

# *Who are you talking to? Or, Whom should I say is calling?*

## Language change in the adult grammar

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Varying theories of grammar make different claims about the nature of language change, claims which must, evidently, be congruent with the nature of the theory in question. In the present paper I examine diachronic aspects of two theories: 1. Transformational/Generative Grammar in its various manifestations including Government and Binding (GB), and 2. Cognitive Linguistics (CG), in particular the role played by mental categorization diachronically as well as synchronically.

As a way of illustrating differences between the theories, I provide an analysis of the evolution of English interrogative/relative pronouns, with emphasis on the disappearance of *whom* in (at least) modern spoken English. The final section of the paper is a discussion of ways in which the nature of the human mind constrains our views of diachronic change, with the result that there are perhaps surprising similarities between GB and CG in what they must say about the nature of change. A final section, however, proposes ways in which a categorization view of mental structures (and hence of linguistic evolution) has things to offer beyond what is proposed by GB.<sup>1</sup>

### 1. *Introduction.*

In diachronic linguistics, as in most disciplines, there are concepts which persistently remain ill-defined or even undefined despite being fundamental constructs within the field. Within historical linguistics itself, for example, the notion of 'change' is in some ways an unfortunately good example of this indeterminacy. At what point should we say that a grammar has changed? And, at least as important a question, what exactly do we mean when we say that a grammar has changed or that grammatical change has taken place? These last two questions are not, of course, exactly the same, although they look at first like fairly insignificant variants. They should nonetheless be considered

<sup>1</sup> I must thank David Lightfoot and Elly van Gelderen for patiently answering my questions about basic notions of Government and Binding, especially in regard to change across generations for the former and case assignment for the latter. Geoff Nathan, as always, lived through the genesis of this paper, reacting to ideas as they emerged and helping to refine them. All errors of fact and judgment I claim for myself.

separately. The first version calls forth at least two interpretations of 'grammar': in one a divorce can be inferred between the structure of language and its users (as in 'traditional grammar' or even Saussurian *langue*), while in the other interpretation the term 'grammar' is used, as in the conventions of Chomsky (1965 and onward), to mean the tacit and cognitively stored knowledge of language which can be called upon by any native speaker. Finally, the second version of the question may seem, at first, to be asking something rather more theory-neutral than the first, which may depend on a definition of 'change', but the answer to this question as well ultimately presupposes decisions about the nature of grammar and the nature of its evolution.

The moral to be drawn, if one can be drawn from so very brief a discussion, is that even fundamental underlying questions cannot be answered or even framed outside of some kind of theoretical framework. The answers must emerge at least in part from within any given theory so that, to cite a rather extreme case, Lightfoot (1981) can claim that no separate diachronic theory is necessary to capture the workings of linguistic change: "If one assumes a restrictive theory of grammar and some simple statements about the nature of language acquisition, ... there is no need to invoke 'historical principles' of any kind, or a distinct theory of change" (1981:209-210). Interacting with questions like when and how language change has occurred are other fundamental questions like the cognitive status of language; even if we agree that language knowledge is somehow 'in the head', this idea means quite different things to different people. This point will be addressed below.

In addition to the way in which the very basic idea of 'in the head' and, with it, the evolution of mental constructs can be understood, another set of notions must be teased apart before we can speak clearly of grammar change. There is, in reality, a further two-part division to be made, between the concepts of the actuation and of the spread of any given change or set of related changes (cf. Labov 1972:160-162 for one expression of this dichotomy). What is meant by actuation is the emerging of a change, usually through the speakers' choice of one of two or more competing synchronic variants which then, in a variety of possible linguistic or extralinguistic ways, distances itself from those variants. Actuation is to be differentiated from spread--the mechanisms by which a change then extends itself through either some speech community, a subset of the lexicon, or both.

The present paper will examine the questions posed above in light of two theories, of which the first is comprised of the various manifestations of Chomsky's theory (GB<sup>2</sup>) during the last decades. The

<sup>2</sup> Chomsky's theory has changed name several times with changes in its emphasis, and my use of 'GB' is meant as an abbreviatory device for all the manifestations of it that I refer to. Much of what the theory/theories had to say about change has not been substantially modified over approximately the last thirty years, at least not in terms of the constructs I shall be discussing.

second, on the other hand, is Cognitive Grammar (CG), with its particular attention to the study of categorization around prototypes, from which emerge notions of change in regard to categories constituted in this way. Section 2 will be a discussion of the two theories in question, with emphasis on the locus of change and the relationship between actuation and spread, while section 3 will look at the history of the English interrogative/relative pronoun *whom* (and its association with *who*) as an illustration. In section 4 some suggestions will be made about a choice between the theories in light of categorization and the affiliation between diachronic and synchronic views of grammar.

## 2. *Competing Theories.*

### 2.1. *Generative Theories - GB.*

Within GB, completed language change occurs exclusively across generations. This view depends crucially on two features of the theory: first, mental processing takes place via multiple layers of structure and the linkages among these layers through transformations or, more recently, through filters and constraints. Secondly, language is acquired anew by each generation of speakers via the creation of these layers, and particularly the deepest, an underlying grammar. Linguistic input to this process comes from what children hear around them, pay attention to (Lightfoot 1991), and use to form a theory about the constitution of their own language. Because of the nature of human genetic inheritance, children have the mental structures in place at birth which allow for the emergence of the very same language they hear around them, and, additionally, they are constrained to produce, as the result of their analysis of the input, the most economical grammar possible. Adults (that is, those whose language is now already formed) can only change their grammar in relatively minor ways, chiefly by modifying the way the underlying forms stored in their brains can be transformed as input to what actually is said. This will only change the surface utterances of speakers, but not the underlying forms themselves as they are stored in the mental lexicon.<sup>3</sup> In order for diachronic change really to take place, the underlying structure must be affected, or the transformations and/or constraints which bring these structures to the surface must be changed in ways which are more profound than just the simple addition of a rule. These mental events, in turn, can only occur when children, while developing their own underlying structures or grammar, arrive at a theory accounting, in the simplest possible way, for what must exist in

<sup>3</sup> The acquisition of new lexical items, an activity which continues, at least in theory, throughout the life span, may seem at first to constitute a counter-example, but is rather ranked among minor changes. One must take the restriction of change in the adult grammar to rule addition to be a statement about syntax and phonology rather than the vocabulary of speakers.

mental storage or for what combination of underlying forms and paths to the surface form are necessary. For a variety of reasons, this theory is different from that of the previous generation.

The recreating of the lexicon with changed underlying forms can be illustrated by such well-known examples as German umlaut and, to use a term from another theory, phonologization in general. When the mental grammar had a rule which fronted back vowels when the syllable was followed by one with a high front vowel, the underlying stored form of the word did not show the fronting. When, however, the environment for umlaut disappeared with the disappearance of the following back vowel, the front rounded vowel became phonemic, which is to say that it became part of the form in the mental lexicon. Before the conditioning element disappeared, adult speakers had a rule of fronting; the generation which heard the front rounded vowel but had no conditioning vowel in the following syllable had to create a new, maximally economical grammar which involved umlauted vowels in the lexicon in order to account to the shape of the words they heard.

On the morphological level, Kiparsky (1965) furnishes a classic example of complex changes in the repertory of rules needed to move from underlying form to the surface output. This is the case of the voicing of final consonants in Yiddish. At a certain point in the history of German and German-based dialects, final obstruents were uniformly devoiced. At a later point in Yiddish, after it separated from German, a subsequent change devoiced obstruents in cases where morphophonemic alternations available to speakers indicated that in instances of the same word where the consonant was non-final, it was voiced. A noun like *veg* 'way, path', therefore, changed in pronunciation of the nominative singular from [vek] to [veg] since the other forms of the noun (genitive singular 'of the path', plural forms) showed a [g].<sup>4</sup> According to GB, adults might adopt or even innovate the new pronunciation, but would do so by adding a rule of devoicing to their internal grammar which would undo what a still-existent rule of final-consonant devoicing had done in the production of the nominative singular form. Children, hearing only the voiced variant, would analyze the output of the older generation's speech without either the devoicing or the devoicing rule; the underlying form would no longer be marked for morphophonemic variation.

For approximately the last ten years a major topic within GB has been the nature of the parametric settings which define individual languages by differentiating them one from another. Recent work in the interaction of acquisition and change (Lightfoot 1991), therefore, has

<sup>4</sup> Evidence for diachronic devoicing and subsequent devoicing comes from such forms as the adverb *avek* 'away' which is etymologically linked to *veg* but was no longer connected to it by speakers at the time of devoicing. Since there is no morphophonemic variation in adverbial forms in Yiddish, the adverb could not be affected by this change. It should be added that Yiddish is not the only Germanic dialect in which this devoicing took place; Kiparsky (1965) also talks of some Swiss dialects.

emphasized the necessity of careful definitions of what triggers parameter setting in the child who is learning to speak. This carefully set out characterization of what constitutes a triggering experience and what may bring about change in the language of the next generation through change in the triggering experience constitutes a valuable refinement in the overall theory. However, it does not change the basic notion that each generation acquires language through, in a sense, recreating a grammar which cannot be learned or (all the more so) actively taught across generations.

Lastly, GB looks primarily, not at the actuation of change, but at its spread, in the sense of transgenerational adaptation in the underlying form of changes which began with the parents, or even in more than one preceding generation. Lightfoot (1991:69) talks about options being exercised, and (p.c.) such motivations as expressive innovations and social mobility. All of these, and many more, are true activators of change in some circumstances and cannot be disputed. The theoretical contribution of GB theory, however, is particularly in the spread of what is considered to be the essential of grammar change, the remaking of the core across generations.

## 2.2. *Cognitive Grammar - CG.*

For CG, like GB, 'real' completed change is change in the cognitive structures that native speakers possess and manipulate. However, the nature of these structures is radically different from one theory to another, first of all because in CG they are not necessarily (and certainly not in all cases) specialized for language to the exclusion of other kinds of processing. Instead, the theory emphasizes the recourse human beings have to such functions as categorization and abstraction, both of which are applied not only to linguistic perception and production, but also to other, non-verbal activities like face or music recognition, various kinds of artistic creativity, and so on.

Central to CG is, accordingly, the notion of radial set categorization (Lakoff 1987:91ff), that is, the arrangement of various occurrences of a linguistic unit around the best or most prototypical instance of that unit. Any occurrence may differ from the prototype along semantic and/or pragmatic dimensions; these variants are understood as being linked to each other (that is, are designated by the same unit) through our understanding of the prototype. Units are defined (Langacker 1987:57ff), in turn, as any conventionalized meaningful sequence, from the bound morpheme through the word and compound to the full grammatical construction, with the added proviso that syntax (by which we mean pure structure) is symbolic of meaning. Each unit has, by its very definition, both a phonological and a semantic pole, where the phonological pole will remain relatively invariant within the radial set except where there is a question of morphophonemic variation. Since

the unmarked situation is polysemy, the large majority of units will be stored in the brain as radial categories.

Given this radically different view of mental structure, it is not surprising that a different model of change emerges. Sweetser (1990), Geeraerts (1983, 1992), and Winters (1987, 1992a) have each considered different aspects of diachrony which emerge from the theory. Sweetser is primarily interested in the lines of connection within a radial set. She examines, using verbs of perception with both their diachronic and their synchronic relationship to verbs of cognitive activity, how the number of meanings captured by one unit may be expanded by metaphoric or metonymic extensions from the prototypical meaning. The prototype displays, in these cases, the most concrete meaning and the one external to the mind of the language user (in the sense of having a deontic rather than epistemic meaning). She examines, for example, the group of verbs having to do with understanding or comprehension in English, showing that in most cases the etymological meaning (Latin *cum* 'with' plus *prehendere* 'grasp' and the more transparent 'stand' and 'under') is concrete and involves physical activity. The corresponding mental-activity uses of the words are later derived via metaphoric transfer; meaning moves across time (and also extends within the semantic set) from physical grasping or standing to non-physical relationships with an idea. Furthermore, the idea itself is metaphorically conceived of as a thing to be grasped or situated in mental as well as physical space in relation to the person manipulating it.

Like Sweetser, Geeraerts examines the history of lexical items within the CG framework. He studies, in particular, the intersection of radial sets, for example his discussion (1992:195-197) of the multiply polysemous Dutch verb *verduwen* whose range of meanings results from the merger of two etymologically distinct words, *verduwen*, from *duwen* 'to push, giving 'to push away', 'push aside', and *verdouwen*, from *douwen*, an archaic verb meaning 'to thaw' 'make something melt' and hence, in Middle Dutch, 'to digest'. Morphological and phonological factors go into the loss of *verdouwen* as a separate verb, in part because it is a strong verb and becomes regularized in contact with the weak verb *verduwen*. The principle motivation for the merger, however, is semantic, in that some of the meaning of the pair began to overlap, leading eventually to the loss of distinction between the units in modern Dutch where *verduwen* includes the sense of 'make (certain things, and especially obstacles) disappear'. The earlier meanings of both verbs, 'to push away' and 'to digest', are still part of the modern range of meanings, though the former meaning is marginal and the latter is recognized by speakers as obsolescent. Geeraerts emphasizes in general the interaction of lexical categories, where each of the sets (and again this is the normal situation) is multiply polysemous so that it possesses a full internal structure of more or less central/prototypical meanings.

Winters, in turn, has considered other aspects of change within this framework: first, her primary work is on grammatical constructions rather than lexical items, although, given that there is no clean dividing line between units of various sizes, this difference does not often entail profound consequences. She looks in particular at the configuration of radial sets, and views change as kinds of modification, both in set membership (in this respect her work overlaps with Geeraerts's) and in degrees of centrality or peripherality of set members. In work on French negation, it was proposed (Winters 1987) that the way in which the negator *pas* evolved from the Latin *passus* 'step' involved, first, an overlapping of the sets of negation and the meaning of one extension of *passus* (first in vivid language use and later as a negative polarity item 'not a step'), and then the gradual movement of *pas* within the radial set of negators in French from a peripheral member to its prototypical, most central member.

We can, therefore, summarize diachronic Cognitive Grammar in terms of the attention that has been paid 1) to the connections between members of a given semantic set, 2) to changes in the configuration of the set across time, and 3) to changes in the relationship between sets. For the third kind of change, the limiting case is either a clean split into two sets (French *on* 'one' or 'we' and *homme* 'man' constitutes an example) or a full merger (as in the work in Geeraerts 1992). All of these evolutionary possibilities involve reconsideration by language users of either the categorization of specific items (semantic or pragmatic variation in meaning) within a set or, on a more abstract level, the categorization of units in relationship to each other. Langacker (1987:100, n.1) suggests that ultimately, with many future developments in neuro-psychology, Cognitive Grammar will be able to correlate neural paths in the human brain with the configuration of radial sets. This is in keeping with the very strong claims of psychological reality in this theory, where the reality may, eventually, find its underpinnings in neuronal activity.

CG should be contrasted with GB in another respect as well. As was indicated above, GB has a robust theory of the spread of linguistic change in that, in indirect ways having to do with reanalysis, change is passed from one generation to another. CG, on the other hand, says very little about spread, except in the very common-sensical comment (Geeraerts p.c.) that any diachronic theory must consider how (and to what extent) change is generalized, with reference, ultimately, to the interaction of variation and change set out most notably in Weinreich, Labov, Herzog (1968). What CG does provide, on the other hand, is a specific theory of the actuation of change, based on the idea that the motivating force is in the way in which categorization takes place and the degree to which this process can be fluid. Certain kinds of categories (those which reflect profound differences in communication like word order changes and their reflection in the basic/prototypical sentence

type in a given language, for example) change only slowly, while other kinds of understanding of the world and the linguistic symbols employed for this understanding may change many times in the lifespan of a speaker.

The other question posed above, as to *when* (as opposed to *how*) language change may be said to take place has as a corollary the difference between abrupt and gradual change. It has been suggested in various places (for example Anttila 1989) that we must differentiate in a pretheoretical way, within the general area of sound change, between phonetic change on the one hand, which, for fairly obvious reasons having to do with the needs of different generations to communicate with each other, is usually gradual, and phonemic change which, on the other hand, is abrupt by its very nature. Parallels with syntax change have rarely been discussed, although Lightfoot (1976) argues that series of relatively small syntactic changes may ultimately produce a situation of intolerable opacity between deep and surface structure which leads in turn to a radical reanalysis of the syntax. We might view rule addition, which can, according to GB, occur in the adult speaker as a gradual change, in part because, in many cases, such rules start as optional. The last step of radical reanalysis would fall, however, under the heading of abrupt change to the mental storage of syntactic constructions and hence to their retrieval and comprehension by native speakers.

Within CG even less has been said - and this is a point we will return to in the conclusions of the present paper - but a possible (though flawed) parallel could reside in the differences between a change taking place completely within the radial set via new extensions, new salience or even newly discerned prototypicality for already existing members, and movement to outside the set, leading either to loss or to membership in a different set. The former kind of movement might be more gradual in nature in the sense that speakers are still identifying the item in question (by virtue of its phonological shape as well as its semantic links to the center) as a member of the set, while in the latter kind of change there must be a moment when the item is no longer in the set. However, hesitation and optionality, which are indicators of gradual change, can occur both within the set and in questions of set membership itself.

### 3. *Whom*.

#### 3.1. *Generative Theories*.

The history of the interrogative/relative pronouns *who* and *whom* in English is an interesting one for several reasons. First, it is one of the relatively rare cases, in its early evolution, of the full substitution of a set of morphemes in what is known as a 'closed' grammatical class. Secondly, it is the only kind of non-personal pronoun to show surface case marking in the modern language, although 'modern' is a somewhat

loaded term in this context and will be returned to. Thirdly, the distinction between the cases has, in some ways, been kept alive artificially by grammarians since the 17<sup>th</sup> century. This last point raises questions about the nature of native speaker intuition and judgment since the case distinction is taught in schools and, although internalized by many speakers relatively late in the acquisition process, is not at all part of the speech of many others. The grammatical distinction should not be studied without taking various considerations of register and dialect into account, including the difference between written and spoken English. The incidence of hypercorrections, as exemplified by the sentences in the title of this paper, is, not surprisingly, high. As a result of all these considerations, there are some potential problems with *who/whom* as a data set, but it has been studied in more than one framework and can therefore be used to shed light on the general questions posed above.

The Old English relative pronouns *se, seo, þæt* were, generally speaking, the same forms as the demonstrative 'that', as they are in Modern German, used either alone ("Nero .. *se* forlet Britena<sup>5</sup>" 'Nero ... *who* lost Britain') or followed by *þe* ("Augustinum *þone þe* 3ecoren hæfdon" 'Augustine, *whom* [lit. that one that] they had chosen'). In the Middle English period, however, the interrogative forms spread to these functions as well, with the first use of the interrogative morphology in relative clauses in the 12<sup>th</sup> century. Allen (1980:201-202, quoting Curme) suggests several reasons for the disappearance of the *se, seo, þæt* series including phonological and morphological changes in the structure of English. In Chaucer there is still a preference for forms of *that* in relative clauses, but by the time of Shakespeare we find a generalization of the *wh-* forms in both functions.

There is no consistency, however, in the use of *whom* as the oblique, in either interrogative or relative clauses, throughout the Middle and early modern English periods. For the interrogatives, Middle English shows sentences of the type:

- (1) a. Who did you see?
- b. Who did you give it to?

and early modern English attests to a generalization of *whom* after prepositions and *who* everywhere else (Traugott 1972:125-127). Shakespeare, on the other hand, does not reflect these generalizations and is simply inconsistent in his use. For the relative pronouns, a more abstract syntactic conditioning seems to have obtained, so that *whom* is found in the non-subject case with or without a preposition by the late 15<sup>th</sup> century (Traugott 1972:153-154).

<sup>5</sup> These Old English examples come from Moore *et al.* (1971).

In the 17th century, under the influence of Latin grammar, English prescriptivists arrived at the rule still taught in schools today: for non-genitive relative and interrogative pronouns (since *whose* is the separate genitive form), the subject or predicate nominative takes *who*, while *whom* is to be used in all other environments (Traugott 1972:183). This prescription was never followed in speech or writing to the point of real consistency, however, and Sapir (1921) uses the disappearance of the non-nominative form as an example of drift. He suggests that those who use *whom* "struggle against" (1921:156) the drift of English toward the loss of (surface) case marking in all but the personal pronouns, and points out the high occurrence of hypercorrection and avoidance which characterize contexts where *whom* would be appropriate. Interestingly enough, despite the evidence that such reactions to *whom* have been found since Middle English, Sapir (1921:156) predicts its disappearance within the next couple of centuries<sup>6</sup>.

It is not the case that *whom* has disappeared completely and, in fact, it probably still appears, at least in written English, at the same level of inconsistency as it displayed in the past. Nevertheless, it has served as the data set illustrating various facets of grammar change, starting with Sapir's discussion of drift (1921) described in the preceding paragraph. Within GB, it was used extensively by Klima (1969) to demonstrate the way that linguistic processing mechanisms and the mental storage of grammatical structures could change.

Klima examined three somewhat idealized stages of the history of the interrogative/relative pronouns in English, assigning sets of ordered transformational rules to each stage. His findings can be summarized using two rather simple sentences rendered in modern English, the first of which has a direct object WH form and the second a WH object of a preposition. In the earliest stage, more or less that of the Middle English with the widest use of *whom*, we have the following:

- (2) a. Whom did you see?
- b. To whom did she speak?

Underlying (2a) and (b) are, roughly, the following deep structures:

<sup>6</sup> H. L. Mencken does not feel the necessity to keep any proper scientific distance in his remarks. He says (1936:201-202):  
 "The schoolmarm, in fact, ... continues the heroic task of trying to make her young charges grasp the difference between *who* and *whom*. Here, alas, the speechways of the American people seem to be again against her. The two forms of the pronoun are confused magnificently in the debates in Congress, and in most newspaper writing, and in ordinary discourse the great majority of Americans avoid *whom* diligently, as a word full of snares. When they employ it, it is often incorrectly, as in "*Whom* is your father?" and "*Whom* spoke to me?" Noah Webster, always the pragmatic reformer, denounced it as usually useless so long ago as 1783. Common sense, he argued, was on the side of "*Who* did he marry?" Today such a form as "*Whom* are you talking to?" would seem very affected to most Americans; they might write it, but they would never speak it."

- (3) a. you see-PAST WH
- b. you speak-PAST to WH

with the generation of the WH form in position to be case marked by a verb (3a) or a preposition (b). The transformations involved which pertain directly to *whom* are:

- (4) a. *Case assignment* (object case is attached to the WH directly following the verb or the preposition, both of which are case assigners)
- b. *WH movement* to the beginning of the sentence
- c. *Pied-piping*, that is the movement to the beginning of the sentence, obligatory in early Middle English (Allen 1980:225-226), of the preposition which remained stranded to the right of the verb after the movement of the WH word.

In the second stage, reflecting early modern English before prescriptivism was a strong force, there are some surface changes:

- (5) a. Who did you see?
- b. Who did you speak to?
- c. To whom did you speak?

The underlying forms are the same as in (3), but the order of the transformations has now changed:

- (6) a. WH movement
- b. Pied-piping - now optional
- c. Case assignment

Since WH movement is now the first transformation to apply, case assignment can only take place if pied-piping occurs. Otherwise the WH word is out of the scope of the case assigner and is not affected by it.

In the last stage, all reflexes of *whom* have disappeared:

- (7) a. Who did you see?
- b. Who did you speak to?
- c. To who did you speak?

WH movement is still the first rule to apply, followed, although only optionally and increasingly infrequently in spoken English, by pied-piping. Case assignment, even after pied-piping, has now disappeared. Compared to the earlier stages, then, rule loss has occurred here, as rule reordering did between the first and second stages.

In terms of the paradigm of language change described for GB above, we can talk about the adult speaker adding a rule to the transformational component of the language module in the first stage

which would undo case assignment where pied-piping does not take place, so that such an early modern English speaker would have the following sequence:

- (8) a. you speak-PAST to WH (underlying form; see (3b))
- b. you speak-Past to *whom* (case assignment)
- c. *whom* do you speak to (WH movement)
- d. *who* do you speak to (undoing case assignment by a new rule)

The next generation of English acquirers would then hear only the output (8d) and analyze the grammar to arrive at stage two with its reordering of transformations. From the second to the third stage we can posit a similar reanalysis. The adult will add a rule generalizing the undoing of case assignment after WH movement so that sentences with direct objects are now affected as well:

- (9) a. you see-PAST WH (underlying form; see (3a))
- b. you see-Past *whom* (case assignment)
- c. *whom* do you see (WH movement)
- d. *who* do you see (undoing case assignment by a new rule),

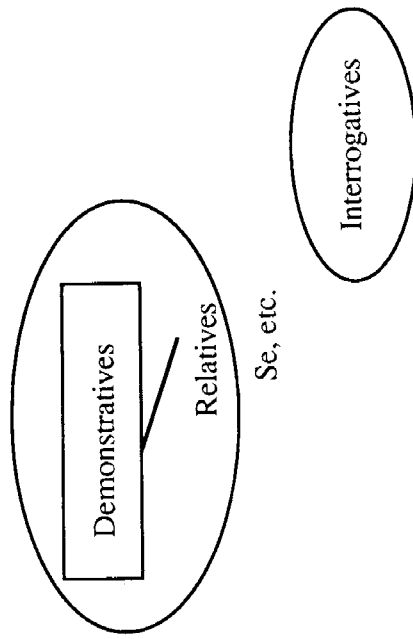
and again acquirers will hear only (9d) and not need case assignment at all; the transformation is therefore lost in the second generation.

In a recent paper, van Gelderen (1993) discusses changes in the case marking of the object from Old to Middle English. Her thesis is that in Old English case is assigned to the object by the nature of the verb (inherent case), while in Middle English case is a matter of the position of the NP vis-a-vis the verb (structural case). It is tempting to extend this analysis to the interrogative/relative pronouns as well since, at least in some ways, the situation is roughly the same: forms that used to emerge on the surface with object case marking (*whom*) whatever their position in relationship to the case assigner (verb or preposition) are now not case marked at all (stage 3) or have case marking only when the case assigner immediately precedes them in the surface output (stage 2 with pied-piping which is still the dialect of many English speakers). van Gelderen (p.c.) points out, however, that since the WH- forms emerge quite late as relative pronouns, it is hard to determine whether indeed there was a change from inherent to structural case.

### 3.2. Cognitive Grammar.

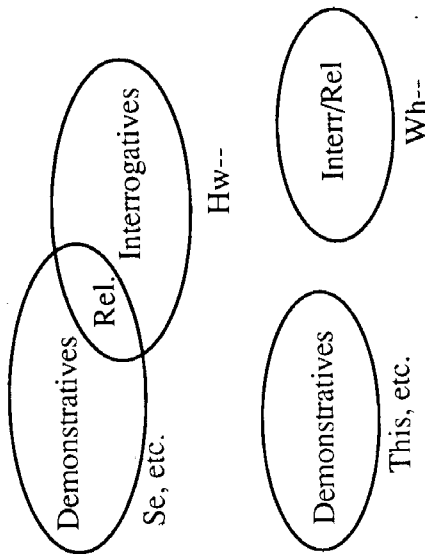
In CG the analysis can be done monostrally by considering radial categories. The earlier change, from Old to Middle English, can be captured by looking at the interaction of various grammatical sets:

relative pronouns as interacting with demonstratives first, and then with interrogatives:<sup>7</sup>



(10) Old English Interrogatives and Relatives

At some point between the two stages there must have been a stage, of course, of hesitation and use of both sets of pronouns:

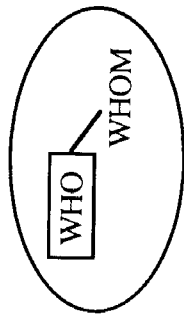


(11) Transition between Old and early modern English

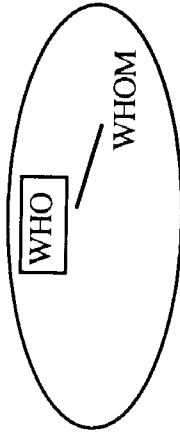
The period of prescriptivism in the 17<sup>th</sup> century and its subsequent effect on later English gives rise to the following radial set in which relative and interrogative pronouns are treated in very similar ways in

<sup>7</sup> I shall exclude *whose* in what follows and concentrate entirely on the disappearance of *whom*.

terms of morphological shape. Here, parallel to Klima's first stage, *whom* appears quite frequently, although not as much so as *who*, which never loses its prototypical position as an interrogative/relative pronoun with personal reference (12a). As *whom* is used less frequently and as its range of uses shrinks, showing up as it does after prepositions but not as a direct object, it becomes less central than before (12b). In (12c), finally, *whom* has disappeared completely, as it has in Klima's third stage.



(12a) Early Modern English  
'WHOM' governed by verbs and prepositions



(12b) Modern English  
'WHOM' governed by fronted prepositions



(12c) "Advanced" English  
'WHOM' is no longer used

CG, therefore, presents quite a different view of language change and its interaction with linguistic acquisition. Unlike GB, where change depends crucially on acquisition, the intergenerational role is far less precise here and linked to social factors in the choice of variant forms rather than to mental structures. Change, seen primarily from the point of view of actuation, has to do with the shift in the categorization of semantic (and pragmatic) units, including those symbolized syntactically. As was illustrated above in (11), the set of members of a given radial category may overlap with those of another category, with the result of partial or complete merger, as occurred in the interrogative/relative pronouns in earlier English. Members of the set, in

turn, may become more or less peripheral or even disappear completely, not into another set through overlap, but fully out of the language (as we see in changes in modern English which are, for many speakers, still on-going).

#### 4. Conclusions.

In the preceding sections I have set forth two theories of language change, one emerging from the Chomskian paradigm and the other from the newer, semantics-based theory of Cognitive Grammar. Of specific interest are the basic mechanisms of change (re-creation of grammar by children acquiring the language as opposed to rearrangement of linguistic categories), and the facet of change which has been most deliberately studied or hypothesized about (spread as opposed to actuation). A third consideration is the role of the adult in the process or, to change the question around, the possibility of change for the individual after the process of acquisition has stopped, certainly by puberty. Here the contrast between GB and CG becomes harder to make: GB explicitly excludes the adult speaker from anything but superficial change, while CG, although it has not pronounced on the subject, does not seem to exclude change at any point in the life span.

How then are we to choose between these models? Obviously, both from a theoretical and practical point of view, a choice is ultimately necessary. Central to GB is the multi-layered and modular view of linguistic functioning, whatever the exact nature of the mental levels involved, while CG is adamantly of the 'what you see is what you get' variety in which basic cognitive functions serve multiple purposes. Any diachronic theory must in some ways account for these differences, or, rather, must choose between them. There are also gaps on both sides in writings about language change: there is a need, for example, for GB to develop a theory of the actuation and CG a theory of the spread of change.

But all of these differences apply to the question of how language change takes place, as discussed in the very first paragraph. If we return as well to the second question asked above, that of *when* we can say that change has taken place, we can claim that there is as well a fundamental similarity between the theories, a similarity dictated by the nature of language change. One of the ways of thinking about the question of *when* change takes place is to differentiate change from variation, where part of the nature of variation is that a speaker may recognize, or even use, several alternatives linked to situation, both social and geographical. Change then, distinguishes itself from variation when the native speaker cannot, without special training, recognize particular variants as such, although s/he can learn about them as historical facts.

GB's transgenerational transmission reflects this very important point in the sense that children, in acquiring language, can no longer extract



from the speech of the older generation the information they would need to recognize these (former) variants as part of the language they are acquiring. It is, in that sense, not at all incompatible with a categorization view of linguistic storage and language processing: whatever the constructs of any given theory, lack of retrievability remains a significant test for 'real' completed change as opposed to variation. CG does not necessarily have to adopt, to reach this point, any 'poverty of the stimulus' arguments or the notion of acquisition through recreation of the grammar<sup>8</sup>. It can still posit (following work stemming from Weinreich, Labov and Herzog [1968] as well as GB) that the point at which change in grammar separates itself from variation is in a generation which does not recognize given variants as acceptable.

To return to our data set, we can, without stretching things excessively, imagine a stage when the English-speaking community (or even a large dialect subset like British or American English) uses *who* in every possible context, so that *whom* does not even appear in hypercorrect phrasing. One last generation will be aware that *whom* is used to be around (perhaps in the speech of their parents), so that they could recognize it as some kind of variant of *who*, say as a kind of decorative extra form in very educated or very pretentious speech. The next generation will have no knowledge of it except for those who decide to become historical linguists and are trained academically in the history of English.

In this case, the necessity of all theories to account for lack of retrievability provides some insight into a choice between them. Langacker (1987:26-27) challenges GB to prove the necessity of the multiple levels and particularly of deep structure: "Here I intend neither to review nor to critique the many arguments advanced to support this conception, but simply to raise the question of whether comparable insights might also be achieved in a model that does not rely on constructs with such tenuous claims to reality." The relative simplicity of a categorization/prototype theory like CG in regard to the number of theoretical entities it calls upon is a point in its favor in choice since it can indeed account for loss of linguistic knowledge without the apparatus of GB.

The categorization view of cognitive reality has, from a diachronic point of view, a second advantage over GB: CG allows us to blur the long-held and strongly defended dichotomy between synchronic and diachronic states of language (Geeraerts 1987 and Winters 1992b). This is not at all to claim that native speakers have access to the history of their language as part of their linguistic knowledge, but rather that, on a more abstract level, where the point of view of the linguist (as opposed to the native speaker) becomes the central one, there is a unity in the processes of language production and perception that cross the

<sup>8</sup> Any such theorizing is beyond the scope of this paper or the expertise of the author, although a theory of acquisition must eventually complement other work done within CG.

traditional synchronic/diachronic boundary. Radial set extensions, for example, may be viewed both synchronically or diachronically, without explicit denial of a specifically diachronic theory (as found in Lightfoot [1981]) or insistence on their total incompatibility. From a metatheoretical point of view, this unification of aspects of linguistic theory may be a deciding factor in the choice of one grammatical analysis over another.

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