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CLITICIZATION VS. INFLECTION: ENGLISH *N'T*

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Two types of bound morphemes—clitics and inflectional affixes—are found attached to (free) words in many languages. At least six lines of evidence separate the clear cases on each side: the degree of selection between the dependent morpheme and the word to which it is attached; arbitrary lexical gaps; phonological idiosyncrasies; semantic idiosyncrasies; syntactic operations affecting the combinations; and restrictions on the combinability of clitics with inflectional affixes. These criteria all indicate that English contracted auxiliaries (*She's gone*) are clitics, but that the English contracted negative (*She hasn't gone*) is an inflectional affix—a rather surprising conclusion that turns out to have satisfying consequences.*

An important point about doing grammatical research on a well-known language is that there can still be surprises. Evidence, sometimes of a subtle and indirect kind, can be uncovered for analyses of a quite unexpected character. For example, Maling (MS) presents syntactic evidence that Eng. *near*, in phrases like *near the wall*, is an adjective taking NP complements—rather than a preposition, as has commonly been assumed. (Note, most strikingly, that we find phrases like *nearer the wall*, *nearest the wall*; prepositions do not have inflectional comparative or superlative forms.) She further shows that the items *like* and *worth*, usually treated as adjectives taking NP complements (cf. Huddleston (1976:244), are both prepositions, despite their non-locational and thus rather un-preposition-like meanings.

It is in part because such unexpected new discoveries can be made at any point, even about the grammar of a relatively well-understood language, that grammatical investigation continues to be interesting. Consider the question of whether some item is a member of a grammatical category at all—or whether it is, like an affix, syncategorematic. Indeed, we might be in doubt as to whether some element is a syntactically independent word or an affix—a question without any straightforward answer, given the possibility that a word can cliticize to another word or phrase.

One such case will be discussed in this paper. The negative formative *n't* is assumed, in most recent analyses that mention it, to be an unstressed and contracted form of the word *not*. The background to our discussion will be a survey of the contrasting properties of the inflectional affixes and cliticized words of English morphosyntax.

1. BACKGROUND. Two types of bound morphemes are found attached to (free) words in many languages: clitics and affixes, in particular inflectional affixes. English, for instance, has auxiliary verbs like *is*, *has*, and *have*, which may become clitic to words preceding them:

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- (1) a. She's gone = She is/has gone.
 b. They've all seen this movie before = They have all seen this movie before.

English also has a few clear inflectional affixes, among them affixes expressing the plural for nouns (*knights*), the past for verbs (*arrived*), and the superlative for adjectives (*fastest*).

The clitics in 1a–b are of the type labeled SIMPLE in Zwicky 1977: they are optional variants of full forms (*is*, *has*, *have*), and occur in the same positions in sentences as the corresponding full forms. Consequently, a major condition on the combinability of a word with one of these clitics is the ability of that word to occur with the appropriate full form in syntactic structures. There are other conditions, of course; but to judge from the survey by Kaisse 1983, they also refer to syntactic structure (both preceding and following the clitic). In any event, word–clitic combinability is largely governed by SYNTACTIC considerations. The conditions governing the combinability of stems with affixes are of quite a different sort: they are MORPHOLOGICAL and/or LEXICAL in character, being concerned with the substructure of a finite set of words. This basic difference between simple clitics and affixes predicts that clitic groups and affixed words will tend to display a number of further differences, which we will illustrate in §2 below:¹

- A. Clitics can exhibit a low degree of selection with respect to their hosts,² while affixes exhibit a high degree of selection with respect to their stems.

¹ A somewhat different list of criteria can be extracted from the proposals of Carstairs 1981, who gives these definitions: (a) clitics are material positioned relative to adjacent syntactic constituents, rather than relative to '(roots or stems belonging to) particular parts of speech'; (b) inflectional affixes are material whose shape is 'affected by grammatical features (e.g. number, gender, conjugation-type or declension-type) of the item which governs their position'; and (c) inflectional affixes are also 'members of a relatively small closed system, one of whose members must always appear at the relevant place in structure' (p. 4). Our criterion A follows from (a) and (b). However, English has such an impoverished system of inflectional affixes that (b) and (c) are of little utility. We agree that (a)–(c) will apply in other contexts, but conclude that they add nothing to our discussion of particular English examples.

Muysken 1981 lists six criteria for distinguishing clitics (which he assumes to be generated by phrase-structure rules), from inflectional or derivational affixes (generated by word-formation rules): (a) 'word trees have more restricted branching properties than phrase trees' (288); (b) 'there is no equivalent of the \bar{X} convention constraining the operation of morphological rules' (288–9); (c) 'all word-formation rules are optional' (289); (d) the base of a word-formation rule is specifiable as being of a single category; (e) indeed, this must be one of the major categories; and (f) the base and output of a word-formation rule may belong to different categories, while the output of cliticization belongs to the same category as the host element. Criteria (a)–(c) are quite weak, and in any case do not apply in our English data; (d) and (e) together amount to a high degree of selection for affixes, our criterion A; and (f) distinguishes derivation, not inflection, from cliticization.

² SELECTION is used here in the sense of the structuralists, e.g. as in Harris 1951. Our reference to DEGREE OF SELECTION is not meant to suggest that the selectivity of some linguistic item is necessarily quantifiable; we assume only that, in at least some cases, items can be ranked with respect to selectivity. A morpheme that occurs with any word from a major form class is then less selective than one occurring only with verbs; this second morpheme is in turn less selective than a morpheme occurring only with some subclass of verbs; and this third morpheme is in turn less selective than a morpheme occurring only with a few specified verbs.

- B. Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.
- C. Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.
- D. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.

Further predictions follow from a strong hypothesis which we propose in our work on syntax–phonology interactions (see Zwicky 1982 for a summary of our position): All cliticization (including the ‘simple’ type illustrated in 1a–b above) follows syntax; or, equivalently, no syntactic operations apply after cliticization. On this view, cliticization rules work on surface syntactic structures, either re-organizing them (in the case of simple clitics) or placing certain morphemes within them (in the case of other clitics). From the assumption that no syntactic operations (including agreement and government processes) can follow these re-organizations and placements, at least two predictions follow:

- E. Syntactic rules can affect affixed words, but cannot affect clitic groups.
- F. Clitics can attach to material already containing clitics, but affixes cannot.

We illustrate these two differences in §3 below.

In §4, we turn to an item whose analysis has been unclear, namely the English contracted negator *n't*; and we show that, by all six criteria (A–F), it is not a simple clitic but an inflectional affix. This is a somewhat surprising analysis, but it is implicit in Harman (1963:610) and in Hudson (1977:80); it is relatively explicit in Starosta (1977); and Lapointe (1980:451, fn. 13) mentions some of the facts which we discuss below as evidence for a ‘lexical’ treatment of *n't*, which could be taken to mean an affixal analysis. We show that analysing *n't* as an affix avoids known difficulties in earlier treatments, such as Zwicky 1969, Selkirk 1980, and Pullum & Wilson 1977. We do not deny that modern contracted *n't* had its historical origin as a simple clitic; but we maintain that it has unquestionably been re-analysed as an instance of inflectional affixation.

2. CRITERIA A–D. The simple clitics ‘s ‘is’, ‘s ‘has’, and ‘ve ‘have’ contrast with the inflectional affixes ‘noun plural’, ‘verb past’, and ‘adjective superlative’ on all four criteria.

(A) The degree of selection between the clitics and the words preceding them is low. The clitics can attach to words of virtually any category, in addition to the pronouns in 1a–b:

- (2) a. The person I was talking to’s going to be angry with me. [preposition]
- b. The ball you hit’s just broken my dining room window. [verb]
- c. Any answer not entirely right’s going to be marked as an error. [adjective]
- d. The drive home tonight’s been really easy. [adverb]

The inflectional affixes, by contrast, are quite specific in their selections of stems: the plural attaches only to noun stems, the past only to verb stems, the superlative only to adjective and adverb stems.

(B) There are no arbitrary gaps in the set of host-clitic combinations—no cases where a PARTICULAR host word fails to combine with one of the three simple clitics we are using as illustrations. A number of GENERAL conditions on these combinations (involving syntactic structure, phonological properties of the host, category of the host, and sentence stress) have been suggested in the literature; but it is never the case that some single expected host-clitic combination fails to occur. Such arbitrary gaps do occur occasionally in inflectional paradigms, as is well known; e.g., the English verb *stride* anomalously lacks a past participle.

(C) No morphophonological idiosyncrasies exist within clitic groups containing 's and 've—no cases where some particular host-clitic combination shows an unexpected phonological form. Hosts are unaffected by these clitics, and the clitics themselves have allomorphs distributed by general rules referring to phonological and morphological properties of the hosts.³ For inflectional formations, morphophonological idiosyncrasies are very common: we find arbitrary groupings into paradigm sets, sub-regular and irregular forms for both stems and affixes, and suppletion. Relevant English examples include forms like *dice*, *oxen*, and *feet* for the plural affix; *slept*, *thought*, and *went* for the past affix; and *best* and *worst* for the superlative affix.

(D) There are no semantic idiosyncrasies for clitic groups containing 's and 've—i.e. no cases where the contribution of these clitics to sentence meaning is not identical to the contribution of their associated full forms. Inflectional formations, in contrast, do occasionally show idiosyncratic semantics: the meaning of the whole word is not always composed regularly from the meanings of its parts. It is not easy to illustrate this from the rather meager inflectional system of English; however, some indications can be gleaned from facts like the existence of *last* (etymologically a superlative from *late*), which has the syntax of a superlative but an idiosyncratic range of meaning (*last words* are final, not just maximally late or recent), or *most*, which in the slang of the fifties developed a meaning similar to *best* (*Frankie Avalon is the most*). Richer inflectional systems have greater possibilities of developing specialized uses of inflected forms.

We have illustrated criteria A–D with inflectional affixes; however, the contrast with clitics would be much more striking if we had used derivational affixes instead. Here the degree of selection between stem and affix is often higher than for inflectional affixes; and arbitrary gaps, morphophonological idiosyncrasies, and (especially) semantic idiosyncrasies are commonplace.

3. CRITERIA E–F. The predictions made in E–F are again borne out for the three simple clitics of English vs. the three inflectional affixes.

With respect to E, no syntactic operations exist which treat a word combined

³ The relationship between full forms and simple clitic forms is not necessarily to be described by rules of general application elsewhere in the language. Kaisse, in fact, argues that the full and clitic forms of the English auxiliaries are simply different allomorphs, both listed in the lexicon (e.g. /hæz/ and /z/ for *has*). In line both with Kaisse's analysis and with criticisms by Klavans (1980, Ch. 2) of the conceptual framework of Zwicky 1977, we do not require that simple clitics derive synchronically from full forms by processes associated with casual or fast speech.

with one of the clitics 's or 've as a unit. Indeed, given the wide variety of hosts to which these clitics attach, it is hard to imagine what such an operation would be like. But inflected nouns, verbs, adjectives, and adverbs are of course regularly treated as units by syntactic operations.

With respect to F, the English cliticized auxiliaries CAN attach to material already containing clitics, though the inflectional affixes cannot:

(3) I'd've done it if you'd asked me.

4. THE CONTRACTED NEGATOR *n't*. Having illustrated the six criteria with respect to three relatively uncontroversial examples of simple clitics, and three relatively uncontroversial examples of inflectional affixes, we now turn to a problematic case—the contracted negator *n't*:

- (4) a. You haven't been here.
b. Haven't you been there?

Almost without exception, linguists have viewed *n't* as a simple clitic, derived in a way exactly analogous to the derivation of the contracted auxiliaries—i.e. by a cliticization process ('NEG Association' or 'Not Contraction') operating on the full form *not*, so that 4a is derived from

(5) You have not been there.

This orthodox analysis, variants of which are seen in Zwicky 1969, 1970 and Selkirk 1980, leads to the conclusion that a syntactic operation, namely Subject–Auxiliary Inversion (SAI), is fed by the contraction operation. (Whether or not SAI is a TRANSFORMATION makes no difference here; our argument relates just as well to the non-transformational analysis of Gazdar et al. 1982.) This conclusion results from the fact that the uncontracted version of 4b is ungrammatical:

(6) *Have not you been there?⁴

SAI accounts for the repositioning of either *have* with contracted *n't*, as in 4b, or alone, as in

- (7) a. Have you been there?
b. Have you not been there?

But it never predicts the two-word combination *have not*, as in 6; so SAI is responsive to the effects of 'contraction'. In other words, with respect to criterion E, *n't* behaves like an inflectional affix rather than a simple clitic. Compare 3, using *n't*, with 8, using 've:⁵

- (8) a. You could've been there.
b. *Could've you been there?

⁴ Zwicky 1969 noted that, if the subject NP in a sentence is fairly long and 'heavy', and if a relatively stiff and formal register is considered, then a *not* can follow an inverted auxiliary and precede the subject: *Will not the electorate of this country consider that they have a right to know these facts?* We do not believe SAI has anything to do with the position of *not* in such examples; rather, we maintain that such sentences result from a stylistic option (quite independent of SAI) that allows heavy subject NP's to be displaced rightward across *not*.

⁵ In Selkirk's treatment, this contrast requires SAI to be ordered after the contraction of *not*, but before the contraction of *have*. Our analysis obviates the necessity for this parochial rule-ordering constraint (or any equivalent of it).

Criterion F also classifies *n't* as an inflectional affix rather than a simple clitic, since *n't* cannot attach to material already containing clitics. The contrast here is between the acceptable *I'd've* in 3 and the unacceptable *I'dn't*:

- (9) **I'dn't* be doing this unless I had to.

The problem with 9 is not that it lacks a source, since 10a–b are both grammatical:

- (10) a. I wouldn't be doing this unless I had to.
b. I'd not be doing this unless I had to.

Rather, *n't* cannot attach to words containing simple clitics, although the simple clitic *'ve* can do so.

At this point, we turn to criteria A–D to see how THEY classify *n't*. In every case, they agree with E–F.

First, criterion A: the negator *n't* is highly selective, attaching only to auxiliary verbs—indeed, only to the finite forms of these. The restriction to auxiliary verbs might be interpreted merely as a consequence of the structures in which *not* occurs, since *not* is frequently preceded by auxiliary verbs. Still, words of other categories can precede *not*, and in these circumstances *not* doesn't necessarily bear contrastive or emphatic stress. However, *n't* cannot occur in these contexts as a variant of *not*.⁶

- (11) a. I don't $\left\{ \begin{array}{l} \text{TRY not} \\ *_{\text{TRYN}}\text{'t} \end{array} \right\}$ to pay attention; I just can't help it.
b. Well, for $\left\{ \begin{array}{l} \text{HER not} \\ *_{\text{HERN}}\text{'t} \end{array} \right\}$ to understand is the last straw.

In any event, the restriction to finite auxiliaries, illustrated below in 12–14, shows that mere adjacency of an unstressed *not* to an auxiliary (in this case *have*) is not enough to licence *n't* in this position. This point is made, with similar examples, by Akmajian et al. (1979:48–9).

- (12) a. It would be a shame to have not EVER had a chance to see it.
b. *It would be a shame to haven't EVER had a chance to see it.
(13) a. The police have not been informed.
b. The police haven't been informed.
(14) a. Would the police have not been informed?
b. *Would the police haven't been informed?

As background for a discussion of criteria B and C, we list in Table 1 (overleaf) the complete membership of the set of auxiliary verbs to which *n't* can attach. Note that in two instances, (i) and (s), the contracted negative forms do not exist at all—in our speech, at least; the forms **mayn't* and **amn't* are used by some speakers, but definitely not by us or a significant percentage of other speakers. Moreover, in one case, (x), a negative form exists which has

⁶ Although this is not the place to explore the association between full/reduced forms and full/reduced stress, we should point out that, for the pair *not/n't*, the correlation with full/reduced stress is very imperfect. In particular, it is much more natural to view forms like *didn't* in denials (*No, I didn't go!*) as corresponding to sentences with stressed *not* (*No, I did not go!*) than to view them as corresponding to sentences with a stressed auxiliary and an unstressed *not* (*?No, I DID not go!*)

no direct positive counterpart, since *ain't* serves as the negative form of *have*, *has*, *am*, *are*, and *is* on an optional basis, in certain dialects and styles. We face, therefore, a pattern of gaps of exactly the sort we find in the realm of word formation. By criterion B, *n't* does not behave like a simple clitic.

a.	do	[du]	don't	[dɒnt]
b.	does	[dʌz]	doesn't	[dʌznt]
c.	did	[dɪd]	didn't	[dɪdnt]
d.	have	[hæv]	haven't	[hævnt]
e.	has	[hæz]	hasn't	[hæznt]
f.	had	[hæd]	hadn't	[hædnt]
g.	can	[kæn]	{ cannot can't couldn't	{ [kænat] [kænt] [kʊdnt]
h.	could	[kʊd]	—	—
i.	may	[me]	—	—
j.	might	[maɪt]	mightn't	[maɪnt]
k.	shall	[ʃæl]	shan't	[ʃænt]
l.	should	[ʃʊd]	shouldn't	[ʃʊdnt]
m.	will	[wɪl]	won't	[wɒnt]
n.	would	[wʊd]	wouldn't	[wʊdnt]
o.	dare	[der]	daren't	[dernt]
p.	must	[mʌst]	mustn't	[mʌsnt]
q.	need	[nid]	needn't	[nidnt]
r.	ought	[ɔt]	oughtn't	[ɔnt]
s.	am	[æm]	—	—
t.	are	[ar]	aren't	[arnt]
u.	is	[ɪz]	isn't	[ɪznt]
v.	was	[wʌz]	wasn't	[wʌznt]
w.	were	[wɛr]	weren't	[wɛrnt]
x.	—	—	ain't	[ent]

TABLE 1.

As for the phonological forms in Table 1, one (*ain't*) is completely idiosyncratic and unrelated to any positive form. At least five other negative forms cannot be related to their positive counterparts by regular phonological rules: *don't*, *can't*, *shan't*, *won't*, and *mustn't*.⁷ *Don't* has [dɒ] for the expected [du], *won't* has [wɒ] for the expected [wɪl], *shan't* is idiosyncratically missing its [l], and all three have [nt] with non-syllabic [n] instead of [nt̚], as does *can't*. *Mustn't* shows a deletion of [t] also found in certain inchoative/causative verb forms with the suffix *-en* (*moisten*, *soften*); however, the deletion is conditioned only by *n't* and the inchoative/causative suffix. (It does not occur within morphemes, since *piston*, *Easton*, and *Lifton* all have [t]; nor is it conditioned by the suffixes *-ent* and *-ence*, as in *existence*, *consistent*, *assistance*, and *persistent*—or by [ŋ] as a variant of *-ing*, as in *bustin'* and *liftin'*.) In fact, it seems

⁷ It is also true, as pointed out in Zwicky 1970, that intermediate forms with reduced [nət] do not exist: *[wɪlnət], *[wɒlnət], or *[wɒnət] are not possible variants of *won't*; and [dɒnət] is an acceptable pronunciation of *doughnut*, but not of a partly reduced form between *do not* and *don't*. However, since we do not require that simple clitics be process-derived from full forms (see fn. 3 above), these observations do not bear directly on criterion C.

to us that no deletion would take place in neologisms with any of the various *-en* suffixes: An inchoative/causative **besten*, based on the adjective *best*, would have a [t]—as would a past participle **heften*, based on the verb *heft*, but with the suffix *-en* of *taken*; or a plural **ghosten*, based on the noun *ghost*, but with the suffix *-en* of *oxen*; or an adjective **frosten*, based on the noun *frost*, but with the suffix *-en* of *golden*. That is, the deletion of [t] in *mustn't* and *moisten* is idiosyncratic, limited to combinations of specific lexical items with specific appended morphemes. By criterion C, then, *n't* does not behave like a simple clitic.

Finally, criterion D. Here we point to the well-known irregularities in the semantic interpretation of the forms in Table 1. If we write the negation of P as NOT(P), and write the meaning contribution of *must* (for example) as MUST, then where P = *You go home*, the meaning of *You mustn't go home* is MUST(NOT(P)), not NOT(MUST(P)). But the order of operators is reversed when we consider *can*: *You can't go home* means NOT(CAN(P)), not CAN(NOT(P)); it refuses permission (or denies possibility), rather than permitting the addressee not to go home (or admitting that possibility). And this is an irregularity in the connection between contracted and uncontracted form; *You must not go home* has exactly the same meaning as its contracted variant, but *You can nót go home* has a meaning that is lacking in *You can't go home* and *You cánnót go home*. (The extra meaning of the uncontracted sentence comes out clearly if the *not* is linearly separated from the *can*, as in *You can simply not go home*.) Such facts are discussed at length in Horn 1972, 1975, where contrasts like the following are noted:

(15) a. A good Christian can nót attend church and still be saved.

b. A good Christian $\left\{ \begin{array}{l} \text{cánnót} \\ \text{can't} \end{array} \right\}$ attend church and still be saved.

These two sentences have strikingly different meanings: on its more dominant reading, 15a says that non-attendance CAN be forgiven, while 15b says that attendance can never be forgiven. Such examples are problematic for any analysis in which contracted negatives, as in 15b, are derived from independent negation, as in 15a. Significantly, Horn's discussion is couched in terms of constraints on lexicalization, i.e. the semantic make-up of lexical items. The analysis of Pullum & Wilson assumes that negative auxiliary verbs are lexical items—which are, however, put in at surface structure after transformational rules of negative placement and attachment have applied. But the semantic idiosyncrasies of contracted negative auxiliaries indicate that, by criterion D, they should not be derived like simple clitics at all.

Granting now that *n't* is not a clitic but an affix, we must consider briefly the possibility that it is a derivational, rather than an inflectional, affix. The fact that affixation of *n't* converts auxiliary verbs into auxiliary verbs—that it does not change category—suggests inflection rather than derivation; and this classification is strongly supported by the fact that in forms like *doesn't*, *hasn't*, and *hadn't*, the affix *n't* occurs AFTER inflectional affixes; the well-known generalization that applies here is that inflectional affixes tend to close off words

to further derivation (Bloomfield 1933:222 refers to 'an outer layer of INFLECTIONAL constructions, and then an inner layer of constructions of WORD FORMATION'); thus we do not expect to find a derivational suffix following an inflectional suffix, as would be the case in *doesn't* if *n't* were derivational rather than inflectional.

5. FURTHER OBSERVATIONS. We have now demonstrated that *n't* behaves in no way like a simple clitic; and we have concluded that it is an inflectional suffix, defining an additional part of the finite paradigm of a small set of irregular verbs, namely the traditional 'auxiliaries'. While this is scarcely the standard view of English, the proposal that a language has negation as one of its inflectional categories is unremarkable; negative inflectional affixes on verbs are found in such well-known languages as Japanese, Swahili, and Turkish. There are even languages with suppletive positive/negative pairs of auxiliaries: Blass 1980 reports on dialects of Sisaala, a Gur (Voltaic) language of West Africa, with suppletive negative copulas; and suppletive negative copulas and auxiliary verbs are widespread in the Dravidian family. For Telugu, Lisker 1963 lists the negative copula *lē-* 'not to be' corresponding to the affirmative *un(n)-* (94), and the negative auxiliary (constructed with infinitives) *lē-* 'cannot, be unable' corresponding to the affirmative *gala-* (204), as well as a negative copula *kā-* constructed with two NP's and corresponding to an affirmative zero (94).

There is also no difficulty in seeing how an inflectional affix *n't* could have arisen historically, through re-analysis of what was originally a simple clitic. However, consideration of the steps in this development leads to another possible analysis for *n't*, namely that it is a SPECIAL CLITIC, rather than a simple clitic. The facts already presented argue against this treatment, but we must flesh out our proposal before we can show this.

The basic property of SIMPLE clitics is that their distribution in sentences is exactly the same as that of associated full forms; the formal device which creates phonological words containing a simple clitic is a readjustment rule, operating on a surface syntactic structure. All other clitics are SPECIAL clitics in our terminology (a refinement of that in Zwicky 1977): either no corresponding full forms exist, as in the Latin conjunctive particle *-que*, the Tagalog clitic particles, and the English possessive 's; or else the clitics do not have the same distribution as the corresponding full forms, as in the pronominal clitics of many Romance and Slavic languages and of Modern Greek. Phonological words containing a special clitic could be regarded in transformational terms as created by a rule that takes features associated with some DOMAIN constituent (usually S or NP); transfers them to a LOCUS, a specified node within the domain (e.g. to an initial or final sub-constituent, or to the head of the constituent); realizes them as morphological material situated either before or after the locus; and attaches this material phonologically either to the right or the left. This rather complex scheme, based on Klavans' exposition, is designed to accommodate cases in which the constituent by which a clitic is located is not the constituent to which it attaches phonologically, e.g. the pronominal clitics of the Australian language Nganhcara, as discussed by Klavans; these are located before the

last word in a sentence (which is apparently always the main verb of that sentence), but are attached phonologically to whatever word happens to appear to their LEFT (word order being quite free in other than sentence-final position). That is, in Nganhcara, features of certain NP's in an S are associated with that S node, transferred to the final word in that S (or to the V that is the lexical head of the S—the two statements are apparently equivalent in this case), realized as a pronominal morpheme situated before that word, and then attached phonologically to the PRECEDING word. Except for the potential distinction between the syntactic locus and the phonological host, such an operation is formally like a rule of agreement—or more generally, a rule distributing marks of inflectional categories. It follows that special cliticization and inflection can look much alike.

For English *n't*, then, one might propose that the feature of sentential negation is transferred to the first auxiliary verb in the sentence, then realized as the morpheme *n't* situated after and phonologically attached to that verb. This formulation works equally well for auxiliaries in construction with the rest of their VP's and for inverted auxiliaries, so that criterion E is not necessarily relevant. However, criteria A–D are directly relevant—since, taken together, they indicate that forms like *wouldn't* and *can't* are LEXICAL ITEMS, not free combinations of auxiliary verb and a clitic (of any sort).

Forms like **I'dn't* (relevant for criterion E) can be avoided in a special clitic analysis of *n't*, but at some cost in complexity. If it is stipulated that a cliticization of *not* to auxiliaries precedes the cliticization of auxiliaries, and if the latter operation is constrained to apply only to monosyllables (Selkirk, §3.1.1, incorporates both these features), then disyllables like *wouldn't* are not candidates for cliticization. Our analysis must include some equivalent of the monosyllable condition, but it avoids a parochial rule-ordering constraint, since the order of *n't* attachment before auxiliary cliticization follows directly from our assumption that all syntax precedes all cliticization.

We conclude that the feature of sentential negation is realized on the first auxiliary verb in an English sentence, as part of the syntax proper, not as a post-syntactic cliticization. This feature transfer is then just like that of tense in English—rather than like that of negation in Tagalog, where the negative particle *hindi* is a special clitic located after the first word of the sentence.

Although this is not the place to develop a full account of negation in English, we can sketch the main features of our proposal. To begin with, we assume (with most recent discussions of English negation) that negative markers are located at two different places within VP's. This assumption permits double negatives in standard English, as in 16; and it predicts an ambiguity in single negation, as in 17, which can be understood as asking either whether it is possible (or permitted) for the youngsters to make the trip, or whether they are able to avoid making the trip:

- (16) a. Well, I just would not NOT sunbathe on such a beautiful day.
 b. When he's nervous, he can't not smoke.

- (17) Could this group of sixteen energetic youngsters not travel down the Colorado in a bark canoe?

Following the analysis of Gazdar et al. (§2.23), we specify that negation can be marked either on a tensed auxiliary (*would* in 16a), or on a tenseless verb (*sunbathe* in 16a), or on both, with somewhat different semantic interpretations for the two instances. Negation on a tenseless verb is realized as *not* PRECEDING the verb. Negation on a tensed auxiliary is realized either as *not* FOLLOWING that auxiliary, or as a feature associated with the auxiliary V node.⁸ Thus, what takes the place of a cliticization rule in this analysis is a principle permitting alternative expression for one type of negation: either as a separate word or as an inflectional feature. This principle is similar to the one required for the description of the comparative and superlative of adjectives and adverbs in English: These are realized either as separate words (*more*, *most*), or as inflectional features (associated with the suffixes *-er* and *-est*), but not as both in the same sentence.

We thus argue that, on all the available evidence, *n't* should be treated as an (inflectional) affix rather than a clitic (of any sort); and also that an inflectional suffix *n't* can be accommodated in an account of English morphosyntax using only garden-variety descriptive principles—indeed, using only those of types already instanced in the language.

REFERENCES

- AKMAJIAN, ADRIAN; SUSAN M. STEELE; and THOMAS WASOW. 1979. The category AUX in universal grammar. *LI* 10.1–64.
- BLASS, REGINA. 1980. The Sisaala negative in the light of universal predictions. University College London, Master's thesis.
- BLOOMFIELD, LEONARD. 1933. *Language*. New York: Holt.
- CARSTAIRS, ANDREW. 1981. Notes on affixes, clitics, and paradigms. Bloomington: Indiana University Linguistics Club.
- GAZDAR, GERALD; GEOFFREY K. PULLUM; and IVAN A. SAG. 1982. Auxiliaries and related phenomena in a restrictive theory of syntax. *Lg.* 58.591–638.
- HARMAN, GILBERT H. 1963. Generative grammars without transformational rules: A defense of phrase structure. *Lg.* 39.597–616.
- HARRIS, ZELLIG. 1951. *Methods in structural linguistics*. Chicago: University of Chicago Press.
- HORN, LAURENCE R. 1972. On the semantic properties of logical operators in English. Bloomington: Indiana University Linguistics Club.
- . 1975. NEG-Raising predicates: Toward an explanation. *CLS* 11.279–94.

⁸ The stylistic option of fn. 4, which displaces heavy NP's rightward across *not*, does not apply over the *not* in construction with tenseless verbs, but only over the *not* in construction with tensed auxiliaries. Consider this stylistic variant of 17:

- (a) Could not this group of sixteen energetic youngsters travel down the Colorado in a bark canoe?

This lacks the 'able to avoid making the trip' reading of 17—the reading that corresponds to *not* in construction with tenseless verbs. It follows from this condition that examples like (b), first pointed out to us by Richard Kayne, will not be generated, even though apparent source constructions, as in (c), are available:

- (b) *Couldn't not this group of sixteen energetic youngsters travel down the Colorado in a bark canoe?
- (c) Couldn't this group of sixteen energetic youngsters not travel down the Colorado in a bark canoe?

- HUDDLESTON, RODNEY D. 1976. An introduction to English transformational grammar. London: Longmans.
- HUDSON, RICHARD A. 1977. The power of morphological rules. *Lingua* 42.73–89.
- KAISSE, ELLEN M. 1983. The syntax of auxiliary reduction in English. *Lg.* 59.93–122.
- KLAVANS, JUDITH L. 1980. Some problems in a theory of clitics. University College London dissertation.
- LAPOINTE, STEVEN G. 1980. A lexical analysis of the English auxiliary verb system. *Lexical grammar*, ed. by Teun Hoekstra et al., 215–54. Dordrecht: Foris.
- LISKER, LEIGH. 1963. Introduction to spoken Telugu. New York: ACLS.
- MALING, JOAN. MS. Transitive adjectives in English: A case of categorical re-analysis. To appear in the Proceedings of the 1980 Groningen Round Table Conference.
- MUYSKEN, PIETER. 1981. Quechua word structure. *Binding and filtering*, ed. by Frank Heny, 279–327. Cambridge, MA: MIT Press.
- PULLUM, GEOFFREY K., and DEIRDRE WILSON. 1977. Autonomous syntax and the analysis of auxiliaries. *Lg.* 53.741–88.
- SELKIRK, ELISABETH O. 1980. The phrase phonology of English and French. New York: Garland. [1972 MIT dissertation.]
- STAROSTA, STANLEY. 1977. Affix hobbling. *Hawaii Working Papers in Linguistics* 9:1.61–158.
- ZWICKY, ARNOLD M. 1969. Phonological constraints in syntactic description. *Papers in Linguistics* 1.411–63.
- . 1970. Auxiliary reduction in English. *LI* 1.323–36.
- . 1977. On clitics. Bloomington: Indiana University Linguistics Club.
- . 1982. An expanded view of morphology in the syntax-phonology interface. Preprints for the 13th International Congress of Linguists, Tokyo.

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