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Relevance verbs in English and French: Synonymy and its structural properties

Abstract: This study deals with a particular group of predicates called "predicates/verbs of relevance" or "predicates/verbs of indifference" in the literature. Its purpose is to investigate to what extent verbs of this particular group present common structural properties. It therefore seeks to establish the structural manifestations of synonymy. These structural manifestations are not to be found in argument-function mapping à la Levin (1993), but rather in polarity, decategorialization and sentence structure. Corpus data reveal that syntax, semantics and pragmatics interact in particular ways in the field of relevance. This interaction appears to be grounded in pragmatic constraints arising from the principle of relevance (Sperber and Wilson 1986). The basic idea is that, as relevance is presupposed in human communication and need not be expressed, verbs of relevance are more likely to be used with negative than with positive polarity. Used with positive polarity, they tend to occur in sentence forms that present them as strongly presupposed. Used with negative polarity, they are more likely to occur in the focal area of the sentence. As statements about relevance express speaker's points of view, relevance verbs are also markers of intersubjectivity and are therefore subject to grammaticalization phenomena, such as the omission of prepositions.

Keywords: relevance predicate, indifference predicate, embedded interrogative, polarity, English/French

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1 Introduction

This paper deals with a particular group of predicates called "predicates/verbs of relevance" (Karttunen 1978; Lahiri 2002) or "predicates/verbs of indifference" (Hoeksema 1994; Leuschner 2005, 2006) in the literature. The members of this category vary from one study to another: all studies mention *matter*, besides some periphrastic forms, such as *be relevant*. Karttunen (1978) and Lahiri (2002)

also include *care*, contrary to Leuschner (2006), who explicitly excludes it. Besides *matter* and *care*, Hoeksema (1994) also mentions *bother* and *mind*.

With the exception of Leuschner (2005) and (2006), none of the authors specifies the criteria on which the classification is based. As Hoeksema (1994) demonstrates, these verbs indeed have very little in common, if they are analyzed according to the dominating paradigm in the field of verb typology, i.e., the paradigm based on thematic roles or argument structure (Fillmore 1968; Pinker 1989; Dixon 1991; Dowty 1991, Levin 1993; Levin and Rappaport Hovav 2005). The purpose of this study is to show that they nonetheless share other properties which can serve as a basis for the categorization: a high frequency of negative items in their vicinity (Hoeksema 1994), specific occurrence patterns of canonical and marked sentence structures correlating with polarity (Defrancq 2005) and specific occurrence patterns of prepositions. These properties are probabilistic in nature and can only be revealed through corpus-based research. In other words, the research described here attempts to find structural manifestations of the synonymy which is supposed to hold between relevance verbs.

In work on verb classification, the combinatorial properties of verbs are believed to be determined by and, hence, to reveal some aspects of their meaning. Levin (1993), for instance, states that:

[d]istinctions induced by diathesis alternations help to provide insights into the verb meaning, and more generally into the organization of the English verb lexicon, that might not otherwise be apparent, bringing out unexpected differences and similarities between verbs. (Levin 1993: 15)

This, I will argue, is also the case of the properties examined here. The frequency of negation and the occurrence patterns of canonical and marked sentence structures can be accounted for on the basis of the concept of relevance. To show this, I will draw on the pragmatic interpretation of relevance, as suggested by Sperber and Wilson (1986). The basic idea is that, as relevance is presupposed and, therefore, uninformative, verbs of relevance are more likely to be used with negative than with positive polarity. Used with positive polarity, they only state what is already presupposed and will therefore tend to occur in parts of the sentence that are presented as strongly presupposed, such as the relative clauses of clefts and pseudo-clefts. Used with negative polarity, i.e., expressing lack of relevance, these verbs are more likely to occur in the focal area of the sentence, i.e., the predicate of a canonical (see Lambrecht 1994) or an extraposed sentence (see Kaltenböck 2005). The alternation between sentence forms and their relation with polarity is a unique feature of these verbs, both in English and in French. Furthermore, as statements about relevance express the speaker's points of view, relevance verbs

are also markers of intersubjectivity and are therefore subject to grammaticalization phenomena (Aijmer 2002), such as the omission of prepositions.

The findings in this study are based on the corpus data presented in Section 2. The hypotheses are tested on corpus data for two languages: English and French. The French data are particularly relevant as French has inherently negative verbs that express irrelevance, rather than relevance. Section 3 discusses the argument-function mapping of relevance verbs and Section 4 deals with the extent to which they share properties such as polarity, decategorialization and sentence structure. Section 5, finally, presents the conclusions of this study.

2 Description and data

In the literature, verbs or predicates of relevance are presented as one of several categories of verbs selecting embedded interrogatives. The concept is first used in Karttunen's classification of verbs/predicates governing embedded interrogatives (Karttunen 1978) and later adopted by Lahiri (2002). Karttunen's classification comprises nine categories (class members are mentioned only for the relevance category):

- (a) verbs of retaining knowledge
- (b) verbs of acquiring knowledge
- (c) verbs of communication
- (d) decision verbs
- (e) verbs of conjecture
- (f) verbs of opinion
- (g) inquisitive verbs
- (h) verbs of relevance: matter, be relevant, be important, care, be significant, ...
- (i) verbs of dependency (sic)

It is unclear what the categorization is based on. Karttunen provides no information whatsoever on the criteria that were used. Considering the items that are members of the relevance category, the categorization is not based on structural properties: verbs such as care and matter have entirely different argument structures (see further). Semantically, the items are of course similar to a certain extent, as they are either synonyms of or can be paraphrased with the adjectival predicate (be) relevant, as in (1):

(1) She didn't care what people said.= she didn't consider what people said relevant (BNC ABX)

Some of the predicates in Karttunen's category of relevance are occasionally also called "predicates/verbs of indifference" (Hoeksema 1994; Leuschner 2005, 2006). Hoeksema (1994) uses the label for the relevance verbs *care* and *matter* and for two verbs that are not on Karttunen's list: *bother* and *mind*. The selection criteria are not made explicit, but it is clear that negative polarity is one of them, as the category label includes a negative prefix ("indifference").

Leuschner (2006: 77–78), on the other hand, quoting an analysis in Baker (1968), argues that a predicate of indifference is a predicate that denies the existence of a relation of dependency between antecedents and consequences. In (2), for instance:

(2) "It doesn't matter what you say," said Alice. "You're only a pack of cards!" (BNC, FNS)

Alice states that what her interlocutor says (antecedent) has no bearing whatsoever on what she considers him to be (consequence). Leuschner's definition only applies to predicates that take the embedded interrogative as their subject (*matter*, *make a difference*, *come down to the same*) and not to verbs that take it as their object, such as *care* or *mind*. Leuschner even warns us that predicates of indifference are sometimes erroneously "lumped together" (Leuschner 2006: 79) with verbs such as *care*.

As the aim of this study is to investigate if and to what extent structural properties of verbs reflect synonymy, I will focus on the four verbs presented as synonyms in Hoeksema (1994) (*bother*, *care*, *matter*, *mind*), as well as on two verbs that are semantically similar to them: *count* and *interest*.

Both verbs can be used in a meaning that is similar to that of *matter*, as illustrated in Examples (3), (4) and (5):

- (3) What matters is not just what Parliament decides but how it decides. (BNC A5A)
- (4) A given administrative arrangement is neither good nor bad ... what really counts is what is done with the group once it is established ...(BNC CLH)

(5) What interests me is which rats leave which ship. (BNC C86)

As the focus is on verb classification, periphrastic forms mentioned in the literature were not taken into consideration, except if they could be analyzed as passives. In other words, be important, be relevant, not give a damn are not within the scope of this paper, whereas be interested and be bothered are. Occurrences of no matter were not taken into account because matter is a nominal form in that particular case.

The French items studied here are those that can be considered equivalents of the English verbs. This is true of compter (count), importer (matter) and intéresser (interest). There are no straightforward equivalents of care and mind, but French has two verbs that correspond to care used in the negative: s'en foutre, s'en ficher. These will also be included in the analysis. Etre égal, which is probably the most frequent equivalent of care in a negative context, was not included, as it is a periphrastic form.

The corpora used in this study are the BNC for English (on-line accessible BNC-BYU) and a collection of linguistic data for French, including all the issues published by Le Monde and La Croix in 2000 and a corpus of spoken data compiled at the University of Louvain-la-Neuve (Valibel).1 The BNC amounts to approximately 100 million tokens, the combined French data amount to approximately 38 million tokens.

As pointed out before, the label "relevance verb" is exclusively used for verbs that select embedded interrogatives. This study will not deviate from this principle. The corpus data used here therefore only include occurrences of the verbs that were mentioned before in combination with an embedded interrogative. To find these, all occurrences of a combination of one of these verbs and a wh-item within a five word span to the right and a nine word span to the left were extracted, using the web interface of the BNC-BYU for the English data and WConcord for the French data. In English, all wh-items were taken into account (how, what, where, when, whether, which, why, who, whose). In French, all whitems were taken into account (comment, où, le(s)quel(le)(s), pourquoi, quand, quel(le)(s), qui, quoi, si, including allomorphs that are typical of embedded contexts: ce que, ce qui, ce dont and the use of que in combination with a disjunction, as in (6), which corresponds to English *whether* (see gloss):

¹ I wish to thank Anne-Catherine Simon (University of Louvain-la-Neuve) for making the spoken corpus available.

(6) Il a ajouté: Peu importe qu'ils aient su ou non ce qui allait se passer dans l'après-midi.

'He added: it matters little whether or not they knew what was going to happen in the afternoon.'

(Le Monde, 10.05.2000)

The selected examples were manually checked to ensure that only examples with embedded interrogatives were considered. For English, 2066 cases passed this check; in French only 152. Considering that the total amount of French data is only three times smaller than the total amount of English data, there appears to be a massive difference between both languages in terms of the actual use of these verbs. Two factors seem to contribute to this discrepancy: on the one hand, the fact that one of the most frequent expressions of irrelevance in French is a periphrastic form which is not included in this study. On the other hand, French makes frequent use of nouns, such as *la nature* 'nature', *la façon* 'way', *le nombre* 'number', etc. instead of embedded interrogatives headed by *quel* 'which', *comment* 'how', *combien* 'how much', etc.

3 Relevance verbs: argument-function mapping

3.1 Analysis

Argument structure and its mapping to syntactic functions are believed to uncover fundamental aspects of verb meaning (Levin 1993; Pinker 1989, 2007). The approach to meaning description based on this assumption, consists of three components: firstly, argument structures need to be identified for the verbs under examination and their mapping to syntactic functions, with a focus on alternative mappings for the same arguments (the so-called "diathesis alternations"). Secondly, verbs allowing the same diathesis alternations are grouped together in classes and, finally, classes are compared as to what could be the underlying semantic parameter of the observed variety.

In Levin's classification of English verbs, relevance verbs belong to the category of Psych-verbs (also called Verbs of Psychological State or VPS). The argument structures of VPS include a Stimulus and an Experiencer. In the case of relevance verbs, the Stimulus is the embedded interrogative, i.e., the type of information which is held to be relevant (or not). The Experiencer is the human

NP to whom the Stimulus is held to be relevant (or not).² According to Levin (1993), VPS come in four classes: "amuse verbs", "admire verbs", "marvel verbs" and "appeal verbs", which correspond to four different mappings of Experiencer and Stimulus to syntactic functions:

- "amuse verbs": map the Experiencer to the object and the Stimulus to the subject:
- "admire verbs": map the Stimulus to the object and the Experiencer to the subject;
- "marvel verbs": map the Stimulus to the prepositional object and the Experiencer to the subject;
- "appeal verbs": map the Experiencer to the prepositional object and the Stimulus to the subject.

As will be shown, relevance verbs are found in three of the four VPS classes: "amuse verbs", "marvel verbs" and "appeal verbs".

3.1.1 English relevance verbs

All but one of the relevance verbs are included in Levin's lists of VPS: bother, care, interest, matter and mind. Count is included, but not as a VPS.

Bother is both a "marvel verb" and an "amuse verb", as it can map the Experiencer both to the subject, as in (7) and (11), and to the object function, as in (8). The labels *bother M* and *bother A* will be used to refer to these different mappings. The Experiencer frequently appears as the subject of a passive voice, as in (9) and (10). When the Experiencer is mapped to the subject, the subordinate clause can both occur with (Examples 9 and 11) and without a preposition (Examples 7 and 10):

- (7) Foreigners, they don't bother what they show. (BNC B34)
- (8) It doesn't bother me what they say. (BNC AK9)
- (9) I'm not bothered about where it comes from. (BNC FUK)

² The term used by Leuschner (2006) is "origo-identification", which is the identification of an instance evaluating the relevance expressed by the verb. In traditional role semantics, the origo coincides with the Experiencer.

(BNC FAN)

(10) The Wedding Present want to make records but say they are not bothered how many they sell.(BNC AT1)

(11) Nobody bothered about what you were doing [...]

The availability of structures without a preposition is not reported in Levin (1993). I will argue in Section 4.4 that these structures are the result of a decategorialization process and are not full-fledged syntactic alternatives for the structures with prepositions.

Care and *mind* are "marvel verbs": the Experiencer is mapped to the subject, the subordinate clause is realized as a prepositional phrase, as in (12) and (13). It can however also occur without a preposition, as in (14) and (15). In the case of *mind* the preposition occurs only marginally (see Section 4.4):

- (12) You just have to wonder if those members of the disciplinary committee really care about where the game is going at international level.
 (BNC CH3)
- (13) She didn't mind any more about what people thought. (BNC EWH)
- (14) *She didn't care what people said.* (BNC ABX)
- (15) I don't mind what they think. I've found him again. (BNC JYA)

In both cases, the absence of the preposition will be interpreted in terms of decategorialization.

Interest is an "amuse verb". Its Experiencer is either the object in the active voice (16) or the subject in the passive voice. In the passive voice the subordinate clause can appear with (17) or without a preposition (18):

- (16) What money you may possess doesn't interest me in the slightest! (BNC HGT)
- (17) You're not interested in how it achieves the function, you just observe the function.(BNC JT1)

(18) I'm not interested whether you take him seriously or not. (BNC HV2)

As illustrated in (19) and (20), *matter* is an "appeal verb" as it maps the Stimulus, i.e., the embedded interrogative, to the subject and takes an optional prepositional object referring to the Experiencer:

- (19) Whether intervals are true or false does not matter to listeners [...] (BNC GVJ)
- (20) But my point is that whether it's true or not doesn't matter. (BNC C8N)

Finally, *count* is included in Levin's classification as a "characterize verb" and as a "masquerade verb", but these classes clearly concern other meanings of the verb. Used as a synonym of *matter*, its argument structure is that of an "appeal verb", as it takes a subordinate clause as its subject and an optional Experiencer as a prepositional object (21).

(21) *It's how they deal with mistakes that counts for me.* (www.aikiweb.com/forums/showthread.php?t=11343)

An overview of the different verb classes to which relevance verbs belong is given in Table 1:

Amuse verbs	botherA		interest		
Marvel verbs	botherM	care			
Appeal verbs				count	matter

Table 1: Overview of English relevance verbs and their verb classes according to Levin (1993)

From a usage point of view, it should be noted that the Experiencer-object mapping is quite rare, whether or not the object is prepositional: in all, only 3.3% of the occurrences of *botherA*, *count*, *interest* and *matter* do map the Experiencer to the object or to the prepositional object. In all other cases, the Experiencer is either absent or realized as the subject of a passive structure, as shown in Table 2 (9 examples have been left out, because the clause structure is unclear).

	No Experi- encer	Experi- encer	Subject	Object	Subject of passive	Other	Total
bother A	1	39	0	5	34	0	40
bother M	0	13	13	0	0	0	13
care	0	659	659	0	0	0	659
count	37	0	0	0	0	0	37
interest	0	279	0	7	271	1	279
matter	786	30	0	30	0	0	816
mind	0	213	213	0	0	0	213
Total	824	1233	885	42	405	1	2057

Table 2: Experiencer identification with relevance verbs in the BNC

In other words, English has a strong propensity to map the Experiencer to the subject function in the field of relevance verbs. In 97% (1361/1404) of the cases in which the Experiencer is specified, it is mapped to the subject function, either in the active or in the passive voice.

3.1.2 French relevance verbs

The French relevance verbs are quite similar to their English counterparts: as *care* and *mind*, *s'en foutre* and *s'en ficher* map the Experiencer to the subject and the Stimulus to a prepositional object, as shown in (22). The preposition can be absent, as in (23):

- (22) Je n'ai pas de raison de plier le genou devant M. Chirac, et je me fiche de qui il est.
 - 'I have no reason to give in to Mr. Chirac and I don't care who he is' (*Le Monde*, 02.02.2000)
- (23) on s'en fout un peu ce que les autres pensent quoi 'we don't really care what others think' (Valibel)

As for the relevant English verbs, the absence of the preposition will be considered here a sign of decategorialization and not an alternative structure.

Intéresser displays the same mapping properties as its English cognate interest: Stimulus to subject and Experiencer to object, as illustrated in (24):

(24) Ce qui l'intéresse, c'est ce que pensent les Français, comment la société évolue et comment on peut faire en sorte que nos institutions ou nos pratiques politiques soient le mieux adaptées possible et que les Français, dans tous les domaines, se trouvent effectivement dans la situation la plus favorable pour eux. . . .

'what interests him, is what the French think, how society evolves and how we can make sure that our institutions or our political practices are optimally adapted and that French citizens enjoy, in any kind of area, the best conditions'

(Le Monde, 16.05.2000)

Unlike interest, the French intéresser is not predominantly found in the passive voice (cf. Table 3 below). A significant number of occurrences are found in a reflexive structure, as in (25):

(25) Cette crise devrait conduire à s'intéresser à quel type de société nous voulons. 'this crisis should encourage us to be interested in what kind of society we want'

(*La Croix*, 19.04.2000)

Finally *compter* and *importer* have the same properties as *count* and *matter*: the Stimulus is mapped to the subject, whereas the Experiencer is mapped to an optional prepositional object. In (26), the Experiencer is absent; in (27) it is realized as the clitic lui:

- (26) Ce qui compte ici, c'est ce sur quoi on est d'accord. 'What counts here is on what we agree.' (*Le Monde*, 23.06.2000)
- (27) Il installe une justice expéditive et ne s'embarrasse pas des critiques des défenseurs des droits de l'homme; peu lui importe si plus d'un millier d'innocents croupissent dans les terribles prisons péruviennes. 'He institutes summary proceedings and pays no attention to the criticisms coming from human rights supporters; he does not care if more than a million innocent people starve in those horrible Peruvian prisons.' (*Le Monde*, 30.05.2000)

Lui is the clitic counterpart of a prepositional noun phrase (\hat{a} + N) but cannot take a preposition itself.

As in English, the Experiencer is mostly absent in the corpus data, as shown in Table 3.

	No Experi- encer	Experi- encer	Subject	Object	Subject of passive	Other	Total
compter	7	0	0	0	0	0	7
se ficher	0	11	11	0	0	0	11
se foutre	0	3	3	0	0	0	3
importer	80	6	0	6	0	0	86
intéresser	0	45	0	19	3	23	45
Total	87	65	14	25	3	23	152

Table 3: Experiencer identification with relevance verbs in the French corpora

3.2 Discussion

As pointed out before, verb classification based on argument-function mappings has important merits and its cross-linguistic validity is probably one of the strongest arguments in favor of its linguistic relevance. There are, however, a number of reasons why this approach should perhaps not have priority over other approaches in the particular case studied here.

The first reason has to do with the purpose of the classification. Argument-function mappings provide interesting insights into the fundamental semantic properties of the verbal lexicon. As Levin (1993) states, they are expected to simplify the lexical description of verbs, making it possible to remove from the lexicon all kinds of semantic information that can be derived from them. In the Bloomfieldian tradition, a tradition which Levin explicitly claims, the lexicon should indeed be no more than a list of the idiosyncrasies of a particular language.

However, one may wonder whether the semantic properties shared by *matter* and other "appeal" verbs, such as *appeal*, *niggle*, *jar* are more fundamental than the synonymy that exists to some extent between *matter* and *care*. For traditional lexicographers, for some modern theories of the lexicon, such as WordNet (Miller et al. 1993), and for terminologists (Temmerman 2000), the answer would clearly be negative, as synonymy plays a fundamental role in these approaches to the

lexicon of a language.³ According to Hoeksema (1994), the attraction to negative environments which is typical of relevance verbs is "semantically induced, but independent of argument-structure" (Hoeksema 1994: 281).

Secondly, argument-function mappings of relevance verbs appear to be guite versatile. As pointed out before, the verb bother allows two radically different mappings: in (28) and (29) bother is a "marvel" and an "amuse verb" respectively:

- (28) Foreigners, they don't bother what they show. (BNC B34)
- (29) The Wedding Present want to make records but say they are not bothered how many they sell. (BNC AT1)

In theory, different mappings are expected to be associated with different fundamental semantic properties. However, the meanings of both mappings seem to coincide, especially when bother A is in the passive voice, as in (29). Three informants who were asked if (28) and (29) were semantically different, all agreed that the alternative mapping did not imply fundamental semantic changes. The claim that different argument-function mappings imply different meaning components is therefore not supported in these cases.

Actually, double mappings seem to be fairly common among relevance verbs. Hoeksema (1994), for instance, points out that relevance verbs can undergo "recategorization", i.e., a shift from one verb class to another. In (30), quoted from Hoeksema (1994) and illustrating what he calls an "obsolete" use of matter, the Experiencer is mapped to the subject and the Stimulus to the object function:

(30) If it had been out of doors I had not mattered it so much.⁴ (Henry Fielding, Tom Jones, quoted in Hoeksema 1994)

³ Whether or not synonymy is a fundamental semantic relationship is open for discussion: Lyons (1968: 452) states that synonymy is "not essential to the semantic structure of language".

⁴ In theory, based on Levin's claims, the fundamental properties of matter in (30) should, therefore, be different from the properties it has in (19), where the Stimulus is mapped to the subject and the Experiencer to the object. It has been argued in other cases that the properties are indeed different (cf. Winters 2009 on the verb like) and it is not unlikely that (30) indeed illustrates a use in which the Experiencer is more actively involved than the one in (19). In (30) the meaning of the verb can be paraphrased by 'to give something thought', a paraphrase which seems less appropriate in the case of (19).

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Modern instances of recategorization can be found, not only in the case of *matter* (Example 31), but also in the case of *mind* and *care* (Examples 32 and 33):

- (31) It may seem ruthless and disloyal but Frank Williams wants to win and he doesn't matter how it is achieved.

 (Joe Saward, http://www.grandprix.com/ft/ft00240.html)
- (32) You may call it God, the Universe, the Force, Divine Spirit, Guides, Angels, Higher Self, Buddha, Allah, whatever. It doesn't mind how you address 'it' (you could even try sitting down tonight and asking for help from you inner weirdo!).

 (Sandy Forster (ed.). Inspired to Success, http://www.docstoc.com/docs/
- (33) The answer is domestic violence can (and does) happen to ANYONE. It does not care how smart you are, where you live, how much education you have, what you do for a living, or how much money you make.

 (http://domesticviolenceworkplace.blogspot.com/2009/06/it-can-happento-anyone.html)

Such examples are rare: none of them have been found in the corpus used for this study. However, the very fact that they seem to exist and that the meaning of the verbs is indistinguishable from cases with the normal mapping suggests that argument-function mappings are perhaps not as crucial to the semantic analysis of relevance verbs as to the analysis of other classes of verbs.

4 Relevance: the interplay of pragmatics and lexical semantics

Section 3 briefly referred to synonymy to describe the relationship between verbs belonging to the relevance category. Verbs are called verbs of relevance, because they share a particular meaning. In this Section I will argue that, besides their shared meaning, which I will try to define as accurately as possible using the pragmatic concept of relevance, verbs of relevance also share a number of structural properties. Those are not be found in the area of argument structure, but rather in the area of sentence structure, as defined by Lambrecht (1994), and in the area of decategorialization (Hopper and Traugott 1993).

4.1 The pragmatic concept of relevance

In pragmatics, relevance is of course best known from Grice's maxims of cooperation (Grice 1975) and from Relevance Theory (Sperber and Wilson 1986; Wilson and Sperber 2004). In Relevance Theory the concept of relevance refers to the extent to which a linguistic stimulus or an internal representation allows the receiver to retrieve a positive cognitive effect through a process that is based on inferences. A positive cognitive effect obtains when the receiver's representation of the world is truthfully changed. It involves a relationship between information already available to the receiver and the new stimulus. Relevance is a relative concept: stimuli are more or less relevant according to the cognitive effects they allow and the processing effort that is needed to produce the effects.

I will assume that relevance verbs denote a similar kind of relationship between a Stimulus and an Experiencer, the latter being the receiver in argument structural terms. By using a relevance verb, a speaker states that the type of information denoted by the embedded interrogative produces cognitive or other effects on the Experiencer. In (34), for instance, the effect is cognitive: the speaker indicates that information on local authority spending produces little effect on the reasoning of neo-Keynesians.

(34) To neo-Keynesians it matters little what local authorities spend on revenue account. (BNC G1C)

In (35), the effect refers to a particular kind of behavior: a young football player is said to play viciously because he wants to be the future winner of the game:

(35) Team games always put me off. Football meant standing on a muddy pitch hoping the ball wouldn't come anywhere near me, so that I wouldn't be forced to tackle some vicious little boy who really cared who won the game. (BNC EE5)

One important aspect of human communication as described by Sperber and Wilson (1986) is that it is based on the assumption that linguistic stimuli are relevant. Every utterance presupposes its own relevance. This is not only important for the issue of how human communication is at all possible, but also for the ways in which relevance is lexically and syntactically expressed in the discourse. In the next sections, I will show that the proposed definition of relevance verbs allows for specific predictions about the properties of the structures in which they occur. These predictions concern polarity, sentence structure and signs of decategorialization.

4.2 Polarity

If, as Sperber and Wilson (1986) claim, relevance is presupposed in interaction, relevance expressions should in fact not be very frequent: an explicit statement about relevance is superfluous and will only be made in exceptional circumstances. On the other hand, stating that something is not relevant should occur more often, as it contradicts the assumption of relevance and is thus more informative. In other words, the general properties of relevance predict that relevance verbs will occur more often with negative than with positive polarity.

This is exactly what Hoeksema (1994) found on the basis of corpus data: relevance verbs occur unusually often in utterances with negative polarity. In an 11-million word corpus of texts posted on the internet the percentage of straightforwardly negative utterances is 53% in the case of *care*, 57% in the case of *matter*, 72% in the case of *mind* and 35% in the case of *bother*. If other types of negations are included, which Hoeksema omits to define or illustrate, the proportions are even higher: *care*: 65%, *matter*: 64%, *mind*: 92%, *bother*: 42%. As these figures are much higher in most cases than the ones observed with other VPS (*like*: 29% and *amuse*: 24% for all types of negation), Hoeksema is led to conclude that, with the exception of *bother*, relevance verbs are in fact semi-polarity items.⁵

It should be noted that Hoeksema's examples are not restricted to cases where the relevance verbs govern embedded interrogatives and that the set of verbs tested in his study is smaller than mine. That is why I have replicated Hoeksema's analysis for my corpus data. The results are presented in Tables 4 and 5.

⁵ It is important to note, however, that according to Halliday (1993), the proportion of negative sentences in the corpus he uses is about 6%. The incidence of negative polarity in the case of *bother* is therefore comparatively high. On the other hand, Halliday's (1993) figures only include affixed negations of mainly auxiliary and modal verbs: *isn't*, *cannot*, *wouldn't*, etc. Other quantitative studies on negation, such as Biber (1989) and Tottie (1991) provide frequencies per thousand words. These cannot be compared to Hoeksema's and our data. It is also worth mentioning that at least one English verb is known to undergo an evolution that turns it into an inherently negative verb. In some varieties of American English (Brians 2003), *care* is used without negative polarity in the expression *could care less*:

⁽i) She could care less where Peaches was, but she had to play the game (COCA, FIC)

Although no negation is present, the writer's intention here is to express irrelevance and not relevance.

Both tables include, besides positive and negative polarity, the frequency of interrogative mood and a residual category. Negative polarity covers all cases where the relevance verb appears in combination with a negative item, including cases of raised negation as in (36) and lexical negation as in (37):

- (36) Something or someone behind her didn't seem to care how much noise they were making. (BNC, JY8)
- (37) Folly doubted if she would care what Luke got up to $[\ldots]$. (BNC, H8S)

Interrogative mood was set apart because questions with positive polarity often imply a negative stance of the speaker, especially in rhetorical questions, as in (38), which happen to be quite frequent:

(38) Does it really matter what a few politicians or academics say? (BNC, K5D)

The residual category covers a number of cases with specific features that interact with polarity: quantified predicates as in (39), counterfactual sentences as in (40) and sentences contrasting two opposite polarities as in (41, see further):

- (39) To neo-Keynesians it matters little what local authorities spend on revenue account. (BNC, G1C)
- (40) Alain had rescued her as if he cared what became of her [...]. (BNC, HGD)

Quantified predicates and counterfactual sentences make up the majority of these cases and are obviously related to negative polarity. In the case of mind, the residual category consists mainly of imperatives with negative polarity.

Table 4 shows that negative polarity indeed prevails in English. There are nearly three times more negative examples than positive ones. Four verbs appear most often in negative contexts: bother, care, matter and mind. Even bother, which in Hoeksema's (1994) counts was mostly used with positive polarity, occurs more often in negative than in positive contexts in the BNC. Both of the other verbs, interest and count, show the opposite tendency. Interest is used with negative polarity in only 12.1% of the cases. Count, on the other hand, is never used

	Positive polarity	Negative polarity	Interrogative	Other	Total
bother ⁷	4	46	2	1	53
care	41	541	52	25	659
count	28	0	0	9	37
interest	203	51	3	22	279
matter	54	662	55	45	816
mind	7	119	7	80	213
Total	337	1419	119	182	2057

Table 4: Polarity of the relevance verbs in the BNC

with negative polarity alone. There are however seven cases where both polarities are contrasted, as in (41):

(41) I now know that it's not what happens in the good times that counts, but how you survive the bad [...].
(BNC, G2V)

Count is also often used to set up a contrast between information whose relevance is denied in the preceding discourse and information whose relevance is underlined, as in (42):

(42) It didn't matter a damn to her what Bob Calder thought of her. What counted was what she thought of herself.
(BNC JY7)

Table	5. Polarity	of the releva	ance verhs in	the French corpora
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	Positive polarity	Negative polarity	Interrogative	Other	Total
compter	6	0	0	1	7
se ficher	11	0	0	0	11
se foutre	2	0	0	1	3
importer	4	3	23	56	86
intéresser	35	5	0	5	45
total	61	3	23	59	152

⁶ All occurrences of *bother* have been grouped, whatever their argument structure, as the purpose of this chapter is precisely to find other verb categorizations than those based on argument structures.

The French data are shown in Table 5. In French, positive polarity is twenty times more frequent than negative. All verbs are more often used with positive than with negative polarity. As intéresser and compter are the equivalents of interest and *count* they are expected to occur more often with positive polarity. *Compter*, for instance, is also often used to underline a contrast, as in (43):

(43) Parler de moi, ca ne m'interesse pas, dit Gaccio, d'entrée. Ce qui compte, c'est ce qu'on voit à l'antenne.

'I'm not interested in talking about myself, Gaccio said right away. What counts is what we see on television.'

(Le Monde, 14,02,2000)

In the other cases, the results are unexpected, but they are mainly due to two phenomena which are typical of French: on the one hand, French has inherently negative verbs such as s'en ficher and s'en foutre. On the other hand, importer, which is the French equivalent of *matter*, is rarely used in combination with negative polarity (3.5% of the occurrences). More than 90% of its occurrences are either interrogative or combined with the quantifier peu 'little', as in (44) and (45):

(44) Et qu'importe finalement si des codes de bonne conduite ont été soigneusement suivis ou non.

'And what does it matter whether rules of good conduct have been carefully applied or not.'

(*La Croix*, 04.10.2000)

(45) peu importe finalement comment vous parlez 'at the end of the day it matters little how you speak' (Valibel)

As pointed out before, these cases come close to negations (see for instance Béguelin 2009): the interrogative utterance is a rhetorical question, casting doubt on the relevance of the information, whereas the quantifier strongly reduces the assertoric force of the utterance. Considering that all interrogative examples and examples in the residual category are of this type, *importer* clearly appears to be used to express irrelevance rather than relevance.

In sum, speakers of both languages more often refer to irrelevance than to relevance, which is expected. French differs from English in that it possesses items that express irrelevance without resorting to negation, and that negation is expressed by means of a quantifier in quite some cases. In both English and French, two verbs escape the general tendency: the cognates *interest* and *intéresser* and *count* and *compter*.

4.3 Sentence structure

The analysis of relevance in terms of presupposition, as explained in Section 4.1, also has structural implications. Since Lambrecht (1994) it is widely acknowledged that sentence structures tend to vary depending on the information status of the predicate: predicates that are in the focus of the sentence tend to correlate with canonical sentence structure; predicates that are presupposed are more likely to appear in marked structures such as clefts (Lambrecht 1994 and 2001; Gundel 2002; Steedman 2000; Rooth 1992). Applied to relevance verbs, this implies that the corpus data are likely to yield different types of sentence structures depending on the polarity of the sentence. Relevance verbs with negative polarity are focal, as irrelevance is unexpected, whereas the same verbs combined with positive polarity are presupposed. Canonical sentence structures are therefore expected to be more frequent in the case of relevance verbs with negative polarity, whereas marked sentence structures are expected to be more frequent in the case of positive polarity.

According to Lambrecht (1994), the canonical sentence structure of English consists of a topical subject followed by a focal predicate, as in (46):

```
(46) I didn't care how I felt after you'd gone.

TOP FOC
(BNC, JY0)
```

In case a subordinate clause is mapped to the subject function, the canonical form of the sentence is extraposition. Kaltenböck (2005) indeed analyzes the extraposed subordinate clause in English as topical and the verb phrase following *it* as the focus:

```
(47) [...] it didn't matter who or what she was.

FOC TOP

(BNC HHW)
```

Marked sentence forms include clefts (48) and pseudo-clefts (49) (Lambrecht 1994, 2001), where the presupposed predicate is hosted by a relative clause, whereas the phrase in focus is marked by the use of a copula:

(48) [...] it's not what you know that counts, but who. FOC PRES (BNC CBC) (49) [...] what bothers me is how they can do that. PRES FOC (BNC AT3)

In the case of relevance verbs, what the corpus data are expected to show is a difference in syntactic realization in combination with positive and negative polarity. All other things being equal, clefting is only expected to occur when relevance verbs are combined with positive polarity. Canonical structures are expected to occur both with positive and negative polarity, as they are the unmarked case. According to Lambrecht (1994) unmarked sentence forms can indeed be used for marked information structure, but marked sentence forms cannot be used for unmarked information structure.

The English data are presented in Table 6. Table 6 proposes for all verbs a breakdown according to polarity/mood and sentence structure. Sentence structures include canonical sentences, clefts, extraposed structures and a category of unclear cases ("other"). Polarity is broken down as previously in Table 4. Some options are not allowed for argument structural reasons: when the embedded interrogative cannot be mapped to the subject function, as is the case with care and mind, it cannot be extraposed either.

Overall, canonical sentences predominate for both types of polarity. Extraposition is frequent with negative polarity and rare with positive polarity, as predicted. Clefting is not frequent in the corpus and is limited to cases with positive polarity, as expected. On the whole, relevance verbs do appear to share basic tendencies with regard to sentence structures. However, there is also a sharp contrast within the group with regard to clefting: verbs that allow the Experiencer to be mapped to the subject (directly or through the passive voice) opt substantially less for clefting than verbs that do not allow Experiencer-subject mapping. Frequencies of clefting in the context of positive polarity lie between 0 and 7% in the case of care, interest and mind and between 75 and 93% in the case of bother, count and matter.

The contrast probably stems from the fact that animate subjects are more typical topics than embedded clauses (Givón 1992). Relevance verbs that allow Experiencer-subject mapping (care, interest, mind) possess an animate subject and are therefore endowed with more typical topics than the other ones. This quite logically in turn results in a higher frequency of canonical structures even in the context of positive polarity. The frequencies thus reflect the complex

Table 6: Sentence structures in English

	Polarity or mood	Canonical sentences	Clefts	Extra- position	Other	Total
bother	+	1	3	0	0	4
	_	43	0	3	0	46
	other	3	0	0	0	3
care	+	37	3	-	1	41
	_	538	0	-	3	541
	other	77	0	-	0	77
count	+	2	26	0	0	28
	_	0	0	0	0	0
	other	1	8	0	0	9
interest	+	191	11	1	0	203
	_	49	0	0	2	52
	other	23	2	0	0	25
matter	+	0	42	12	0	54
	-	16	0	646	0	662
	other	4	14	82	0	100
mind	+	7	0	_	0	7
	_	119	0	_	0	119
	other	87	0	-	0	87
Total	+	238	85	13	1	337
	_	765	0	649	5	1419
	other	195	24	82	0	301

interplay between lexical meaning, polarity, argument structure and sentence structure, in which lexical meaning and polarity determine the basic tendencies in the area of sentence structure, which are then reinforced or weakened by argument structural properties.

The French corpus data in Table 7 confirm the conclusions drawn from the English data. As *se ficher* and *se foutre* are verbs of negative relevance, no polarity breakdown is proposed in either case. As both verbs are used affirmatively in all cases, the data for *se ficher* and *se foutre* are included in the total figures for negative polarity.

Overall, canonical structures are frequent in the case of *se ficher*, *se foutre* and *intéresser*. In the latter case canonical structures are more frequent with positive than with negative polarity. The association between positive polarity and clefting is confirmed: 42.6% of the examples with positive polarity are clefted and clefting never occurs in structures with negative polarity. Extraposition does not

	Polarity	Canonical	Clefts	Extraposition	Other	Total
compter	+	1	5	0	0	6
	_	0	0	0	0	0
	Other	1	0	0	0	1
se ficher		11	0	0	0	11
se foutre		3	0	0	0	3
importer	+	0	1	3	0	4
	_	0	0	3	0	3
	Other	2	4	73	0	79
intéresser	+	20	14	3	0	37
	_	4	0	2	0	5
	Other	2	0	0	0	2
Total	+	21	20	6	0	47
	_	18	0	5	0	23
	Other	5	4	73	0	82

Table 7: Sentence form of sentences with relevance verbs in French

appear to be specifically linked with negative polarity: only 21.7% of cases with negative polarity are extraposed. However, if we add all examples of *importer* combined with a quantifier, the ratio of extraposition in negative contexts raises to 70.4%. As mentioned in Section 4.1, these examples imply negation. For lack of data, the interaction with argument structure cannot be checked in French.

Both in English and in French the corpus data confirm the hypotheses put forward: the occurrence of particular sentence structures can be predicted from a combination of lexical semantics and polarity: clefting, for instance, is limited to contexts where relevance verbs occur in combination with positive polarity. Positive relevance is indeed uninformative and therefore compatible with structures that mark presupposition. Extraposition, on the other hand, is strongly (but not exclusively) associated with negative polarity. Negative relevance is informative and therefore compatible with the focal status of the predicate in extraposed structures.

4.4 Decategorialization

Decategorialization is a process whereby lexical items such as nouns and verbs lose the typical grammatical properties of their paradigm (Hopper and Traugott 1993: 106–107). In the case of verbs, these properties typically are person, tense, aspect and modality markers and argument structure. For a verb, losing its ability to support PTAM markers and argument structure is a manifestation of decategorialization (Haspelmath 1999; Thompson and Mulac 1991; Thompson 2002).

As mentioned before, the subordinate clause of a relevance verb, when it is not the subject, can occur with or without a preposition. Both uses are illustrated in (50) and (51):

- (50) Foreigners, they don't bother what they show. (BNC B34) (=7)
- (51) Nobody bothered about what you were doing [...] (BNC FAN) (=11)

From an argument-structural point of view, such pairs can be analyzed as constituting an alternation. The conative alternation discussed by Levin (1993), for instance, consists of pairs of structures, such as the ones in (52) and (53), which, as far as syntax is concerned, only differ with respect to the use of the preposition:

- (52) *Carla hit the door.* (= 12d in Levin 1993)
- (53) *Carla hit at the door.* (= 14d in Levin 1993)

From a grammaticalization point of view, the syntactic versatility can be analyzed as an instance of decategorialization. The absence of the preposition in (50) indeed affects the argument structure of the verb, and can therefore be analyzed as a manifestation of decategorialization. Such an analysis has been proposed by Defrancq and De Clerck (2009) and Defrancq and De Sutter (2010) to describe similar examples of the verb *depend* that lack the preposition *(up)on*:

(54) Do I get more profit than I paid in? Depends how well the business is doing. (BNC KSV = Example (40) in Defrancq and De Clerck 2009)

There are several reasons why the second analysis is to be preferred. The first reason has to do with the meanings of structures belonging to alternations. In a real alternation, these meanings tend to differ in a systematic way: in (52), for instance, the structure without a preposition states that there is physical contact between Carla and the door, whereas the use of the preposition at in (53) implies that there is no such physical contact. Whatever the verb (hit, cut, ...), the presence or absence of the preposition will have the same effect: if there is no prepo-

sition, physical contact is assumed; if there is a preposition, physical contact is assumed not to take place.

In the case of relevance verbs the semantic difference between structures with and structures without a preposition seems to be difficult to pin down. The informants who were consulted for this study either did not perceive any difference between (50) and (51) or stated that the relevance verb in (50) seemed to have a more "general" or "absolute" meaning than in (51), referring to an attitude of indifference rather than indifference about a particular subject. Attitudinal meaning is a typical feature of items that acquire pragmatic functions through a process of grammaticalization (Aijmer 2002). The informants' intuition about the semantics of prepositionless structures thus supports the analysis in terms of decategorialization.

The second reason is concerned with the input structures. All relevance verbs whose subordinate clause is not the subject, are affected, whatever the structure they occur in: passive (be bothered, be interested) or non-passive structures (bother, care, mind). Genuine alternations, on the contrary, usually hold between uniform sets of structures. The conative alternation, for instance, is a relationship between a set of uniformly transitive structures and their prepositional counterparts. Decategorialization does not require input structures to be of a particular kind. It can affect any kind of item and any kind of structure. This again gives support to the idea that the omission of the preposition in the case of relevance verbs is more likely to be a sign of decategorialization.

Finally, from a theoretical point of view, relevance verbs are very likely to show signs of decategorialization because they are directly involved with intersubjectivity, a well-known source of grammaticalization phenomena (Traugott 1995, Traugott and Dasher 2002). Broadly speaking, intersubjectivity is concerned with the linguistic expression of the speaker's relation to textually referenced or allowed statements, assumptions and inferences, which are frequently referred to by the cover term *points of view* (cf. White 2000, 2003). As shown by Defrancq and De Clerck (2009) and Defrancq and De Sutter (2010), verbs used intersubjectively undergo a process of decategorialization which, among other effects, affects the preposition. A verb like depend, which governs a prepositional phrase, is used much more often without a preposition in intersubjective contexts than in non-intersubjective contexts.

As relevance verbs deny or confirm relevance, they can be used intersubjectively and express the speaker's relationship to a point of view. By declaring a point of view relevant or irrelevant, speakers direct the argumentation in a way that suits their purposes. As demonstrated by Leuschner (2006:88), relevance verbs are used, for instance, to anticipate possible (counter)arguments (supposedly) supported by the addressee. Example (55) illustrates this anticipating move: (55) PSOJA (shouting) Out, what did I tell you?
PSOJF Mummy
PSOJA (shouting) I don't care what you're gonna say go out
(BNC KD1)

Speaker PS0JA rejects PS0JF's aborted attempt to reason her into letting someone enter the room. She does so by stating that nothing of what PS0JF is about to say is relevant enough to make her change her mind.

On the contrary, used with positive polarity, relevance verbs can also stress the importance of an argument, generally after a first discursive move that rejects another argument. In (56), the speaker's aim is to speak out in favor of older workers. He therefore stresses the importance of experience by presenting it as more relevant than physical strength. In this case, the relevance verb is not used to reject a point of view, but to signal what argument is the most convincing in the mind of the speaker.

(56) He realized that experience in the quarrying industry is certainly something that you don't get rid of. You know fair enough, some of the older men can't move as fast as a eighteen year old, but on the other hand it's what they got in their head that counts
(BNC HUY)

As pointed out before, argument structure is expected to be affected by the decategorialization process associated with intersubjectivity. The figures in Table 8 show that this is the case: the figures represent all instances of the four relevance verbs that can occur with or without a preposition in the spoken part of the BNC. First and second person instances have been separated from instances in third person, because only the former can be used intersubjectively.

Table 8: Use of the preposition in English

	No preposition	Preposition	% no preposition
bother 1st & 2nd persons	9	3	75.0
bother 3rd person	3	5	37.5
care 1st & 2nd persons	73	4	94.8
care 3rd person	13	4	76.5
interest 1st & 2nd person	5	21	19.2
interest 3rd person	2	22	8.3
mind 1st & 2nd person	44	0	100.0
mind 3rd person	4	1	80.0
Total	152	60	71.7

It appears that for all verbs, except *interest*, the preposition is more often absent than present. As expected, occurrences in first and second person drop the preposition more often than occurrences in third person, but even third person instances are often affected, especially with care and mind. This does not necessarily contradict the claim about the relationship between intersubjectivity and decategorialization: as decategorialization becomes frequent in intersubjective contexts, it becomes more likely to also affect occurrences that are not intersubjective, through the effect of analogy (see Hopper and Traugott 1993 on analogy and grammaticalization). In this respect, care and mind have gone a longer way on the grammaticalization path: they are used more often with an intersubjective function (high frequency of first and second person forms) and decategorialization is more frequent in intersubjective contexts as well as in nonintersubjective ones.

While the spoken component of the BNC provides a workable amount of English data to analyze the importance of decategorialization, the French spoken corpus used for this paper only provides a handful of examples. In French, 3 verbs take prepositions: se ficher, se foutre, intéresser. Together they occur five times in the spoken corpus. Only one of the examples lacks the preposition, as illustrated in (57).

(57) bon on connaît beaucoup de monde alors on pf on s'en fout un peu ce que les autres pensent quoi

'well, you know a lot of people so you pf you don't really care what other people think'

(Valibel)

The verb is not used intersubjectively; it is in third person and has a generic pronoun *on* 'you', 'one' as its subject. Obviously, the lack of data forbids any reliable conclusion about decategorialization of relevance verbs in French.

5 Conclusions

The aim of the study was to find structural manifestations of synonymy. To that effect, a set of verbs was selected, which are labeled in the literature "verbs of relevance" or "verbs of indifference". The use of these particular semantic labels proves that these verbs are considered to be synonyms by the authors involved. It was shown that, although they are considered synonymous, relevance verbs belong to different argument-structural categories. In order to determine what other structural properties might reflect synonymy, the pragmatic concept of relevance was analyzed and three structural properties were hypothesized to be associated with the lexical expression of relevance: negation, marked sentence structure (and, in particular, clefting) and decategorialization. The frequencies of these properties were analyzed on the basis of corpus data.

This study shows that most of the verbs that were analyzed here do share a number of properties, including structural properties, despite having different argument structures. From the initial set of verbs, only the English verb *interest* and its French cognate *intéresser* do not display the expected patterns. English *count* and its French cognate *compter* differ from other relevance verbs with respect to one of the properties.

The properties investigated derive straightforwardly from a set of independent assumptions about relevance in pragmatic theory. Negative polarity, interaction between polarity and sentence structure and decategorialization are structural reflections of the presuppositional status of relevance and the inherent intersubjectivity of lexical expressions of relevance. As such they substantiate the central claim of this paper, i.e., that relevance verbs constitute a category, even though their different argument-function mappings seem to suggest otherwise. Unlike argument-structure, the verbs' particular relationship with negative polarity, marked sentence structure and decategorialization are manifestations of synonymy.

Relevance verbs share a number of properties which reflect an interplay between pragmatics, syntax and lexical semantics. As pragmatic relevance is presupposed in human interaction and therefore uninformative, verbs expressing relevance are expected to occur less frequently with positive polarity. As sentence form is determined by information structure and as relevance is presupposed and, therefore, uninformative, relevance verbs are also expected to occur in marked sentence types, such as clefts that present the information as presupposed. Relevance being presupposed, the denial of relevance is an intersubjective process which is therefore likely to be subject to grammaticalization processes, such as the absence of preposition in front of the embedded interrogative denoting the Stimulus.

Relevance being a universal property of human communication, verbs of relevance from different languages are expected to share the same properties. For English and French this hypothesis seems to hold for most properties. Differences exist between the two languages with regard to the availability of inherently negative items and with regard to argument realization and grammaticalization. Only French possesses inherently negative items. English seems to be developing one currently through the use of *could care less* in the sense of *couldn't care less*. In English, the use of prepositions in front of embedded interrogatives strongly correlates with polarity. In French, such a conclusion could not be reached on the

basis of the available corpus data. French also has a stronger propensity to express negative polarity through interrogative mood and minimizing quantifiers.

As all linguistic categories, the category of relevance verbs has central and peripheral members in both languages. English interest and count and their French cognates *intéresser* and *compter* clearly jump out as atypical.

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