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On direct/indirect perception with verbs of seeing and seeming in English and Lithuanian¹

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1 Introduction

The number of meanings that can be found in the dictionary entries of the verb SEE in various languages ranges from 9 to 30:

1.	<i>Language</i>	<i>No of meanings</i>	<i>Vision</i>	<i>Mental process</i>
	Lithuanian	20	+	+
	English	28-30	+	+
	Swedish	4-5 (15)	+	+
	Russian	9	+	+

On a closer look at the definitions of the meanings and the examples given we shall see that they fall into two basic types of meaning, namely (a) those that are related to or based on vision, and (b) those that are related to some mental process. According to Sweetser 1993, one of the basic reasons accounting for the given polysemy is a metaphorical change of meaning that basically proceeds "from concrete to abstract", and what the scholar calls "the Mind-as-Body Metaphor" (Sweetser 1993:29). In the present study, the given opposition will be regarded as somewhat parallel to direct vs. indirect perception, and a lot of the attention will be devoted to the statistical analysis of the ratio of these two features in the usage of verbs of seeing and seeming. As the given semantic opposition is very much complement-type-dependent, the focus will be basically on the interaction of syntax and semantics on the

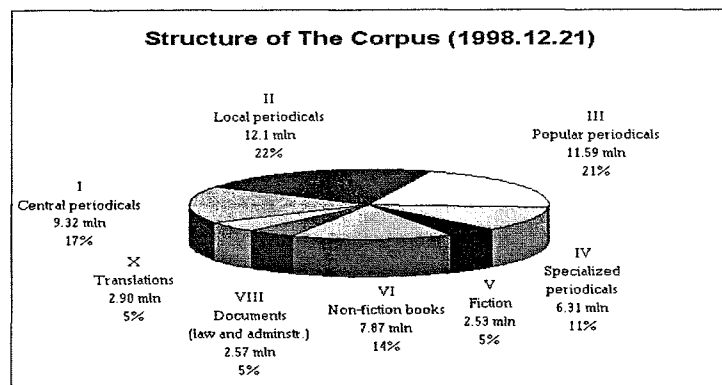
¹A greater part of the research was carried out during my study visit at the Department of Linguistics and Phonetics, Lund University where my two-month stay became possible thanks to a Swedish Institute scholarship. All my warmest thanks are due to Jan-Olof Svantesson for his kind assistance in arranging the visit. I am grateful to the staff of both my home and host departments for their hospitality and attention, as well as Laima Erika Katkuvienė and Bonifacas Stundžia for a term's leave from teaching. I also wish to thank Caroline Willners, Johan Dahl and Vivan Franzén for their help and understanding.

example of the analysis of various types of verb complementation. It is mainly right-hand complementation and the stimulus position that will be dealt with in the given paper.

Viberg's 1993 research results of the 20 most frequent verbs in 11 European languages (English, German, Swedish; French, Spanish, Italian, Rumanian; Russian, Polish; Finnish, Hungarian) show that the field of perception is represented by the key verb denoting visual perception, namely the verb *see*. The purpose of this paper is to try to find out which type of meaning dominates, and whether it is a direct or an indirect (mental) type of perception that makes these verbs get to the top of frequency lists of the two languages (<http://www.itri.bton.ac.uk/~Adam.Kilgarriff/bnc-readme.htm>, Grumadienė & Žilinskienė 1997).

1.1 Data description

The data for the analysis have been collected from two corpora², namely the British National Corpus (BNC) used at the Department of Linguistics and Phonetics, Lund University, and the Lithuanian Language Corpus (donelaitis) compiled at Vytautas Magnus University. The Lithuanian corpus 'donelaitis' (50 million words) (<http://Donelaitis.vdu.lt/tekstynas/>) consists of texts published since 1994 and reflects present day written Lithuanian:



The Lithuanian corpus is not annotated so all the analysis of the Lithuanian data had to be carried out manually. A great number of sets of concordances for the linguistic phenomena (especially for the queries like SEE, SEEM, MATYTI, etc.) under investigation were usually reduced to a reasonable

²If not indicated otherwise the data cited are from these corpora. The translation of Lithuanian examples is nearly literal.

amount of data for a more accurate analysis (approximately 150-350 matches). In quite a few cases the same manual procedure has been applied to the English data as well. This was considered necessary when dealing with finite complementation of the verb SEE. For instance, it was necessary for calculating cases of zero complementation (SEE Ø-S) as well as for cases when THAT-clauses come to be placed far from the matrix verb, e.g.:

2. I saw it was an accident.

... he was still able to see from their reflection in the mirror behind the bar that they were deep in conversation.

Therefore, in quite a lot of cases manual analysis was preferable both for accuracy reasons and for its simpler query procedure.

Following Rogers 1971, Viberg 1984, Quirk et al. 1985, Croft 1993, Schlesinger 1992 and Levin 1993, verbs and verb phrases under analysis are subdivided into Exp(erience)-verbs and St(imulus)-verbs and phrases:

3. <i>Exp-verbs and phrases</i>	<i>St-verbs and phrases</i>
E: see	look, seem, appear
	be seen/visible
LT: matyti 'see' (tr)	at-rod-yti/rod-yti-s 'look/seem/appear'
	PRFshowINF/showINF.RFL
	mat-yti(s) (intr) 'be seen/visible'
	seeINF(RFL)

2 On directness/indirectness of perception

2.1 Previous studies

As is well known in linguistics, directness vs. indirectness in complementation (Borkin 1973, Aijmer 1980, Duffley 1992) is very much dependent upon the choice of the complementizer introducing a clause (Riddle 1975, Frajzyngier & Jasperson 1991, Dixon 1995). For instance, *that*-clauses take a very special place among various kinds of clauses in that "all *that*-clauses have the property of being interpreted as being in the *de dicto* domain" to quote Frajzyngier & Jasperson (1991:139), which means that they do not refer to something as a direct description of an event. The same feature of indirectness is attributable to the clauses introduced by a full infinitive. Quite a few linguists (Borkin 1973, Duffley 1992) observe the importance of purely formal features in linguistic representation, like presence/absence of the particle TO with the infinitive form (full or bare infinitive in the Infinitival Perception Verb Complements (IPVCs). They claim that occurrence of the full infinitive form enhances a reading of indirect perception of the entity denoted by the complex

structure. The most common examples for the marked member of the opposition can be quoted from Duffley 1992:30-31:

4. I saw him *to be obnoxious*.
He saw the children *to be eating* their lunch.

The most important features in cases of clausal complementation, which are crucial for the distinction between the two types of perception are (a) time reference, (b) types of entities denoted by complements and (c) type of complementizer, which have been widely discussed by many linguists:

(a) *Time Reference*

tense sequence: simultaneity (Woodbury 1986)
determined/dependent time reference (Noonan 1987:92)
time dependent reference (Dik & Hengeveld 1991:240)
Simultaneity Condition (Felser 1998:352);

All scholars agree that simultaneous interpretation of the events described by the verbs in the matrix and embedded clause is a necessary condition for the feature of directness to be present in a perceptual situation.

(b) *Types/characteristic of entities denoted by complements*

Truth vs. Occurrence complements denoting "direct physical perception vs. abstract cognitive evaluations of the truth of a proposition" (Ransom 1986:63)
perceptually vs. mentally accessible entities (Sweetser 1993)
direct vs. indirect (Tasmowski 1989, Verspoor 1996, Felser 1998)
immediate vs. mental perception (Dik & Hengeveld 1991)
'resultatively' vs. 'operationally' evoked perception (Duffley 1992).

There is no polemic that the more abstract the perceived entity is the more indirect is the perception.

(c) *Type of complementizer & formal differences*

THAT-S (Frajzyngier & Jaspersen 1991)
presence/absence of the particle TO with the infinitive form, i.e. full or bare infinitive (Borkin 1973, Duffley 1992).

Among the works that have dealt with entity types of different order and their linguistic expression, mention can be made of the classifications developed by Lyons 1977, 1991:

5. *Basic entity types*

1st-order entities: individuals/physical objects (boy, dog, tree)
2nd-order entities: events/processes/relations/states of affairs (I heard John singing in his bath)
3rd-order entities: propositions (I know that John is singing in his bath)

Mackenzie 1996 can also be mentioned, where the process of higher-order nominalizations in English showing a gradual development towards "an increasingly prototypical term" was illustrated by analysing examples of the Ross 'nouniness squish':

6. *Transition from verbal to nominal status* (Mackenzie 1996:343-346)

3rd-order: That my horse won the race came as a great surprise (Vfin)
My horse winning the race came as a great surprise (Vnon-fin)
My horse's winning the race came as a great surprise (Nverbal)
2nd-order: My horse's winning of the race came as a great surprise (Nderiv)
2nd/3rd-order: My horse's victory in the race came as a great surprise (Nnonderived)

When dealing with complementation of perception verbs, Dik & Hengeveld 1991 have worked out the typology of perception-verb complements which is based on the hierarchical clause structure. Their research was basically devoted to the so-called Exp-verbs like English SEE, HEAR, and the semantic opposition under analysis can be illustrated by the following examples:

7. (a) *Direct*

I saw *your brother* yesterday. (Immediate Perception of Individuals – IPI)

I saw *him walk down the street*. (Immediate Perception of State of Affairs – IPSoA)

b) *Indirect*

I saw *that Mary had been crying*. (Mental Perception of Propositional Content – MP; Dik & Hengeveld 1991:237-39)

It is generally accepted that the binary semantic opposition of direct vs. indirect perception is based on right-hand complementation and is parallel to 1st/2nd-order entities vs. 3rd-order entities that can roughly be seen as finding their linguistic expression in non-finite vs. finite forms of complement clauses, where the choice of the complementizer can be crucial for the interpretation of the clause in terms of denoting perceptually/mentally accessible phenomena.

2.2 Findings of the present analysis

The present analysis of the data has shown that infinitival/participial complements of the perception verb SEE (I/PPVC) come to describe cases of IPSoA only when the subject of the embedded clause is a 1st-order entity. When an abstract noun takes this position of the stimulus of perception, the result is some phenomenon that is not observable directly by vision:

8. On numerous occasions I saw *attempts to mobilize* band-wide agreement or cooperation ...

Morgan sees the *key issues centring* around production, ...

The entities denoted by these non-finite embedded clauses are only mentally accessible, if we follow Sweetser 1993. The same type of metaphorical change of meaning is observed in cases when an abstract noun takes the DO position, e.g.:

9. In literature too, the period sees *the increasing use of English*, ...

Therefore, in cases of non-finite clausal complementation all the attention will be concentrated on the entity type denoted by an NP in the Infinitival/Participial Perception Verb Complement. The same is applicable to Lithuanian:

10. Matau tavo širdgėlą. 'I can see your heartbreak.'

Kai mes apsidairome, matome savo viduomenę praradus moralines vertybes. (PPVC)

'When we look around [we] see our community to have lost moral values.'

Moreover, the same interpretation of indirectness of perception is present in the structures where an AP takes the DO position, for instance:

11. If she did not *see fit to prevent* their actions, it must be because they served her purposes.

The results of the data analysis suggest that there are at least two more types of complex complement structures following the English verb SEE that should be also considered to effect an indirect perception meaning of this verb. The first one will comprise the structures where the active and passivized forms of the verb SEE are followed by AS-phrases (AS Ps), as in the following examples:

12. Lack of knowledge or skill *was seen as a potential constraint* by half the people.

I mean, are we *to see that as symbolic* the setting fire to Rochester's bed?

But, although I heard that music, I never *saw it as the kind of music I'd be involved in* and that was because Kensal Green was a deprived place.

AS-phrases are used to give some qualitative characteristic about the stimulus of perception and are regarded here as conveying an evaluatively charged information (cf. Poldauf 1968, Gisborne 1998). Traditionally they are the so-called 'introduced object complements' (IOC) with the introducing element AS. I will not deal with the grammatical status³ of the introducing element (for more detail see Noël & Simon-Vandenberg 1996). The statistical analysis of the active SEE/SAW NP *as* P and passive SEEN *as* P structures collected from the BNC has shown that the most frequently occurring phrases introduced by AS are NPs. ING-phrases come second, APs are third, and then just a few percent are taken by PPs/AdvPs/APs and finite clauses. Compare their percentage in Table 1:

Table 1. Types of Introduced Object/Subject Complements with SEE

	<i>as</i> NP	<i>as</i> AP	<i>as</i> -ing	<i>as</i> -ed	<i>as</i> S	<i>as</i> PP/AdvP
<i>see</i> AT0 N ⁴	77%	4%	12%	0	6%	0
<i>saw</i> AT0 N	55%	4%	21%	5%	2%	1%/1%
<i>see</i> P.*	76%	5%	10%	2%	0	2%
<i>seen</i>	70%	14%	11%	1%	0	0.7%

A contrastive analysis of 'opinion' verb complementation in terms of the opposition of IOC and BOC ('Bare Object Complements') carried out by Defrancq 1996a shows that the English verb SEE takes a somewhat intermediate position regarding the occurrence of AS as an introducing element of IOCs. The scholar claims the ratio to be 1 to 5, which means it is less often used with AS as compared to REGARD which always takes AS, and BELIEVE which never takes AS.

Traditionally these phrases are considered to function as attributes to the NPs they modify. At first sight it might seem that AS-phrases here are added

³In the BNC *as* is tagged as an adverb, conjunction and a preposition, for instance:

Don't see me *as/CJS-PRP*/a spokesperson for anything...

... some people see it *as/AVO*/instant answer to every problem...

... informal careers are seen *as/AVO*/able to give assistance.

⁴In some of the diagrams/tables, I have used the notation of the Basic Tagsets used for word class annotation of the whole BNC. Thus, NPs cover all the expressions where the head word is a noun or pronoun, e.g.: AT0+N.*, AJ0+N, PNP, N.*, AV0+AJ0+N.*, etc.

to give some qualitative characteristic about the entity perceived. However, the examples from the BNC show that even in cases when the stimulus is an individual (1st-order entity), the interpretation of the situation is not the 'Immediate Perception of Individual'. It is actually something about the individual/s and that something is not a property that is directly perceivable/detectable by the senses⁵. It is actually an evaluative judgement about the individual (stimulus of perception) that presupposes some mental activity on the part of the Experiencer; consequently the verb SEE is used to describe mental perception, e.g.:

13. Does he see *you as a partner*, or is he already the boss?

I never saw you as insincere.

I do not want to be seen as a liability to you.

They are seen as mainly young with insufficient life experience; they are considered intolerant and left wing

Thus the given cases of perception cannot be immediate and direct for they are not dependent upon the functioning of the individual's physical senses. The verb SEE comes to describe perception that is more inferential or intellectual than sensory and can be compared to the verbs of cognition like KNOW:

14. Many know *him as* the British jazz singer.

A very similar interpretation of this type of meaning for the verb SEE is given by Defrancq 1996b:132 who distinguishes between 'typical' and 'exceptional' meanings of the 'opinion' verbs, which are based on the contrast of 'unmarked or bare' vs. 'marked or introduced' complements. I wish to add one more structure to this type of IOCs. Its introducing element is TO BE, whose function also seems to be that of an 'indirectness/proposition marker'. The entities denoted by the phrase introduced with TO BE cannot be regarded as phenomena that are represented as happening in time or being experienced directly by senses (see 'operative' meaning in Duffley 1992), e.g.:

15. The Bedouins, whom Cecil cared for and saw *to be* poor, were being paid in private out of Cecil's own pocket.

⁵There are but a few cases when the verb SEE in the given type of structures with *as*-phrases is used to describe direct visual perception or can come to characterize the Experiencer, as in the examples below:

The inaccuracy is possibly due to choosing too high an exposure, so that *some black cells are seen as white*.

I think he saw life as a theatre-goer ...

... if the worker sees the task *to be* of significance.

At this stage, Pip sees a gentleman *to be* someone who romantically escapes from the humble world, into a more fairytale-like world.

Moreover, it is the presence of the AS-phrase and TO BE that seems to play a crucial role in initiating the change of meaning of the verb SEE in the given structures. I have chosen the following sets of alternating structures for comparison in Table 2:

- cases where the Subject/Object complement of the verb SEE is a BOC and its attributive position is filled in with the Participle (*-ing/-ed* forms) and adjectives (APs),
- cases where the complement structure contains an IOC with the introducing element AS
- cases where the complement structure contains an IOC with the introducing element TO BE

In cases of zero-complementation, the situations described contain information of the Experiencer's direct perceptual experience (IPI/IPSoA) or direct (mental) impression (DMI) which is dependent upon the type of NP following SEE, while those with introducing elements seem to be a kind of report statements, hence descriptions of indirect perception (IP). The structures with AS-phrases (no matter what kind of NP it modifies) contain an evaluative judgement, and those with TO BE do not denote directly observable phenomena and are mere reports on events/facts (cf. Palmer 1988). The basic claim to be made here is that AS has got a few functions: to introduce an evaluation⁶ (an element of subjectivity) and to bring about a kind of distance/remoteness between a speaker/experiencer and the phenomenon described. The function of TO BE seems to be that of a proposition and indirectness marker, which becomes especially obvious with passivized forms of SEE when we compare the following sets of examples from the BNC (16):

⁶The evaluative information conveyed by the given structures is parallel to the evaluation expressed in the structures with seeming verbs both in English and Lithuanian. They are regarded as cases of DI unspecified in terms of sense modalities (Usoniene 1999), e.g.:

They looked as fresh as maids in May.

Their colours and patterns seemed as fresh as the day they were made and she was amazed at their richness compared with the wartime materials she was used to.

The door appears as ordinary dark wood door at first sight, with a pair of brass doorknobs.

Mama Danutė – jauna, graži, šalia savo vaikų atrodo kaip vyresnioji sesuo.
'Mother Danute – young, nice, ... looks like a senior sister'

Table 2. Types of SEE complements in contrast

SEE+NP+Ving	SEE+NP+as Ving	SEE+NP+to be Ving
Liz turned and saw Anna leaning sleepily against the frame. (IPSoA) They saw costs escalating and sales slumping as the effect of oil crises and world recession hit the Company. (DMI)	Later he saw Arnold as initiating the degradation of philosophy and religion. (DMI) C. Wright Mills saw professionals as increasingly becoming the servants of the rich and powerful.	Someone saw him to be walking away.
SEE+NP+Ved	SEE+NP+as Ved	SEE+NP+to be Ved
Midnight opened his eyes and saw Jess surrounded by a fuzz of sunlight. (IPI) Visual arts officer Mr Steve Chettle wants to see Cleveland taken seriously as a place to visit and admire its arts (DMI)	The Aristotelian paradigm saw the universe as divided into two distinct realms. Liberalism and nationalism are seen as two sides of the same coin. They were seen as inextricably bound up.	Until 1910 the chief sponsor of the union was the Liberal Party, which saw political capital to be made out of organizing farm workers in the Tory rural strongholds,
SEE+NP+AP	SEE+NP+as AP	SEE+NP+to be AP
He liked seeing Edith happy. (IPI)	He thought a little wistfully of Provence, tried and failed to see Edith as happy in the HUTel Paradis ... (DI)	I saw him to be impolite.
SEEN+Ving	SEEN+as Ving	SEEN to be Ving
Council's second argument was that all the evidence presented to the court was that the defendant had been seen engaging in an actual violence, (IPSoA)	Even those texts which appeared concerned with uncontroversial matters were open to be seen as engaging in political and social questions in which the state could suddenly intervene ...	Thus, unions are seen to be engaging in a conflict with firms managements as part of the class struggle ... He was seen to be attacking the moral, manly roots of English public life with the aid of effeminate, aristocratic tastes.

16. Avoiding artificial lighting and air conditioning was *seen to be important* in reducing the use of electricity, ...
... philosophy is *seen as being less serious, less important* than 'hard' theory.
It will be seen that these matters are of importance both in judging and understanding a market economy.

Illustrations are *seen to be a motivating factor* for poor readers ...

Exercise is now *seen as being an important aspect of lifestyle* which is associated with health status.

It may be seen that the non-detector zoned system is not a great improvement on the 29th edition system, ...

Another type of complementation that seems to affect the meaning of the verb SEE in the same way is its occurrence with an AP followed by a full infinitive in its complement position, as in the cases like:

17. As far as I have seen, the BBC has not even *seen fit to broadcast* a single programme in his memory.

Here SEE seems to function as a transitive verb taking an AP denoting an entity which is not perceptually accessible. Hence SEE is used as a kind of report verb (meaning of indirect perception), as in the structures with a full infinitive form in the IPVC following SEE:

18. In 1986, there was a nationwide appeal for anyone who may have seen *Joan to come forward*. Nobody did.

In modern Lithuanian, KAIP ('as')-phrases following passive/active voice forms of MATYTI 'see' happen to be found in descriptions of direct mental impression. However, their frequency is very low and this type of use is regarded as deviant (a few examples in the corpus):

19. Ankstesnė valdžia buvo matoma kaip stambiųjų prekinę produkciją gaminančių įmonių šalininkė ...
'The former government was seen as a supporter of large enterprises ...'
Naujajame Testamente Krist matau kaip gyvą žmogų, ...
'In the New Testament I see Christ as a living human being'

Third person reflexive forms of the intransitive Lithuanian MATYTIS ('see' InfRfl) are also used to describe perception stimulus situations. KAIP 'as/like' + NP/AP phrases can be added to convey the evaluatively qualitative characteristic (attributive function) about the appearance of the objects/phenomena perceived. However, as a rule, these are cases of direct perception. Consider the following examples:

20. ... slenkanti kometa turėtų matytis plika akimi kaip miglota 5-4 ryškio dėmelė.
'...a moving comet should be visible to the naked eye as a misty ... spot'

... medžių viršūnės tame raudonume matėsi kaip anglimi nupaišytos.
 'tops of the trees in that redness (were) seen as painted with charcoal'

All the instances of use in 20 and footnote 6 are regarded as cases of direct perception/impression. They describe the way the outer world looks to the experiencer no matter how distorted the image or how subjective the impression might be.

To sum up, IPI and IPSoA structures with mentally accessible entities in their stimulus position are considered as cases of perceptually indirect but mentally direct perception (Direct Impression_{visual/mental}). Parenthetical use will also be considered as a case of indirect perception. For simple structures this meaning might be purely lexical-meaning-dependent, but in more complex structures this shift in meaning depends upon the types of complements following the verb. Consider structures in Figure 1:

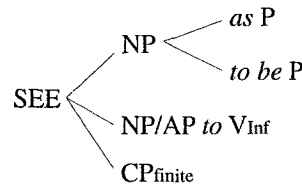


Figure 1. Indirectness of seeing as dependent upon the type of complement

Verbs of seeming in English, when used as copulas (*look/seem/appear* ØP), will be regarded as describing cases of direct impression (subjective and evaluative). However, when used in structures where they are followed by the phrases introduced by TO BE, these verbs will be considered to describe indirect perception accompanied by some modal qualification (for more detail see Usoniene 2000), e.g.

21. But she didn't *seem at all angry*, just amused.
 It seemed to me that she *looked older* than she was ...
 The prospects for spirits *looked brighter*, with exports of Cognac and other French liqueurs up 1.2 per cent ...
 Clashes with the WPBSA on other fronts, however, *appear inevitable*.
 They're doing it within their own time and resources, but it does *seem to me to be a very appropriate area* for Michael?
 His whole buying policy *looked to be a failure*
 We *appear to be a long way from finding effective means of primary prevention of attempted suicide*.

In Lithuanian this basic semantic opposition will find its structural expression in the following types of complements:

22. Direct: St-verb – AdvP/AP/PP/N_{NOM/GEN/INS}P
kaip/tarsi AP/NP('like/as if')
 Indirect: St-verb – CP-finite (Ø-complementizer)
 (Parenthetical use)

The following table is assumed to summarize the types of complements that are used to describe directness and indirectness of perception:

Table 3. Direct vs. indirect perception: types of complements

	DIRECT	INDIRECT
SEE	E: NP _{1st-order}	E: NP <i>to be</i> P NP/AP <i>to VInf</i> LT: NP <i>as/kaip</i> P CP-finite NP _{2nd-order}
SEEM	E: ØP LT: AdvP/AP/PP/NP	E: <i>to be</i> P LT: CP-finite

3 Statistical analysis

If we turn to the nominal types of complements with the English SEE, we can see that it is especially 3rd person subjects that seem to show preference to describing cases of indirect perception by means of complex NPs (IOCs) following the verb SEE. Consider the data in Table 4:

Table 4. SEE Complementation (Indirect Perception)

	S/DO-abstract NP	CP-finite(<i>that</i> -S/Ø-S)	NP <i>as</i> P
SEE	8%	16% (10%/1%)	3%
SEES	41%	5% (2%/0)	30%
SAW	32%	12% (8%/2.5%)	4%

If we look at all the person forms of the Subject that take IOC with AS Ps, we shall see that 3rd-person subjects dominate in the description of situations with present time reference, as seen in Table 5.

Table 5. Percentage of Introduced Object Complements of SEE vs. CP-finite complements

	<i>I see</i>	<i>I saw</i>	<i>You see</i>	<i>You saw</i>	<i>We see</i>	<i>We saw</i>	<i>He sees</i>	<i>He saw</i>	<i>She sees</i>	<i>She saw</i>	<i>They see</i>	<i>They saw</i>
AS P			2%		11%		33%	8%	21%	5%	26%	19%
CPfin	8%	11%	14%	3%	15%	12%	4%	18%	4%	16%	3%	6%

Moreover, verb forms taking a 1st/2nd-person subject actually ignore this type of complementation. However this does not mean that complements with DI reading take advantage of the situation. The analysis shows that it is parenthetical use that is much more common for them, as seen in Figure 2.

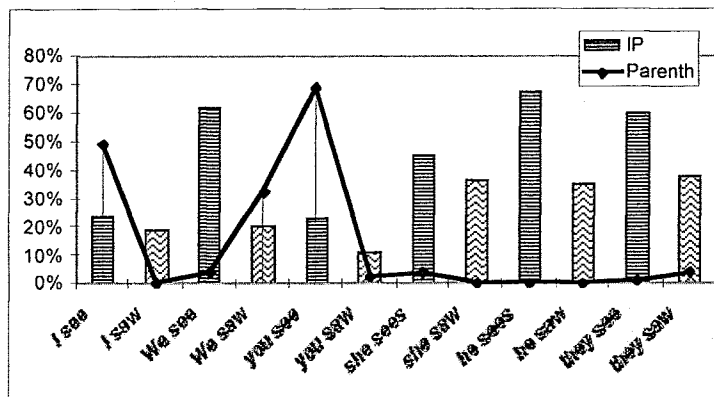


Figure 2. Indirect perception and parenthetical use of SEE (person & tense)

If we take all cases with indirect perceptual reading of the situation, i.e. finite clausal complementation plus the percentage of parenthetical functioning and SEE used as a reference marker (e.g. *see p. 9*), we shall see that they are predominant in the use of SEE and SEES, as shown in Figure 3.

When describing situations with past time reference, the difference between the directness/indirectness interpretation becomes equalized. The Lithuanian language seems to favour finite complementation more than English. Consider the data in Table 6.

Finite clausal complementation and parenthetical use are always an indication of indirectness in perception. As we see in Figure 4, the given type of indirectness is dominant for present tense forms and especially 1st- and 2nd-person subjects, while past tense forms prefer NPs.

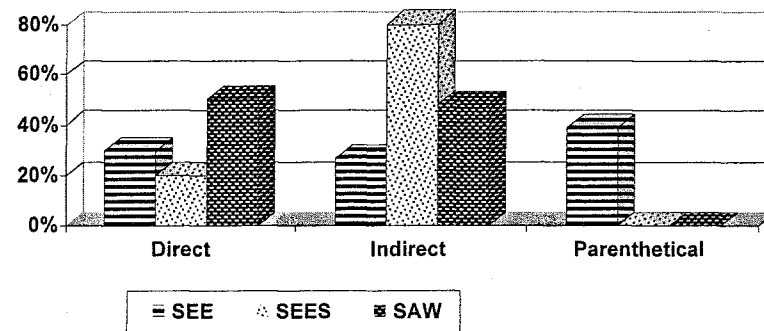


Figure 3. Percentage of Direct - Indirect - Parenthetical use of SEE

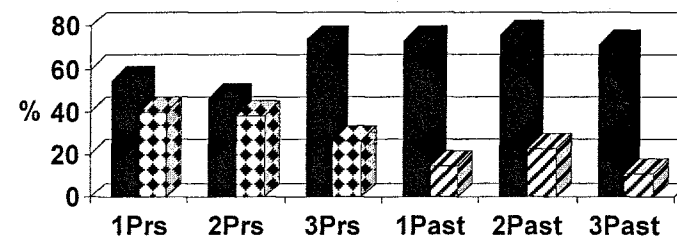


Figure 4. MATYTI ('see') complementation: tense & person (NP vs. CP-finite + Parenthetical use)

Table 6. Frequency of finite CPs in PV Complementation

Present	English	Lithuanian
1st: I see / Aš matau	8%	31.4%
2nd: You see / Tu matai (Sg)	14%	33.4%
3rd: S/he sees / Ji/s/jie mato	5%	34.3%
Past		
SAW & MAT*(Sg)	9%	22%

The calculation of the percentage of NPs denoting perceptually and mentally accessible entities in the present tense form complementation has shown that the percentage of indirectness can increase slightly for this verb. The ratio of abstract nouns to concrete ones in the Direct Object position of MATO ('see': 3rd person present tense singular form) is 1:6, while with MATAI ('see': 2nd person present tense singular form) it is only 1:1.5 and for MATAU ('see': 1st person present tense singular form) it is 1:8 accordingly. This means that a slight quantitative difference that exists between the two types of perception in the situations with present tense reference will actually disappear. However the percentage of nominal complementation with past tense forms is much greater.

With Lithuanian St-verbs there is a clear difference between seeming verbs (ATRODYTI/RODYTIS) and a middle seeing verb MATYTIS⁷ ('see' InfRfl). Lithuanian seeming verbs, like their counterparts in English, can develop a modal meaning of epistemic possibility (uncertainty). A morphologically reflexive verb MAT-YTI-S ('see' Inf.Rfl), when followed by finite clauses, preserves the modal meaning of evidentiality that is characteristic of the verb MATYTI ('see') in cases of finite clausal complementation. As seen in the diagram below, with 3rd-person forms of MATYTIS direct perception dominates, while for seeming verbs ATRODYTI/RODYTIS ('look/seem/appear') description of indirect perception is much more common.

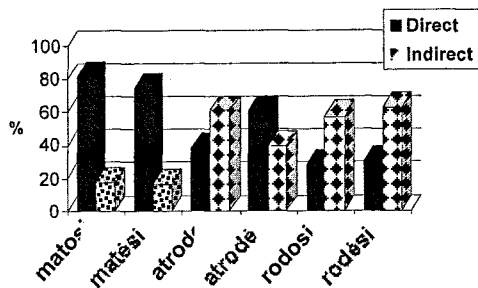


Figure 5. Directness/Indirectness with 3rd person forms of MATYTIS ('see' Rfl) & ATRODYTI/RODYTIS ('look/seem/appear')

⁷The status of these forms in standard Lithuanian is a subject of polemic in Lithuanian linguistics.

Moreover, mention should be made of the fact that 39% of the Lithuanian 3rd-person present tense form ATRODO ('looks/seems/appear') is its use as a parenthetical modal word. This is the form that has got the highest number of occurrences among all the verb forms under study (11,983). It is only 3rd-person subject forms of St-verbs that take finite clausal complementation. Other personal forms describe only cases of direct perception, but their frequency is too low to affect the general tendency of these verbs to be considered as verbs describing indirect types of perception: 1Sg.Present tense form ATRODAU =113, 1SgPast ATRODŽIAU =23, 2SgPres ATRODAI =83 and 2SgPast ATRODEI =12.

The data in Figure 6 demonstrate that the present tense forms of the English verb SEEM are more frequently used to describe mental perception than its past tense form.

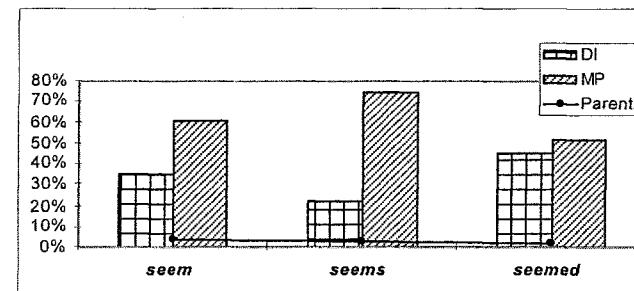


Figure 6. Directness/Indirectness in SEEM vs. Parenthetical Use

The English SEEM does not develop into a parenthetical modal word, as do the Lithuanian ATRODO ('seem'3rdPres) and RODOS ('seem'3rd Present = 'maybe'; a shortened form of the seeming verb RODOSI). The Lithuanian parenthetical modal word MATYTI 'obviously/seemingly', which has developed from the infinitive form MATYTI 'see', takes the second position in terms of its number of occurrences in the corpus, i.e. 6,659. On the contrary, the indirectness reading of SEEM comes from other types of complementation, namely complements introduced by full infinitive forms, as shown in Table 7:

Table 7. Types of SEEM complementation

	to be P	ØP	to-INF	S-that (Ø-S)	Parenth.
SEEM	25%	35%	31%	5% (0.5%)	4%
SEEMS	24%	22%	29%	22% (3%)	3%
SEEMED	18%	45%	29%	5%	2%

4 Concluding observations

The results of the preliminary statistical analysis carried out allow us to assume that an extremely high frequency of the verb SEE in both languages seems to be accounted for by its use either as a parenthetical (pragmatic marker: Aijmer 1997) or as a verb to describe indirect (mental) perception.

The verb SEEM in both languages is predominantly used to describe mental perception with a modal meaning of epistemic possibility.

Though the languages are structurally and genetically very different their syntax and semantics of complementation have much in common. The basic difference in the types of complementation that brings about an indirect reading of the perceptual situation is: (a) non-finite complementation and complex nominal structures in English; and (b) finite clausal complementation in Lithuanian.

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Impoverishment as feature deletion: Dual and plural agreement in Sámi*

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1. Introduction

Bonet 1995 provides an account of neutralizations in the pronominal clitic system of various Romance languages, that crucially relies on the possibility of deleting morphological features prior to lexical insertion (cf. Halle & Marantz 1993). Bonet accomplishes this by positing that "pronominal clitics constitute hierarchical structures of unordered morphological features" (p. 614), in the same way as is familiar from phonology. Under this view, neutralizations, or impoverishments, are the result of rules that delink features from these representations. Spanish spurious *se* provides an illustration, (1). As shown in (2), spurious *se* can be accounted for by assuming that the features representing third person dative of the dative clitic are deleted when co-occurring with an accusative clitic, (2). Now, the feature specification of the elsewhere clitic *se* matches the structure created in (2), hence preventing insertion of *le*.

- (1) a. A Pedro, el premio, se lo dieron. (Bonet 1995:632)
 to Pedro the price se 3rd-acc gave(3rd-pl)
 'They gave the price to Pedro.'
- b. *A Pedro, el premio, le lo dieron. (Bonet 1995:632)
 to Pedro the price 3rd-dat 3rd-acc gave(3rd-pl)

Noyer 1998 challenges Bonet's approach to impoverishment, by claiming that deletion rules like the one illustrated in (2) are insufficient. In a study of Nimborean duals and plurals, Noyer proposes that in order to capture neutralization of dual to plural, a persistent redundancy rule is required, that spells out [-singular] as [+plural] in cases where a [-plural] feature has been

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