frequency** V	V + av	**% with *av***
beräknas	estimate	1204	3	0.2
drabbas	strike; afflict	3295	1746	53.0
tvingas	force	5497	19	0.3
gripas	seize; move	2494	656	26.3
införas	introduce, insert	1136	20	1.8
dömas	judge; sentence	1670	52	3.1
behandlas	treat; handle	1156	80	6.9
ersättas	compensate; replace	1015	497	49.0

Table 12. The frequency of *av*-phrases in combination with *s*-verbs

For *drabbas* the semantic role of the *av*-adverbial is Cause, not Agent, and the most common causes are diseases and injuries of all kinds. Damages and accidents are also frequent. The Patient, that is, the subject of the clause, is mostly animate and human but there are some examples of inanimate Patients such as in (9).

(9) Land-et har drabba-t-s
country-DEF have-SG-PRES affect-SUP-PASS

av torka
by drought

'the country suffers from drought'

For *gripas* the most common subpattern is *gripas av polis(en)* 'be seized by (the) police'. Alongside *polis* other authority-like groups occur in the Agent role rather frequently. Another subpattern is *gripas av panik/ångest* 'be struck by/ get into panic/anxiety' where the verb is used metaphorically and where the semantic role of the *av*-adverbial is Cause. Also, other strong feelings, both negative and positive, can be expressed with the *av*-adverbial.

For the verb *ersätta* no obvious lexical subpatterns can be found. Three main semantic patterns appear in a random selection of 100 hits: 1) a Receiver is compensated by a Payer (for a damage), 2) a human Patient is replaced by a human Agent and 3) an inanimate Patient is used instead of another inanimate Patient (by an Agent not expressed).

The patterns that can be observed for the three verbs are connected to the world around us, so in that respect the combinations are not arbitrary. Still, there is a great deal of arbitrariness involved in the expressions. This is clear if we consider that the verbs have several equivalents in English. Even if the grammar allows several possibilities of expressing a certain idea we tend to prefer one way over the others (Pawley 1986).

Out of the eight verbs that show the greatest proportion of passive forms in all forms of the verb, only three show a high tendency for the *av*-adverbial; and the *av*-adverbial expresses Cause more often than Agent. *Av*-less passive sentences are most typical for the Swedish *s*-passive. In a constructional description of these verbs the tendency for an *av*-phrase should be accounted for as well as whether the PP tends to represents Agent or Cause.

After these glances at *s*-passive uses we turn to the periphrastic passives.

6. Patterns for the periphrastic passive

Section 4.2 pointed out the verbs that show the highest frequency of periphrastic passives in the corpus. This section takes a closer look at some of these verbs.

6.1. Bli-*passive patterns*

Most of the verbs in the *bli*-passive top list (Table 6 in section 4.2) demonstrate that there is reason to state that verbs fusing with the *bli*-passive construction are telic (section 2.2). The action referred to by some of the verbs can even be said to lead to drastic results (*skjuta* 'shoot', *mörda* 'murder', *döda* 'kill' and so on).

Three of the ten verbs are, however, are not clearly telic (*se* 'see', *kalla* 'call, name; send for', *erbjuda* 'offer') and we shall have a look at the three exceptions to see why they appear in the *bli*-passive.

With *se* 'see' the *bli*-passive is strongly connected with two different meanings. One is the meaning 'observe' (10), the other is the meaning 'note' as the opposite to 'ignore' (11). In the latter meaning the *s*-passive can hardly be used. There are also some occurrences of the *bli*-passive form followed by the word *som* 'as' with the meaning 'be seen as, be considered'.

(10) en tiger hade blivit sedd
a tiger had been se-PCP-UTR

ute på Ingarö.
out on Ingarö

'a tiger had been seen on Ingarö'

(11) Alla vill bli älskade
All-PL want be-INF love-PCP-PL

och sedda
and see-pcp-pl

'everybody wants to be loved and seen'

The *bli*-passive, *bli kallad,* can mainly be used in two different meanings of the verb *kalla*, 'call, name' and 'call for, send for'; in the latter meaning it is often used in combination with the preposition *till* 'to'. Both meanings appear also for *kalla* in the *s*-passive.

In the meaning 'call, name' the *bli*-passive is chiefly used with nouns, to a great extent with nouns with negative connotations, as for example (in translation) *be called a whore, faggot, bandit, animal abuser* and so on). The *s*-passive, too, is frequently combined with nouns, but with neutral nouns (*kallas tant* 'be called auntie'); however, it also appears with adjectives (*kallas demokratisk* 'be called democratic'). The tendency of the *bli*-passive to combine with negative nouns is probably a consequence of its more casual style level.

For the 'send for' meaning of *kalla*, no obvious differences in use can be observed between the *s*- and *bli*-passive in the part of the corpus that consists of literature. The occurrences mostly refer to personal calls. The newspaper material shows a clear difference: the *bli*-passive is used chiefly for persons getting a personal call, whereas the *s*-passive often

has the nuance of 'alarm'. Police, ambulance, fire department and so on are the subject for *kallas till*, although examples with persons called for occur as well. *Kallas till möte* ('meeting'), *kallas till förhör* ('inquiry; examination') and particularly *kallas till platsen* (‘the place’) are frequent combinations. There is not a single occurrence of *bli kallad till platsen*.

The passives of the verb *erbjuda* 'offer' are strongly connected to the newspaper genre. For the *s*-passive, 808 hits of 867, or 93 %, occur in the press material. The difference for the *bli*-passive is not as marked but even so, the share is 81 % (99 of 122). (The proportion of corpus texts is 68 % newspaper and 32 % literature.) The *bli*-passive is clearly personal with personal pronouns and names as frequent subjects.

A constructional description of these phenomena can partly be explained through the concept of mini-constructions (Boas 2003, 2008), but other factors influencing the choice of construction seem to be text type and genre.

6.2. Vara-*passive patterns*

Both telic and atelic verbs top the list for the *vara*-passive (Table 7 in section 4.2). The verb *göra* (‘do; make’) is a highly frequent verb on the whole and can be assumed to be on the list for that reason.

In comparison with the *bli*-list, several in the verbs of the *vara*-list seem to express less drastic actions and, above all, the state that the action leads to has actuality for a longer period of time: with *bygga* ‘build’, *skriva* ‘write’ and *planera* ‘plan’ some kind of product remains. As to the verb *försvinna* ‘disappear’, lost items or missing people have the state of absence as long as they are not found.

Three verbs on the *vara*-list, *tänka* ‘think; *avse* ‘mean, intend’; and *hämta* ‘fetch’, seem to appear on the list because of their tendency to form collocational patterns. I shall illustrate this with the verb *tänka*.

The verb *tänka* 'think' appears in the *vara*-passive in certain functions forming collocational patterns such as <X vara tänkt att V-inf> 'X be intended to V-inf' (12), <X vara tänkt som Y> 'X be thought as a Y'. The first is a raising variant of an extrapositioning construction <det vara tänkt att Clause> 'it be thought that Clause’> (13).

(12) Livet är inte tänkt
life-DEF is not think-PCP-NEU

att vara lätt
to be easy.

‘life is not meant to be easy’

(13) Det var tänkt att
it was think-PCP-NEU that

arbetet skulle ta en månad
work-DEF would take a month

‘the work was meant to take a month’

Another subpattern, even if not so frequent, is <det är adverb tänkt> ‘it is adverb thought’ with adverbs as *rätt, vackert, klokt, snällt, fel* ('rightly', 'beautifully', 'wisely', ‘kindly’, 'wrongly').

The verb *tänka* also occurs in the *s*-passive. There are 660 occurrences of the *s*-form of the verb and an overwhelming number of these represent the structure <X kunna tänkas V-inf> (14) and the variant <det kunna tänkas att Clause>, of which the first is a raising variant.

(14) han kan tänkas resa
he can think-INF-PASS travel-INF

till Bagdad
to Bagdad

'he may go to Bagdad',
'it is possible that he will go to Bagdad'

There are also a few related patterns with the modal verb last <så ADJ-POS [N] som tänkas kan/kunde> (15), <art adj-supl n som tänkas kan/kunde> (16), <så adv som tänkas kan/kunde> and <all(t) N/allt/allting som tänkas kan/kunde>

(15) så kort tid som
so short time as

tänkas kan
think-INF-PASS can

‘as short a time as ever possible’

(16) det varmaste leende som
the warm-SUPL-DEF smile rel.PRON

tänkas kunde
think-INF-PASS could

‘the warmest smile you can think of’

There are several different subpatterns with certain slots filled, i.e. collostructions, for both the periphrastic passive and the *s*-passive. The same verb can appear in patterns with both passives. The patterns are of different generality (more or less slots filled).

7. Alternation between all three passives

In the former sections we looked at periphrastic passives for a couple of verbs and also compared their use in the *s*-passive. In this last empirical section we turn to verbs that appear rather frequently in all three passives.

Engdahl (2001) points out that the choice between the *bli*- and *s*-passive is often connected to different meanings. For both *döma* 'judge, sentence' and *skada* 'injure, damage' the large contemporary Swedish dictionary Svensk ordbok (SO 2009) gives only one main meaning, but a comparison with English suggests that meaning plays a role: the nuances of meaning must partly be explained with separate equivalents (17).

(17) *döma*

Main meaning	pass sentence (in court)
Nuance	more general: decide (judge in a competition)
Nuance	tone of blaming (e.g. *don't judge me to hard*)

skada

Main meaning	injure bodily
Nuance	within sports
Nuance	with respect of other phenomena (damage)
Nuance	In certain expressions (there is no harm in asking …)

However, multiple meanings of the verb are not the only reason for the choice of one of the passives. Several other factors are invovled. I will illustrate this with the verb *skada*. For the comparison I have chosen about 100 random occurrences of each of the three passives.

In terms of what the subject of the passive clause (the Patient) refers to, there is a difference between the forms. As expected (cf. section 2.2.), the *bli*-passive shows a greater proportion of human subjects than the *s*-passive, even if the difference is not sizeable. The *bli*-passive is used to refer to non-humans in 17 % of the occurrences (Table 13).

	N	Human	Non-human
skadas	110	66.4	34.5
bli skadad	106	79.2	17.0
vara skadad	99	62.6	35.4

Table 13. The distribution between human and non-human subjects.

Whereas the subject of the *s*-passive typically refers to indefinite persons (over 70 %), the subject of the other passives and of the reflexive *skada sig* 'hurt oneself' refers to definite persons in more than 50 % of the cases (for the *vara*-passive even 80 %). In the comparison, persons mentioned by name, referred to in definite form (*mann-en* 'the man') or by a personal pronoun (*han* 'he', *jag* 'I' and so on) are regarded as known. Table 14 shows the share of known or definite subjects.

	Person	Name	Def. noun	Pers pron	Total
	N	%	%	%	%
skadas	73	8.2	11.0	9.6	28.8
bli skadad	84	17.9	9.5	27.4	54.8
vara skadad	62	40.3	12.9	27.4	80.6
skada sig	59	37.3	1.7	32.2	71.2

Table 14. The share of known subjects for the passive forms of *skada* and the reflexive *skada sig*.

This indicates that the *s*-passive is the passive of a reporting style (like for *döma*) and it is often used for introducing. The two other passives are more often used for commenting.

There is, however, another important difference between the *s*-passive and the others forms, and this difference is probably partly the cause of the differences seen in Table 14 above. The *s*-passive is very rarely used in reports on sport (only 3 of 73 occurrences with a human subject: Table 15). The *s*-passive is the passive for reporting accidents, crimes, disasters and so on.

	N	Sport (N)	%
skadas	73	3	4.1
bli skadad	84	17	20.2
vara skadad	62	29	46.8
skada sig	59	27	45.8

Table 15. The share of occurrences belonging to the frame [sports].

The *vara*-passive and the reflexive are the forms used in the frame of sports, but even so more than half of the occurrences are non-sport examples.

Of the 85 definable examples of *bli*-passive of *skada* not belonging to the sports frame, 18 have non-human and 67 human subjects. Non-human subjects refer to animals, plants, buildings or parts of buildings, vehicles and, last but not least, human parts (eye, hand, molar, nail). Engdahl (2006) has established that almost 90 % of the grammatical subjects of the *bli*-passive are animate. For the non-sport meaning of *skada* the share is 84 % if the four hits with animal subjects are included. It can be noted that the boundary between animate and non-animate subjects for *skada* is connected to an equivalent shift in English, 'injure' vs. 'damage'.

Out of the 67 occurrences with human subjects, 31 represent known subjects and 36 indefinite. About a third can be identified as quotations from what somebody has said.

The *s*-passive of *skada* has 10 occurrences with an explicit *av*-PP. They all express Cause, not Agent. The most Agent-like adverbial is *av råttor och ohyra* ('by rats and vermin'), which refers to living creatures but not to an intentional Damager. Among the *bli*-passive examples there are five and for *vara*-passive two occurrences of *av*-PP, all expressing Cause.

There is more to be said on the passives of *skada* but I will not go into more detail, because I think my point is clear. There are no sharp rules for how the different passive constructions unify with the lexical construction(s). The concept of mini-construction can be applied – different meanings of the verb fuse with different passives – but this is not always true. The context or frame plays a part (for *skada* the frame of [sports] for example). The passive is a construction strongly connected to information structure. In Swedish the dimension known–unknown seems to contribute to the choice between different passives.

8. Conclusions and discussion

So, what are the results of this analysis of Swedish verbs used in the passive? Seen from the perspective of a group of individual verbs the distribution of passives seems rather disparate. Even if the *s*-passive is the unmarked passive in Swedish this does not mean it can always be used. The choice of passive also depends on the genre, the degree of formality/casuality and on the semantic frame (in the meaning of scene or situation as presented in Fillmore (1982)). Patterns can be extracted but the patterns are tendencies, not "rules". There are also collocational restrictions: a certain passive belongs to a certain collocation (e.g. *det är inte tänkt att vara lätt* 'it is not meant to be easy').

This raises the question of whether statistical data should be included in the description of the passive use. Such a solution would be all but simple. There is, for instance, a general tendency for how the *s*-passive is preferred to the periphrastic passive but this varies according to genre (cf. Laanemets 2004, 2012). As seen in this study, it varies also for different verbs, and moreover, for the same verb in different genres. Capturing all this variation seems next to impossible for any description.

A third question which arises, the question that was the springboard for this study, is how constructions of different generality interact and where different parts of a description of the use of the Swedish passives belong. The different meanings of a verb as a factor behind the choice between the passives would naturally belong to a description of the lexical constructions of the verb, to the mini-construction (Boas 2003, 2008). But as we have seen, the choice is not only a function of meaning: genre, text type, frame and presumably also regional factors have an influence. Does the information of, for instance, genre belong to the lexical construction or to the general passive constructions that the verb fuses with, or to an even higher level of generality? The Subject Raising Construction is, of course, a construction in its own right, but how is it related to more general and more specific constructions? Where does the information on what verbs it can fuse with belong? To the description of the construction or to the description of the verb?

In my study I present more questions than I give answers for. For me, with a background in lexicography, Construction Grammar is an appealing theory since it takes meaning into account; but the ambition to describe "everything" through the same formality and to include all phenomena between syntax and lexicon is a great challenge.

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Corpus

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