The Old English exponent for the semantic prime TOUCH.
Descriptive and methodological questions.[1]

The aim of the article is to identify the exponent for the semantic prime TOUCH in Old English. Therefore, this research contributes to the frame of the Natural Semantic Metalanguage Research Programme (NSMRP) by applying it to the study of a historical language. Throughout such an application several descriptive and methodological questions arise. On the descriptive side, it is necessary to propose a cluster of semantic, morphological, textual and syntactic criteria that allow for the identification of the prime at stake, given that the nature of the object of study is not compatible with the translation into the native language generally adopted by the NSMRP. The analysis focuses on the category *actions, events, movement, contact* and relies on data retrieved from the *Historical Thesaurus of the Oxford English Dictionary*, the *Dictionary of Old English Corpus* and the lexical database of Old English *Nerthus*. Although the cluster of criteria evinces a clear candidate for semantic prime it also raises the methodological issue of the distinction between the semantic prime and the hyperonym because some of the criteria used in the search for the former also play a role in the process of identification of the latter. The conclusion is reached that the verb *hrīnan* is the main exponent for the semantic prime TOUCH in Old English because it satisfies the criteria of meaning, word-formation, textual frequency and syntactic complementation.

1. Introduction

The aim of this research is to contribute to the development of the Natural Semantic Metalanguage Research Programme (henceforth NSMRP) as put forward by Goddard and Wierzbicka (1994, 2002a, 2002b) by applying it to a historical language like Old English (hereafter OE). More specifically, this article discusses the descriptive and methodological questions that arise in the search for the exponent for the semantic prime TOUCH in OE. Given the choice of the language of analysis, this article also aims at contributing to the research line of semantic primes in OE pursued by Martín Arista and Martín de la Rosa (2006), de la Cruz Cabanillas (2007) and Guarddon Anelo (2009), who have identified the OE exponents for the semantic primes belonging to the categories Substantives, Determiners and Quantifiers, as well as adpositions and the descriptors BIG/SMALL. These works insist on the idea that, in spite of the nature of the available linguistic evidence, semantic primes constitute a theoretical resource of explanatory nature for the lexical analysis of OE and the role played by lexical primes in word formation processes. From the point of view of the NSMRP, the applicability of this approach to historical languages undoubtedly represents a step forward in explanatory validity, since this field has not been examined in depth and the criteria required for selecting the exponents of the semantic primes in this kind of languages have not been thoroughly established.

Overall, one fundamental difference distinguishes previous work in semantic primes in OE from research in living languages. Whereas the identification of exponents in living languages relies on the linguistic knowledge of speakers of the language of which exponents are being searched for, semantic primes in a historical language have to be found by indirect methods. Martín Arista and Martín de la Rosa (2006) and Guarddon Anelo (2009) identify the OE exponents for semantic primes by measuring textual frequency, so that the most frequent of the candidates for prime exponent is selected. De la

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Cruz Cabanillas (2007) adds the principle of lexical iconicity to the frequency criterion. This research, instead of considering frequency or the collocations of the words only, is based on an array of morphological, semantic and syntactic criteria, with which conclusions are also expected on the methodological side that refine the criteria of selection of the exponents for semantic primes in historical languages. The rest of the paper is organized as follows. In section 2 the relevant aspects of the NSMRP are reviewed and the methodological basis of the research is presented. Section 3 is the analytical part and, finally, section 4 draws the conclusions of the undertaking.

2. Theoretical and methodological basis

The central idea of the NSMRP is that *there is a set of simple, indefinable meanings - universal semantic primes- which have concrete linguistic exponents in all the world's languages* (Goddard and Wierzbicka 2002a: 2). Therefore, every natural language can be defined by a metalanguage ruled by the principle of reductive paraphrase, which can be defined as the capacity of every language to explain complex concepts by means of simpler and irreducible ones. Indeed, this set of semantic primes can be used within the given language with a proper grammatical structure with the same expressive power as a full natural language. The first inventory of primes of the NSMRP proposed by Wierzbicka in the 1970's was comprised of 14 different primes. Over the years, the inventory of semantic primes has been enlarged, to reach in its present state a total of 64 primes, divided into 16 categories, given by Figure 1:

Substantives:	I, YOU, SOMEONE, PEOPLE, SOMETHING/THING, BODY
Relational substantives:	KIND, PART
Determiners:	THIS, THE SAME, OTHER/ELSE
Quantifiers:	ONE, TWO, SOME, ALL, MUCH/MANY, LITTLE/FEW
Evaluators:	GOOD, BAD
Descriptors:	BIG, SMALL
Mental predicates:	THINK, KNOW, WANT, FEEL, SEE, HEAR
Speech:	SAY, WORDS, TRUE
Actions, events, movement, contact:	DO, HAPPEN, MOVE, TOUCH
Location, existence, possession, specification:	BE (SOMEWHERE), THERE IS, HAVE, BE (SOMEONE/SOMETHING)
Life and death:	LIVE, DIE
Time:	WHEN/TIME, NOW, BEFORE, AFTER, A LONG TIME, A SHORT TIME, FOR SOME TIME, MOMENT
Space:	WHERE/PLACE, HERE, ABOVE, BELOW, FAR, NEAR, SIDE, INSIDE
Logical concepts:	NOT, MAYBE, CAN, BECAUSE, IF
Intensifier, augmentor:	VERY, MORE
Similarity:	LIKE/AS/WAY

Figure 1: Semantic primes by category (Goddard 2010).

The different exponents for these semantic primes have been proposed for several languages such as English, French, Russian, Spanish, Chinese or Japanese, among others. As has already been remarked, some exponents have also been found in OE.

The starting point of the search for the exponent for TOUCH in OE is the main hypothesis of the NSMRP, to wit, the existence of units to express the concepts represented by each semantic prime in every natural language. However, OE is no longer spoken and only some written records from this period survive. Hence, the analysis of this language by means of the NSMRP is very dependable on surviving texts, since there is no direct way to check the results with native speakers. Therefore, it seems necessary to widen the scope of analysis as much as possible, beginning with the selection of the data for analysis. With this aim, I have consulted both lexicographical and textual sources. The former provide the

lexicological information on meanings, senses and hyponymy while the latter yield the textual occurrences of the words listed by dictionaries and thesauri. The combination of textual and lexicographical sources can be described in the following terms. I have consulted *The Historical Thesaurus of the Oxford English Dictionary*, henceforth HTOED, (Kay *et al.* 2009) in order to look up the OE verbs conveying the meaning 'touch'. The HTOED provides a comprehensive description of the evolution of the vocabulary of English from OE until Present-day English while offering a systematic account of lexical organization based on fields and subfields that reflect hyponymy or progressive lexical specialization. On the textual side, I have resorted to *The Dictionary of Old English Corpus* (hereafter DOEC), compiled for *The Dictionary of Old English* (henceforth DOE), in order to retrieve the information relating to the number of textual occurrences and syntactic behaviour. The DOEC gathers all the OE surviving texts and consists of 3,060 texts of different genres dated from the 6th century until the end of the OE period, with a total of approximately three million words. Along with the unlemmatized forms that appear in the corpus, it is necessary to have access to a list of lemmas and the information on lexical derivation, which has been provided by the lexical database of OE *Nerthus* (www.nerthusproject.com). *Nerthus* contains approximately 30,000 entries and draws on Clark Hall's *A Concise Anglo-Saxon Dictionary* (1996) and, to a minor extent, on Bosworth and Toller's *An Anglo-Saxon Dictionary* (1973) and Sweet's *The Student's Dictionary of Anglo-Saxon* (1976).[2]

3. Finding the OE exponent for the semantic prime TOUCH

With this background, the analysis carried out in the remainder of this journal article focuses on the HTOED category *actions, events, movement, contact* involves four criteria: semantic, morphological, textual and syntactic. The semantic criterion can be formulated as follows: the exponent for the semantic prime should conform as much as possible to the prototype of the semantic prime. The morphological criterion stipulates that the exponent for the semantic prime should constitute a source rather than a target of lexical derivation.[3] The textual criterion requires that the most frequent candidate for prime exponent is selected. Finally, the syntactic criterion, which is only applicable to verbs and derived predications such as deverbal nominalizations and the like (other similar derived categories), gives priority for prime exponent to the verb with direct rather than oblique complementation patterns (morphological case government), or to the prime exponent with the widest choice of complementation patterns. All four criteria boil down to markedness, as defined by Croft (1991), Givón (1995) and Martín Arista and Ortigosa Pastor (2000). Croft (1991), distinguishes three types of markedness, namely qualitative (structural), quantitative (textual) and distributive (coding and behaviour). According to Croft (1991: 59-60):

> (...) the marked member is expressed by at least as many morphemes as the unmarked member; the unmarked member can occur in at least as many inflectional distinctions and in at least as many syntactic contexts as the marked member, and the unmarked member is textually at least as frequent as the marked member.

[2] See Martín Arista (fc.-a, fc.-b) on the latest advances of the *Nerthus* Project.

[3] It has to be remarked in this respect that the morphological inheritance produced by lexical derivation is often parallel to the lexical inheritance that links hyponyms to the corresponding hypernym.

To the types of markedness proposed by Croft, Givón (1995: 25) adds substantive markedness, which can be broken down into communicative and cognitive markedness. Martín Arista and Ortigosa Pastor (2000) assess communicative markedness on the grounds of the degree of topicality of the noun phrase. As for cognitive markedness, which is more relevant for this study than communicative markedness, Martín Arista and Ortigosa Pastor (2000) measure the former on the basis of iconicity, in such a way that the less iconic the linguistic representation is with respect to the extralinguistic reality the more marked it becomes. Given these definitions, the four criteria proposed for selecting exponents for semantic primes can be justified by the concept of markedness because, ultimately, markedness instantiates the principle of reductive paraphrase, given that marked concepts (structurally, textually or cognitively) are explained in terms of unmarked concepts (less complex, more frequent and more iconic than their marked counterparts).

These premises call for the following steps of analysis: (i) the identification of the possible exponents for TOUCH in OE, (ii) the study of word-formation and hyponymy relations, (iii) the quantification of the occurrences of these verbs in the DOEC and (iv) the analysis of the syntactic behaviour of the OE verbs. These steps are discussed in turn.

Beginning with the identification of the candidates for exponent for the semantic prime TOUCH, the HTOED has been consulted. A set of verbs has been selected that convey, among others, the sense of 'contact with the hand'. Such verbs have been found under the section 'The World' and within the category of 'Physical sensibility'. The relevant section and categories of the HTOED appear in Figure 2:[4]

01. the world
01. 03 physical sensibility
01. 03. 04. (n.) touch
01. 03. 04. 02 (vt.) Touch
01. 03. 04. 02. 01. (vt.) Touch/feel with the hand
01. 03. 04. 02. 01. (vi.) Touch/feel with the hand

Figure 2. Sections, categories and subcategories of the HTOED where 'touch' is found.

The decision reflected by Figure 2 has been motivated by empirical reasons. Firstly, it is necessary to restrict the object of study to a manageable number of verbs. A search launched on the lexical database of OE *Nerthus* turns out 24 hits of 'touch', most of them verbs. With the parameters set by Figure 2, the inventory is reduced to nine: *(ge)hrīnan* (vt.), *(ge)handlian* (vt.), *(ge)felan* (vt.), *ætfeolan* (vt.), *onhrinan* (vt.), *(ge)ðaccian* (vt.), *(ge)hrepian* (vt.), *(ge)grapian* (vi.) and *ætfeohtan* (vi.).[5] Of these, *ætfeohtan* will not be disregarded because it shows only one occurrence in the DOEC and its meaning is not related to physical contact.[6] Secondly, it is the case that in diachronic semantics figurative meanings evolve from literal meanings, rather than vice versa. For example, the polysemy of the following verbs can be explained as an instance of extension of literal to non-literal meaning:

(1)
OE *āngietan* 'seize' > 'see, hear' > 'understand'
OE *grīpan* 'seize' > 'understand'

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[4] The following abbreviations are used: vt. (transitive verb) and vi. (intransitive verb).

[5] The prefix *ge-* between brackets indicates that a given verb appears in the texts both as a complex and a simplex form. The DOE opts for writing two entries, one for the simplex and another one for the complex form, but other dictionaries prefer to include just one entry. On the causes of this alternation, see Martín Arista (2012).

[6] *Ætfeohtan*: to struggle (against); of a blind person: *folmum ætfeohtan* 'to flail around' (DOE).

OE *tōdælan* ‘separate’ > ‘distinguish’
OE *scādan* ‘separate’ > ‘distinguish’
(examples from Koesch 1904: 4-12)

For the reason illustrated by example (1), verbs in the areas of emotion or knowledge have been put aside since they represent non-literal extensions of literal verbs of physical contact.

Once we have selected the possible candidates for the OE exponent for TOUCH, the next step is to check them in *Nerthus* database and retrieve all the relevant information concerning the morphological status of these words, since lexical derivation is one of the main factors to determine the exponent for TOUCH. The analysis throws the results presented by figures 3-10.[7]

Prefixed	adjective	*ungehrinen*	untouched
Prefixed	noun	*æthrine*	touch
Compound	noun	*handhrine*	touch
Zero derived	noun	*(ge)hrine*	sense of touch; touch; contact
Suffixed	noun	*(ge)hrinenes*	touch, contact
Suffixed	noun	*hrīning*	touch
Zero derived	noun	*onhrine*	touch, contact
Compound	noun	*wīfgehrine*	contact with woman
Prefixed	verb	*āhrīnan*	to touch, handle
Primitive	verb	*(ge)hrīnan*	to touch, lay hold of, reach, seize, strike; have connection with
Prefixed	verb	*onhrīnan 1*	to touch, lay hold of
Prefixed	verb	*oðhrīnan*	to touch; move

Figure 3: *(ge)hrīnan* (strong verb) and its derivatives.

Prefixed	adjective	*unfēlende*	unfeeling, insensible
Prefixed	adjective	*ungefēle*	without feeling
Zero derived	adjective	*gefēle*	sensitive
Prefixed	adjective	*ungefēled*	without feeling
Suffixed	noun	*(ge)fēlnes*	sensation, feeling
Primitive	verb	*(ge)fēlan*	to touch, feel; perceive

Figure 4: *(ge)fēlan* (weak verb) and its derivatives.

Prefixed	adjective	*ungehrepod*	untouched
Suffixed	noun	*hrepung*	sense of touch, touch
Prefixed	verb	*āhrepian*	to treat
Primitive	verb	*hrepian*	to touch, treat (of); attack
Prefixed	verb	*æthreppian*	to rap at, to knock, dash about
Prefixed	verb	*forhrepian*	to catch

Figure 5: *hrepian* (weak verb) and its derivatives.

Suffixed	adjective	*grāpigendlic*	tangible
Suffixed	noun	*grāpung*	sense of feeling, touch
Primitive	verb	*(ge)grāpian*	to feel for, lay hold of, seize, touch; attain, reach

Figure 6: *(ge)grapian* (weak verb) and its derivatives.

Prefixed	verb	*ætfēolan*	to stick to; adhere, apply oneself to, continue in
Primitive	verb	*(ge)fēolan*	to cleave, be joined to, adhere; enter, penetrate, pass into, through or over, betake oneself to; undergo;

[7] Numbered predicates as used by the lexical database of OE *Nerthus* mark the categorical or morphological contrasts existing between homonymous predicates with the same lexemic root. For instance, *ābūtan* 1 ‘on, about, around, on the outside, round about’ is an adposition and *ābūtan* 2 ‘about, nearly’, an adverb; *andfenge* 1 ‘acceptable, agreeable, approved, fit, suitable’, while *besēon* 1 ‘to see, look, look round’, is a class V strong verb, and *besēon* 2 ‘to suffuse’ a class I strong verb.

			persevere in

Figure 7: *ætfēolan* (strong verb) and its base of derivation.

Zero derived	verb	*(ge)handlian*	to handle, feel; deal with, discuss
Primitive	noun	*hand 1*	hand; side (in defending position); power, control, possession, charge; agency; person regarded as holder or receiver of something.

Figure 9: *(ge)handlian* (weak verb) and its base of derivation.

Derivationally unrelated	verb	*(ge)ðaccian*	to clap, pat, stroke, touch gently; smack, beat; tame

Figure 10: The verb *(ge)ðaccian.*

Except the derivationally unrelated *(ge)ðaccian*, the rest of the verbs bear morphological relations of inheritance, either as bases of derivation or as derivatives. Beginning with the verbs that do not have derivatives of their own but can be related to a base of derivation, we find the prefixed strong verb *ætfēolan* (< *(ge)fēolan*), as well as the weak verb *(ge)handlian* (< *hand 1* 'hand'). The other verbs are primitives of lexical derivation, as well as hyperonymic terms with respect to their derivatives. For instance, *(ge)grāpian* is the base of derivation of the suffixed noun *grāpung* and the suffixed adjective *grāpigendlic,* while the meaning 'to touch' turns up in the definition of the meanings 'that can be touched' (*grāpigendlic)* and sense of touch (*grāpung*). The other weak verbs that give rise to lexical paradigms are *hrepian* and *(ge)fēlan*. Notice that the term *lexical paradigm* is used after Pounder (2000) to make reference to a set of derivatives that share a base of derivation and a core meaning. *(Ge)hrīnan*, a strong verb, presents not only derivatives from all major lexical classes but also the largest lexical paradigm in the set of candidates for exponent of TOUCH. Moreover, the lexical paradigm of *(ge)hrīnan* is the only one that comprises all the major word-formation processes of OE, zero derivation, prefixation, suffixation and compounding. To summarize, the picture that emerges from the analysis of word-formation is that, while the majority of the verbs at stake (under analysis) conform to the morphological criterion requiring that the exponent for the semantic prime is a source of lexical derivation, the strong verb *(ge)hrīnan* shows significant differences with respect to the other verbs considered, both qualitatively and quantitatively.

Turning to the textual occurrences of the verbs under analysis, the DOEC throws the number of textual types and textual tokens that is tabulated in Table 1 (checked against the draft entries to the letter H of the DOE):[8]

TYPE	OCCURRENCES	TEXTUAL TYPES	TEXTUAL TOKENS
(ge)hrīnan	*gehran* (44)/ *gihran* (10), *hrinan* (20), *gehrine* (16)/*gihrine* (2)/*gehryne* (1), *hran* (17), *gehrinen* (14), *gehrinan* (14), *hrine* (11), *hrineð* (7)/ *hrinð* (2), *gehrineð* (6)/*gehrinð* (3), *hrino* (5), *hrinen* (4), *hrunan* (4), *gehrinon* (4), *gihrina* (3), *hrinon* (3), *gehrinde* (2), *gehrindon (2), gihrionun* (2), *gehrin* (2), *hrin* (2), *gehrinað* (2), *gihrino* (2)/ *gehryno* (1), *gehrinadon* (1), *gehrined* (1), *gehrinade* (1), *gihrinas* (1), *gihrinon* (1), *gehrinende* (1), *hrina* (1)/ *hrinæ* (1), *hrenende* (1)/ *hrinande* (1), *hrinað* (1)	31	216
hrepian	*hrepode* (37)/ *hrepede* (1), *hreppan* (13)/ *hræppan* (1)/ *reppan* (2), *hreppe* (9)/ *reppe (3), hrepað* (8)/ *hrepiað* (1), *hreopan* (5)/ *hripan* (2), *hreopon* (4)/ *hreppon* (1), *hrepa* (4), *hrepodon* (4), *gehrepode* (2), *hrepodest* (1), *gehrepa* (1), *hreopun* (1), *hrepige* (1), *hrepadan* (1), *hreppene* (1)	15	103
(ge)felan	*gefelde* (16)/ *gefylde* (6)/ *ifelde* (1), *gefelan* (12), *gefelð* (6)/ *gefeleð* (2)/ *ifeleð* (1), *felað* (2)/ *feleð* (2)/ *fæleð* (1)/ *fælæð* (1), *gefele* (4), *gefelað* (4), *gefeldon* (2)/ *gefeldan* (1), *gefelst* (1)/ *gefelest* (1), *gefelande* (1)/	11	67

[8] I should like to thank Professor Antonette diPaolo Healey for providing me with the draft entries to the letter H of the DOE. Any errors or misconceptions remain exclusively mine.

	gefelende (1), *fele* (1), *felde* (1)		
ætfeolan	*ætfealh* (19)/ *ætfalh* (7), *ætfeolan* (5)/ *ætfealan* (1), *ætfileð* (3)/ *ætfeolyð* (1)/ *ætfylgð* (1), *etfylhð* (2)/ *ietfylgð* (1), *ætfeole* (2), *ætfeolen* (2), *ætfelh* (2), *ætfulgon* (2), *ætfelun* (2), *ætfeollon* (2), *etfiolæð* (1)/ *etfyolæð* (1), *ætfyligeð* (1), *ætfela* (1), *ætfeah* (1)	14	57
(ge)grapian	*grapiað* (13)/ *grapiæð* (1), *grapode* (9)/ *grapade* (1), *gegrapiað* (3)/ *gegrapað* (1), *grapodon* (2)/ grapedon (1)/ *grapodan* (1), *gegrapian* (3), *grapað* (4), *grapige* (2), *grapie* (1), *grapian* (1), *grapa* (1), *grapude* (1), *grapienne* (1), *gegrapade* (1), *gegrapedon* (1), *gegrapod* (1), *gegrapudum* (1)	16	50
(ge)handlian	*handlian* (14), *handledon* (3), *handlað* (3), *handle* (1), *gehandlion* (1), *handla* (1), *handligende* (1)	7	24
onhrinan	*onhran* (12), *onhrinan* (3), *onhrinð* (2), *onhrinon* (2), *onhrinen* (1), *onhrinað* (1)	6	21
(ge)ðaccian	*ðaccian* (1), *ðacciað* (1), *geðaccode* (1)	3	3

Table 1: Occurrences of the verbs under analysis found in the DOEC.

A terminological note is in point at this moment. I use the term type to refer to the lemmatized form that can be found as the headword of an entry to a dictionary. Textual types and textual tokens are unlemmatized forms, the difference between them depending on whether repeated forms are counted or not. For instance, the type *(ge)grapian* throws 50 occurrences (textual tokens) but if repeated forms are disregarded, this verb presents 16 occurrences (textual types). The distinction between textual types and textual tokens adds an extra perspective in order to assess the fulfillment of the textual criterion which stipulates that that the most frequent candidate for prime exponent is selected. In terms of textual type, *(ge)hrīnan* clearly outnumbers the rest of the verbs with 31 textual types. In terms of textual token, *(ge)hrīnan* is also the most frequent one with 216 occurrences, followed by far by *hrepian* (103), *(ge)felan* (67), *ætfeolan* (57) and *(ge)grapian* (50). That is, regarding frequency, *(ge)hrīnan*, which comes first both by textual token and textual types, stands out from the rest.

Once the morphological and the textual criteria have been applied, it remains to assess the fulfillment of the semantic and the syntactic criteria. The semantic criterion, in terms of which the semantic prime should conform as much as possible to the prototype of the semantic prime, and the syntactic criterion, which gives priority for prime exponent to the verb with direct or wider complementation patterns, converge on the complementation pattern of the verb and, therefore, will be discussed together. The starting point of this part of the discussion is Talmy´s (1988) semantic category of force dynamics, which identifies lexicalization patterns by explaining how entities interact with respect to force. From a purely structural point of view, force dynamics is a generalization over causativity and transitivity. Causative and transitive events, in the framework of force dynamics, require a force-exerting entity and a force-receiving entity that may or may not overcome the force exerted by the former entity. By elaborating on this framework, the prototype of the semantic prime TOUCH can be defined as a verb of physical contact that partakes in predications with two participants, agent and patient, or, in Talmy´s (1988: 53) terminology, an agonist, an antagonist. If there is a third participant, the instrument, it has to hold a relation of inalienable possession with the agent, necessarily animate. The inalienable possession restriction favours the omission of the instrument, which by default is the hand. The animate restriction guarantees that the meanings of emotion or knowledge can develop from the meaning of physical contact. Syntactically speaking, the exponent for the semantic prime TOUCH is a transitive verb that governs the accusative and can take an adjunct of instrument with oblique marking. Consider, in this respect, the following example:

(2) (from draft entries to the letter H of the DOE)
Beo 987-988:
Æghwylc gecwæð ðæt him heardra nan hrinan wolde...

Everyone said that him hard weapon none touch would...
'Everyone said that no hard weapon would touch him...'

In instances like (2), the inanimate instrument is expressed as subject with the consequent absence of a human participant and lack of inalienable possession. Notice that the patient is case marked dative (*him*). Instances such as (2), therefore, do not conform either to the semantic or the syntactic prototype of TOUCH. To summarize, candidates conveying the general meaning of physical contact exerted by an animate participant, typically with the hand, on an inanimate participant will be preferred. That is, specific meanings denoting ways of touching as well as figurative meanings of perception or knowledge will be put aside. Figure 11 displays the different meanings of the candidates:

PREDICATE	MEANINGS
(ge)hrīnan	hrīnan: 1. to touch (someone / something: dat. / acc.; with one's hands / with some instrument, ointment, spit, etc.: *mid* and dat. / instr.) 1.a. past part: touched, contacted (by a part of the body other than the hand or finger: dat. / instr.) 1.b. to touch, come in contact with (the earth, water, an object, etc.: dat. / gen.) 1.c. without expressed object: to touch (i.e. oneself) with one's hand, i.e. to masturbate 2. to have the sensation of contact with, feel the sensation of (a light: gen.) 3. physical, passing into non-physical: to handle or have to do with in any or the slightest degree; to have any contact with (something: acc. / dat.; with negative expressed or implied) 3.a. to lay hands on or meddle with so as to harm, trouble or disturb, 'to lay a finger on' (a person / one's body: acc. / dat.) 4. to attack, assail, strike at. 4.a. to lay violent hands on; attack, strike (someone: dat. / on and dat. / acc. (following Latin lemma); with one's hands: dat. / mid and dat.) 4.a.i. without expressed object: to attack (i.e. someone; with assault: dat. / instr.) 4.b. to attack, strike (someone: dat., with weapons: dat. / instr.) 4.b.i. of a weapon, an arrow, etc.: to strike, hit (someone: acc.) 4.c. of troubles, sorrows, distress, wounds, danger, etc: to assail, hurt, harm (someone: dat.) 4.c.i past part.: assailed, troubled, hurt, harmed (by cold, hardship, wounds: dat. / instr.; mid and dat. / instr.) 4.c.ii. without expressed object: *hrinan æt heortan* 'to assail, strike at one's heart'. 5. of a weapon: to affect by contact, make an impression on (someone: dat.) 6. to attain to, reach (a place: dat.) 7. glossing *intinguere* = *intingere* 'to dip, immerse (in water)', as if *tangere* 'to touch'. 8. rendering impinguare 'to anoint (one's head: dat.)', perh. as if *intinguere* 'to dip, immerse' (cf. sense 7 above), or simply interpreted contextually as 'to touch, come in contact with' (see sense 1.b. above) gehrīnan: 1. to touch (someone / something: acc. / dat., with one's hand, one's head, with an instrument: *mid* and dat.) 1.a. spec. to touch, fondle, caress (one's breast: acc.) 1.b. spec. to touch with one's foot, set foot on (land / a threshold: acc.) 1.c. with inanimate subject: to touch, come in contact with (something: dat.) 1.c.i. of the sun and moon: to touch, come in contact with, cross (each other's orbit: dat. / acc.) 1.d. pret. 3. sg. *gehran*: 'he touched', glossing *tactus* 'touch, touching', as if *tactum* 'touched'. 2. to have sexual contact with (a woman: dat.) 2.a. glossing *adhaerere*, here 'to couple, have intercourse with (someone; also fig.) 3. physical, passing into non-physical: to handle or have to do with in any or the slightest degree; to have any contact with (something: dat.) 3.a. to lay hands on or meddle with so as to harm, trouble or disturb, 'to lay a finger on' (a person / one's body: dat. / acc.) 3.a.i. glossing vexare 'to trouble, disturb (someone: dat.)'. 4. to affect, trouble, assail, harm, strike at. 4.a. of fire: to touch, affect, harm, damage (something / someone: acc. dat.) 4.b. of illness, torment, pain, punishment, noxious vapours, temptations of the devil, etc.: to assail, attack, afflict, trouble (someone: acc. / dat.; a place / one's soul, thoughts, etc.: acc.) 4.c. the cutting action of a blade: to affect by contact, make an impression on (someone: dat.) 4.d. of an arrow: to strike, hit (someone: acc.) 5. to touch, make an impression upon, affect, stir the feelings of, influence (someone / one's mind, thought, will, etc. : acc., with words, actions, etc.: mid and dat.) 5.a. of greed, anger or some other emotion: to seize, grip, take hold of (someone: acc.) 6. to touch upon, treat in writing or speech, deal with, discuss, mention (a subject: acc.)
(ge)hrepian	hrepian:

	1. to touch, handle, come in contact with (someone / something: acc.) 1.a. glossing *palpare*; 'to feel'. 1.b. glossing *pulsare* 'to strike, touch' (here fig.) 2. physical, passing into non-physical: to handle or have to do with in any or the slightest degree; to have any contact with (something / someone: acc.; usually with negative expressed or implied) 2.a. to have carnal relations / sexual intercourse with (a woman: acc.) 2.b. to lay hands on or meddle with so as to harm, trouble or disturb; to lay a finger on' (a person or other living thing: acc.) 2.c. rendering *temerare* 'to violate, desecrate (a holy place: acc.)' 3. to attack, strike at. 3.a. where the subject is a person: to lay violent hands on, attack, strike (someone: acc.) 3.b. to visit, afflict, strike at, blast, blight (someone / a place: acc., with plague: mid and dat.) 3.c. with inanimate subject (a weapon, sword point): to strike, hit (someone: acc.) 3.d. of pain, affliction: to assail, strike (someone: acc.) 4. to touch, affect, assail, disturb, trouble, distress (one's mind, thoughts, conscience, etc.: acc.) 5. glossing *tractare*, here 'to treat, handle, make use of' 6. to touch upon, treat in writing or speech, deal with, discuss, mention (a subject: acc., *ymbe* and acc. / dat.) 7. glossing *reprehendere* 'to find fault with, censure', perhaps interpreted as if in sense 'to take hold of, grasp, seize'. 8. glossing *attingere* 'to attain to (something)'. <u>gehrepian:</u> 1. to touch (with the hand), come in contact with (someone / something: acc.) 2. to lay hands on or meddle with so as to harm, trouble or disturb, 'to lay a finger on' (someone: acc.)
(ge)felan	<u>felan:</u> 1. without expressed object: to feel, i.e. to have sensation, sensory perception; to sense or perceive. 2. to feel the touch of, be aware of physical contact with (something acc.) 3. to have a sensation of, feel the physical effect of (something gen., occas. acc.) <u>gefelan:</u> 1. without expressed object: to feel, i.e. to have sensation, sensory perception; to sense or perceive. 2. to feel the touch of, be aware of physical contact with (something acc.; also governing acc. inf. const. in obj. clause) 3. to have a sensation of, feel the physical effect of (pain, heat, cold, etc., acc.) 4. to feel the effect of, experience the impact of (Christ's might at Judgement Day acc.) 5. to feel, sense, empathize with (someone else's suffering acc.) 6. to perceive, sense; become aware of, recognize; discern, distinguish. 6.a. describing a sense other than touch: to sense, detect, i.e. 'taste' (sweetness, the sharpness of salt acc.) 6.b. governing accusative-infinitive construction, or rendering such a construction in a Latin source. 6.c. governing object clause introduced by *hu / swa swa / þæt.*
ætfeolan	1. to adhere, cleave, stick. 1.a. to cling, stick, adhere to (someone / something dat., in / on and dat.) 1.b. to adhere, attach oneself to (someone / God), be a partisan or follower; *ætfeolan æfter* 'to attach oneself to (God)' 2. of action carried on: to apply oneself. 2.a. with the notion of diligence: to apply (oneself) to, continue to maintain or adhere to (a belief or practice) 2.a.i. with dative. 2.a.ii. with *þæt* clause. 2.b. *ætfeolan geornlice* 'to apply (oneself) urgently, insistently'. 3. to press. 3.a. to press, i.e. apply pressure to, feel (a limb) 3.b. to press, urge (someone to an action)
(ge)grapian	<u>grapian:</u> 1. to feel with the hands, grasp. 1.a. without expressed object; *grapian on* 'to grasp at'. 1.b. with darkness as understood object: to feel. 2. to feel about as a blind person or as in the dark; without expressed object: to grope. 3. to touch with the hands, examine by touch; to probe. 3.a. of physical wounds / bodily sores: to probe with the hands, examine by touch. 3.a.i. specifically of Christ's wounds or his resurrected body . 3.b. of spiritual wounds / failings: to probe. 4. glossing *palpare* here in the sense 'to treat (oneself) gently'. <u>gegrapian:</u> 1. to feel with the hands, grasp.

	1.a. without expressed object: to feel with the hands, grasp. 1.b. with accusative object: to feel (something) 2. to touch (someone / something) with the hands, examine by touch, probe. 2.a. specifically of Christ's resurrected body. 3. in past participle: *gegrapod* glossing *contractus* here in the sense 'affected / touched injuriously (by sickness)'.
(ge)handlian	handlian: 1. to handle, feel, touch with the hands. 2. figurative: to handle, treat of, discuss (a subject) gehandlian: 1. to handle, treat of (a subject); contextually, 'to discuss (a subject)'
onhrinan	1. to touch, lay hold of.
(ge)ðaccian	1 to clap, pat, stroke, touch gently; smack, beat; tame.

Figure 11: Meaning and case government of verbs of touching (from the DOE, the draft entries to the letter H of the *DOE* and *Nerthus* database).

From the semantic point of view, *onhrīnan, geðaccian* and *ætfēolan* convey very specific meanings and cannot be considered prototypical. These verbs, along with *(ge)felan,* seem to belong in the area of perception rather than in physical contact, and, as such, do not conform to the prototype. The other transitive verbs in the set can be used with the general meaning of physical contact, except *ge-handlian*, which is restricted to the sense of feeling. Interestingly, *ge-hrepian* cannot be used either as a verb of feeling or with a figurative sense. However, its simplex counterpart *hrepian* shows these values. The same goes for *handlian, ge-hrīnan* and *hrīnan*, with which the prototypical sense of physical contact has been enlarged to include the senses of feeling and 'affect', 'attack', 'concern' and 'be relevant to'. I concur with Díaz Vera (2001: 10) that these senses of 'harm' and 'injuring' found in some of the verbs, especially for *hrīnan* and *gehrīnan*, can be understood as a case of metaphorical extension where the primary meaning of 'touching' is extended to that of 'causing harm'.

From the syntactic point of view, the verb *(ge)grapian* does not make good candidate for prototype because it is intransitive. If we focus on the transitive verbs of the set, it turns out that all of them can be found followed by an accusative expressing the object, although *ge-handlian* is used figuratively only. It is also of relevance for the question of case government that all transitive verbs can be followed by oblique cases, including the dative and, much less frequently, the genitive and the instrumental. There is a clear tendency to express the affected human in the dative, and this case is also selected when the conative meaning 'to come in contact' is conveyed. The syntactic criterion gives priority for prime exponent to the verb with direct case government, which is not applicable here, or to the verb displaying the widest choice of complementation patterns. The verbs *hrīnan* and *ge-hrīnan* clearly stand out in this respect. Mitchell (1985: 459) notes that *hrīnan* can license the accusative, the genitive and the dative and that it can select an animate as well as an inanimate object. *Ge-hrīnan* can be used with an inanimate subject in the nominative and a human recipient in the dative while *hrīnan* can be used with an inanimate subject in the nominative and a human recipient in the accusative as well as in the dative. Moreover, *hrīnan* is the only verb that appears with an unspecified reflexive object. Finally, not only *hrīnan* and *ge-hrīnan* but also *hrepian* can be used in a conative way to express the meaning 'come in contact with' with accusative, dative or genitive. The widest complementation pattern, then, is the one of *hrīnan*. That is, although the semantic criterion is not completely conclusive, the syntactic criterion selects *hrīnan* and, by extension the prefixed *ge-hrīnan* for exponents for the semantic prime.

4. Discussion. Semantic primes vs. hypernyms

To summarize, in the search for exponents of OE lexical primes the issue arises of distinguishing semantic primitive exponents from hypernyms, the reason being that some

criteria used for determining them overlap at least partly. This analysis has used four different criteria to identify the OE exponent for the semantic prime TOUCH, namely the semantic, morphological, textual and syntactic criterion. Since it is not possible to check the extent of use of the candidates with native speakers, the measurement of the number of types and tokens seems to be the most reliable method to solve this problem. The morphological criterion emphasizes the basic nature of the terms chosen to be the exponent for the given semantic prime, since strong verbs are considered the starting point of Germanic derivation (Bammesberger 1965; Hinderling 1967; Bammesberger 1992; Kastovsky 1992; Seebold 1970) and thus, they can be considered not only the simplest category but also the most basic and prototypical. Semantics is obviously the most important criterion since it is directly related to the nature of the meaning of each candidate. And, finally, syntax is also necessary to determine the different syntactic contexts where words can occur and the restrictions they present. It is precisely the semantic and the syntactic criteria that are relevant for the search of both semantic primes and hypernymic terms.

Along with the overlapping of some criteria of identification, the concepts of semantic prime and hypernym are related to each other because both bear on lexical semantics, which consists of the study of the meaning of words (in terms of primitive decomposition) and the systematic connections established between these words (usually described as semantic relations). Despite the fact that both notions are said to be universal, it is important to highlight that semantic primes are universal in the sense of occurring in all languages, whereas semantic relations and hyponymy are also used by the speakers of any language but the terms included in each relation do not coincide cross-linguistically. As Wierzbicka (1996: 15) puts it:

> Within a particular language, every element belongs to a unique network of elements, and occupies a particular place in a unique network of relationships. When we compare two, or more, languages we cannot expect to find identical networks of relationships. We can, none the less, expect to find corresponding sets of indefinables [universal semantic primes - RMM].

As a brief illustration of the language dependent nature of semantic relationships, I comment on the Spanish exponent for the semantic prime TOUCH, this is, the verb *tocar*, and check the different networks found for the hyponymic relation of this Spanish verb in contrast to other languages. The verb *tocar* also stands for the superordinate term in the hyponymyc relation of 'touch'. However, apart from the sense of contact and feeling conveyed by the English verb, the meaning definition of its Spanish counterpart also includes the sense of playing an instrument, since this activity requires contact between the player and an instrument:

(3) Spanish: *Mary toca la guitarra*
(4) English: *Mary plays the guitar*
(5) French: *Mary joue la guitare*
(6) German: *Mary spielt die Gitarre*

As shown in the translations in (3)-(6), this is not the case with English, where the verb 'play' is used, as well as in other languages such as French or German, where the verbs *jouer* and *spielen*, both meaning 'play', are selected. These examples insist on the idea that although both semantic primes and hyponymic relations are universal terms, the elements displaying the latter are language dependent.

A further difference between semantic primes and hypernyms that is relevant for this discussion has to do with the paradigmatic axis of lexical organization. As has been

remarked above, semantic primes are basic indefinable concepts shared by all languages, in such a way that the meaning of every single concept can be defined by means of explanations in terms of the grammatical rules of the language in question. On the other hand, hyponymy represents a semantic relation holding among different members of a semantic field. Semantic relations determine how speakers process conceptual or lexical information in terms of antonymy, synonymy, hyponymy, meronymy, etc. Such relations are captured in terms of lexical paradigms that contain members of a given lexical category and exhibit similar semantic characteristics. In these paradigms, a hyponymic relation is comprised of two basic elements, a hypernym and one or more hyponyms. As Hearst (1992: 539) puts it, *an L_0 is a (kind of) L_1. Here L_1 is the hypernym of L_0 and the relationship is reflexive and transitive but not symmetric.* The hypernym, in this view, is the superordinate node of the hierarchy, whereas the hyponyms are the remaining items whose meaning is included in the definition of the hypernym. A significant number of the authors who deal with hyponymy in English (Faber and Mairal 1999; Díaz Vera 2000, 2001; Cortés and Orta 2006; Cortés and Mairal 2002), base their studies on semantic-syntactic criteria, in such a way that the framework of verbal classes and alternations (Levin 1993) is applied to the lexicographical information retrieved from dictionaries and thesauri. These works also adopt The Lexical Iconicity Principle coined by Faber and Mairal (1999) and reformulated by Cortés and Mairal (2002: 20), which stipulates that *the greater the syntactic coverage of a lexical unit, the higher its position in the semantic hierarchy within a given subdomain*. This line has been taken, in the specific field of OE, by Díaz Vera (2000, 2001), who investigates the onomasiological structure (semantics and complementation) of a number of verbs, including verbs of touching. For this author, *hrīnan* is the most prototypical verb of touching because its syntactic coverage, calculated on the grounds of the complementation patterns available for this verb, is the widest one. My analysis has shown that *hrīnan* is the main exponent for TOUCH, considering the morphological, syntactic, semantic and textual (frequency) parameters adopted in this undertaking. At the same time, *hrīnan* 'touch' is a hyperonymic term. This is an important difference between this analysis and Díaz Vera´s (2001), for whom *hrīnan* 'touch' is a hyponym of *felan* 'to perceive $\text{sth}_{(\text{gen, acc})}$ with the senses'. The meanings of *hrīnan,* as reflected by the DOE, point in the direction of physical contact. The semantic prototype based on force dynamics reinforces this idea and, moreover, the cross-linguistic research that has resulted in the NSMRP has found evidence for a semantic prime TOUCH different from FEEL. This strongly suggests that, but for some secondary meanings of *gehrīnan* that are related to 'tactile perception' thus falling under the scope of FEEL, *hrīnan* is the hypernym. All things considered, although the hypernym of 'touch' and the exponent of the semantic prime TOUCH coincide in OE, these two theoretical constructs have to be distinguished for the reasons given in this section.

5. Conclusion

This research has made use of morphological, textual, semantic and syntactic criteria in order to find the OE exponent for the semantic prime TOUCH. After analysing the information provided by textual and lexicographical sources, the most important conclusion is that all the criteria that have been proposed converge on the strong verb *ge-hrīnan*. It must be borne in mind, however, that the morphological, the textual and the syntactic criteria are more conclusive than the semantic one. All in all, *ge-hrīnan* clearly stands out from the other verbs. The use of an array of criteria enriches the discussion and provides additional arguments in favour of the candidate selected for prime exponent. In this case, *ge-hrīnan*, apart from conforming to the semantic prototype, is a prime of lexical derivation, is the most type and token-frequent verb in the set and displays the widest complementation pattern. Along with descriptive questions, this article has also engaged in

methodological aspects and discussed some similarities and difference between lexical primes and hypernyms. Finally, it is also of methodological relevance that this study has attempted to establish the basis for the search of semantic primes in dead languages. It has been attested that a combination of lexicographical and textual sources can provide the relevant information, as well as accurate results in the search for prime exponents, which, in a historical language such as OE have to be found by means of indirect ways like the ones proposed in this research.

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