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## A SYNTACTIC EXPLORATION OF REPAIR IN ENGLISH CONVERSATION\*

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### 1. Introduction

The present study concerns itself with a description of the syntactic organization of self-repair in English conversation, and with the relevance of that organization for syntactic theory. The topic of self-repair has received relatively little attention from linguists, and yet it seems to us to have quite profound implications for the theory and practice of syntax.

Perhaps because self-repair appears to create utterances which are 'dysfluent' or 'ungrammatical' from a linguist's perspective, many linguists have seen self-repair as outside the scope of syntactic theory. And even though some linguists (outside of the generative tradition) have shown a passing interest in the phenomenon of self-repair in everyday speaking (for example, the 'dysfluencies' of unplanned spoken language are mentioned in Jespersen (1924, 1937), Hockett (1958, 1967), Bicomfield (1962), and Chao (1968), self-repair has received little serious attention as a syntactic phenomenon.

Outside of linguistics self-repair has fared a bit better; it is becoming an important topic in computational and experimental approaches to speech and natural language (Levett 1982, 1983, 1989; Good 1990; Levett & Cutler 1983; Bredart 1991; Postma, Kolk & Povel 1990; Blackmer & Milton 1991; van Wijk & Kempen 1987; Bear, Dowding & Shriberg 1992; Shriberg, Bear &

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We would also like to thank Chuck Goodwin and Manny Schegloff for the use of transcripts for this study. In some cases we have changed the spelling of segments from transcripts to standard orthography.

Dowling 1992, Nakatani & Hirschberg 1993, Hindle 1983, Carbonell & Hayes 1983). While this work offers extremely promising results, a detailed syntactic analysis of self-repair has not yet appeared in this literature.

The most direct discussions of self-repair and syntax come from within the Conversation Analysis literature. In 1979, Schegloff published a paper, in a volume edited by a linguist (see Givón 1979), on the relevance of repair for syntactic studies. In that paper, Schegloff encourages linguists to consider the fact that syntactic utterances are produced in thoroughly interactional environments and therefore that syntax probably exists in some relationship to other, interactional processes which operate on talk — for example, repair. In 1981, Goodwin noted the relevance of repair for even such crucial syntactic notions as 'grammaticality':

In order to deal with repairs, a hearer is thus required to make one of the most basic distinctions posed for anyone attempting to decipher the structure of a language: He is called upon to distinguish between what are and are not possible sequences in the language, that is, between grammatical and ungrammatical structures. (Goodwin 1981:172)

It is perhaps of interest that linguists have only recently started to seriously address the issue of syntax and interaction, and perhaps of even greater interest that linguists have not done much with the specific topic of repair and its relationships to syntax (exceptions being Du Bois 1975, Hockett 1967, Local 1992). This fact is almost certainly due to the perception that repair is 'performance' data *par excellence* — chaotic, unpatterned, and disruptive of the 'real' work of syntax.

It is our intent to suggest that self-repair is in fact highly patterned, non-chaotic, and organized by, indeed partially constitutive of, syntax. We make this suggestion gently, because, as we have discovered, it is a vast topic of research, one requiring expertise in a variety of domains; this paper as a result cannot help but be exploratory and preliminary in nature. Nonetheless, we think even these exploratory and preliminary remarks are based on such compelling findings that the present paper has its place, if only in drawing other linguists to an unusually rich area of research.

The primary goal of this study is to describe the organization of utterances from naturally-occurring English conversations which exhibit **first-position self-repair** and to relate this description to syntactic theory. By self-repair we mean repair which is produced by the speaker of the repairable (see Schegloff, Jefferson & Sacks 1977), as in (1) below.<sup>1</sup> We have used an asterisk to

indicate where self-repair begins; the repaired segment is enclosed in square brackets, and the repairing segment is given in boldface.<sup>2</sup>

- (1) H:    h And [Ishə-∗] **this girl's** fixed up on [a da ∗] a blind date.<sup>3</sup>

In this utterance, H cuts off the subject pronoun *she* (the '∗' indicates glotalized cut-off) and in a sense redoes that pronoun with a full noun phrase, *this girl*. This example is classified as self-repair because both the repaired segment — the pronoun — and the repairing segment — the full noun phrase — are produced by the same speaker. A second instance of self-repair occurs in this utterance: the first try at *date* is cut off to introduce a modifier — *blind date*.

The term 'first-position repair' refers to repair which takes place within the same Turn Constructional Unit as the repairable. In utterance (1), for example, *this girl* occurs within the same clause as the cut-off pronoun.

For the purposes of this study, we use the term Turn Constructional Unit to refer to the units from which turns are made. A TCU can be a word, a phrase, a clause, or a sentence which is a possibly complete turn (see Sacks, Schegloff & Jefferson 1974). Ford & Thompson (To appear) show that intonation and pragmatics are crucially involved in understanding how recipients hear when an utterance is 'possibly complete'; a TCU is thus a point of possible syntactic, intonational, and pragmatic completion.

The present study is thus interested in repair as it is most relevant to syntax — within the boundaries of a coherent syntactic unit and impinging on what we might otherwise think of as flowing, grammatical utterances.

In this study, then, we attempt a description of some of the syntactic parameters of first-position self-repair in English, including: the syntactic constraints on repair, the syntactic organization of repair, repair as a resource for syntax, and the relevance of repair to understanding the organization of syntax. What we suggest is that there is indeed syntactic organization in repair; in effect there is a 'grammar of repair' in English, a way to be fluently dys-fluent.<sup>3</sup>

It is our claim — a claim borne out by the patterns exhibited by our data — that repair constrains and is constrained by the syntactic resources of a language. Of course, we cannot rule out the possibility that other factors may

<sup>2</sup> The first letter of the first word of an utterance is capitalized if it occurs at the beginning of a Turn Constructional Unit.

<sup>3</sup> For a comparison of the 'grammar of repair' in English and Japanese, see Fox, Hayashi & Jasperson (To appear).

<sup>1</sup> The notation conventions used in our examples are explained in Appendix A.

influence the organization of repair: for example, it is possible that certain 'styles' of repair are fashionable for a given language/culture or that they work in that language/culture to create a certain construction of self (as perhaps tentative, submissive, unintelligent, etc.) and that these styles are more constrained than is required by the syntax of that language. It is also obviously plausible that other facets of a language — e.g. its phonology — would influence the operation of repair. Nonetheless, it is still possible that one can detect in the workings of repair the larger workings of general syntactic resources in a language.<sup>4</sup>

## 2. Methodological preliminaries

### 2.1 Definition of repair

A possible first understanding of repair might be that repair is the process by which speakers correct errors they have made in their immediately prior talk. But, as Schegloff, Jefferson & Sacks (1977) note, repair is not limited to error-correction; there are many instances of what we would like to call repair in which no error is made (in fact the reason for the repair is not obvious):

- (2) M: I don't know but [it's-\*) it's gonna cost quite a bit

And in some cases, the utterance under construction is aborted, and one with a new syntactic organization is started, so there is no direct replacement involved:

- (3) H: And I half-\*) ( ) my class starts at two.

We define repair here, then, as any instance in which an emerging utterance is stopped in some way, and is then aborted, recast, or redone. Further examples illustrating the range of phenomena included in this category are given below:

- (4) D: ((clears throat//))  
 J: [I gave\*], I gave up smoking cigarettes;  
 (5) M: Called her 'n [I t-\*) well actually I told her that my best friend had gotten the measles.  
 (6) B: She said they're usually harder markers 'n I said  
 wo: wuh huhh! bh [I said there go\*], I said [there's-s-\*)]

- A: **there's** three courses already that uh(hh)hh-ff  
 Yeh  
 B: I'm no(h)l gonna do well (h)n.

- (7) A: Like they-\*) the biggest debate [h-\*) in our department. [m-\*)], at Trenton was that when we had these faculty meetings.

- (8) K: Plus once [he got- (0.8) some um\*] (1.3) he got some battery acid on-\*) (0.2) on his trunk or something.

We did not include in the category of repair utterances in which *um* or *uh* were followed by the syntax continuing as projected, as in:

- (9) AK: hh And I'm in the uh (0.2) school of law.

Nor did we include instances in which the speaker cut off the end of a word, as if initiating repair, but then continued with the utterance as projected:

- (10) AK: they've given me (1.5) the value of tangent in-the sense that it's less than zero

In other words, there had to be some alteration of the emerging syntactic form, if only through repetition of a word, for an utterance to be seen as exhibiting repair.

We use the term **repaired segment** to refer to the portion of the utterance which is being repaired; the term **repairing segment** refers to the portion of the utterance which is accomplishing the repair. **Repairable** is a term from Schegloff (1979) which refers to the unit which is the actual source of 'trouble' which the speaker wishes to alter (in this sense, many utterances do not have a repairable).

Very little is currently known about how recipients understand or process the repairing segment with regard to the repaired segment. It is tempting to think of the repairing segment as in some sense replacing the repaired segment; but we do know that recipients do not 'delete' the repaired segment (see Jefferson 1974), so it is not clear in what sense the repairing segment might replace without deleting the repaired segment. Since some studies of repair assume a replacement relationship (see in particular our discussion of Levelt's work in section 3.1), we have sometimes adopted that metaphor, but we remain neutral as to whether replacement is an adequate model for the process of

<sup>4</sup> We explore this assumption in greater detail elsewhere (see Fox, Hayash & Jasperson To appear).

repair.

We did not explore the possible motivations for using different kinds of repair initiators, nor did we explore the possible consequences of using different kinds of repair initiators. These and other, further, details of the organization of repair await future research.

## 2.2 *Mutual relevance of self-repair and syntax*

Much of the argumentation for this section is based on Schegloff (1979, 1987).

The relevance of repair to syntax can be seen in utterance (1), repeated below for convenience as (11):

- (11) H: .hh And [Ishə-∗] **this** girl's fixed up on [ə də-∗] **a** blind date

In this utterance, we have two important syntactic 'transformations': from pronoun subject to full noun phrase subject, and from unmodified noun to modified noun. Now, the distribution and use of pronouns and full noun phrases is obviously a valid and important topic of syntactic inquiry; the change from one to the other must thus be a syntactic issue. Similarly, an unmodified noun and a modified noun are related through syntactic structures (e.g. phrase structures), and thus a change from one to the other must be a syntactic process. Repair manipulates the relative ordering of elements in a string and hence must be of relevance to syntax; if syntax is understood as the system or set of systems which relate elements in an utterance to each other and to elements in other utterances (in an oral/aural language these elements are produced sequentially, in a string).

There is another way of stating this same interrelation. Consider again utterance (11). How is it that the recipient of this utterance (or we as analysts) hear *this girl* as replacing *she*, rather than, for example, continuing it? It is obviously at least partly due to our knowledge of English syntactic patterns that we hear the full noun phrase as a re-try or redoing of the initial formulation. The same is true for *a blind date* and *omada*: we hear *a blind date* as replacing *a da* at least in part because we know there is no pattern in English that has a time specifier and an event specifier (e.g. *on a day* (?) *a blind date*) as arguments for *be fixed up*. It is thus partly our experience with English syntax which leads us to hear a given production as repair or not.

So far we have seen that without syntax, repair could not operate. Repair operates on and through syntax. This conclusion is perhaps of limited interest to most linguists, since if one does not work on repair, the exact organization

of repair is of no immediate concern. But, it is possible to show also that syntax cannot operate without repair, and this is obviously of the utmost concern even to linguists who do not work on repair.

Let us for now focus on conversation, and in particular conversation in an oral/aural language. In conversation, all utterances are produced and heard in real-time. But that does not mean that all processing is done strictly sequentially; we know from a variety of studies that recipients make predictions on the basis of what has been said so far about what is to come (e.g. what kind of syntactic unit is under construction, and just how it will come to completion). Now, while recipients have a great deal of experience with the ways in which utterances tend to be produced, and therefore can predict with quite amazing accuracy how an utterance-in-progress will continue (Sacks, Schegloff & Jefferson 1974; Lerner 1991), recipients are not mind-readers, and syntax is complex; and if recipients knew 100% of the time what was going to be said by the speaker, there would be no need for communication at all. It is therefore logically necessary that recipients will on occasion make mistakes in their judgments of what is to come.

One of the things that recipients do with their predictions of what is to come is to plan when they will be able to make their own contribution – that is, when it might possibly be their turn. Given the nature of turn-taking (see Sacks, Schegloff & Jefferson 1974), if a recipient of an on-going turn is not ready to begin speaking at the precise end of that turn, it is possible that recipient will lose the opportunity to speak, that opportunity having been taken by someone else. Recipients thus monitor the on-going turn to make predictions about how it is going to come to possible completion so that they can themselves start speaking at the earliest possible opportunity.

Recipients can make incorrect predictions about when the speaker is going to stop speaking, and as a result recipients can end up speaking in overlap with the preceding speaker, with the outcome that some of what they have each said may have been drowned out by the overlap. It is common at this juncture for one of the parties to stop speaking to let the other continue, although sometimes both parties continue to speak in overlap, and sometimes both parties stop simultaneously (see Sacks et al. 1974; Schegloff 1987; Jefferson 1973; Lerner 1989). What does not happen, however, is for the conversation to stop. Eventually, one of the parties will speak again. And given that part of what they have just said might not have been heard, if they are to continue speaking, there must be a resource with which they can redo what was not heard. Hence there must be at least the kind of repair which allows the speaker to redo part of an utterance, as in (12) below:

- (12) B: thing to get off // it y' know,  
 => J: So that- that was| really =That was really nice hh

A simpler argument can be found in Schegloff (1979). Schegloff suggests that the possibility always exists that a crash of thunder, or a phone ring, or a child crying, will blot out part of the utterance that is currently being produced. There must thus be resources for redoning the part which was not heard. Even if human error were not a pervasive presence in conversation, then, repair would still have to be possible.

There can thus be no talk without the possibility of repair. And since talk is constructed through syntax, there can be no syntax without the possibility of repair. Syntax must allow for the possibility of repair, as an essential part of its organization. It is thus important that syntax-linguists explore repair, so that we can better understand the organization of syntax.

### 2.3 *Data collection*

For the purposes of this project, we culled 500 examples of repair from transcripts of naturally-occurring American English conversations: the first 300 were from everyday conversations (both face-to-face and telephone conversations); the remaining 200 were culled from our own collection of face-to-face tutoring sessions. We gathered instances of repair from the tutoring sessions in order to increase the sample size. The two sets of data were kept separate both in the collection stage and in the analysis stage of this project. Utterances appearing in the text below which are taken from the tutoring sessions are preceded by *A*.

Since tutoring is a bit different from everyday conversation, a few words about the tutoring data are in order. In the summer of 1986 one of us (Fox) received a grant to study human tutoring dialogue, as part of an endeavor to build more robust computer tutoring systems. As part of this project, we hired graduate students from math, physics, chemistry and computer science to serve as tutors; students needing tutoring were attracted to the project through ads in the student newspaper. Tutor and student pairs then met in a small lab room for an hour, where the interaction was audio- and video-taped. The pair was given no instructions beforehand on how to proceed, and the whole interaction was guided by the genuine needs of the student (several had tests coming up, for example). The resulting conversations were thus spontaneous and natural, in the sense that they were not in any way planned or orchestrated in advance. However, they are on rather abstract topics, and they bear many marks of the asymmetrical roles of the tutor and student in the teaching/learning process (and tutor and student had never met before this session). For these reasons, to be

cautious, we have kept the tutoring session data separate from the everyday conversation data. But in fact in the analysis we found no consistent differences in repair between the two data sources.

Instances of repair were coded for (a) the syntactic constituent that was under construction when the repair was initiated (e.g. noun phrase, prepositional phrase); and (b) the syntactic organization of the repair (e.g. just a word was repeated, or the entire clause was redone). We used syntactic categories for the analysis, rather than, for example, interactional categories, to see if there were indeed syntactic patterns through which repair operates, or which emerge as constraining the operation of repair. Of course, in the analysis the interactional locus of each utterance was considered, so the analysis is by no means a purely syntactic exercise. But as syntax-linguists, we were interested in the possible syntactic configurations of repair.

Choosing syntactic categories for analyzing such data obviously poses several risks. First, it is not possible to know at the outset whether the phenomenon in question is organized according to syntactic categories. For example, Schegloff (1987) demonstrates that one type of repair is governed by turn organization and *not* by sentence organization. So it was certainly possible that no description of repair could be made in syntactic terms. Second, it is possible that the categories we used, while widely accepted by linguists, would not be the **appropriate** syntactic categories; that is, it is possible that repair is indeed organized through syntactic categories — just not the syntactic categories typically recognized by linguists.

Throughout the project we tried to be conscious of both pitfalls of our syntactic analyses; the fact that some of the results suggest an organization that is not completely parallel to basic syntactic categories indicates that the analysis was flexible enough to allow discrepancies to emerge. (In fact, one of the possible rewards of doing this kind of work is that it might shed light on the syntactic categories that we currently recognize. We were eager to see if the repair data offered any insights into our commonly accepted categories.)

This study addresses only one particular set of relationships between repair and syntax; there are a variety of others which we have not explored (e.g. syntactic constraints on additions in recycling) — these require further research.

### 2.4 *Organization of the chapter*

The chapter is organized as follows: Section 3 describes the organization of repair in terms of syntactic categories. The analysis suggests that repair is organized, at least in part, by and through certain syntactic categories, but interestingly enough, not by all of the categories we originally used in the analysis. The implications of these findings are also discussed in section 3.

Section 4 discusses repair as a resource for syntax; that is, how repair is used as a mechanism for managing certain pressures on syntax. Section 5 presents some theoretical musings on the nature of syntax, in light of the findings of sections 3 and 4. Section 6 provides concluding remarks.

### 3. Exploring the syntax of repair

#### 3.1 The basic patterns

One of the remarkable features of repair is that the utterance exhibiting repair, when looked at as a whole, is completely unacceptable grammatically. The following utterance, for example, if one does not 'calculate' the repair, cannot be parsed:

- (13)  $\Delta$ K: Now, [I want to simp-\*] I want to break it down further than that, right?

*I want to break it down* is unacceptable as a continuation of the infinitival complement of *I want* in the higher clause. So it is interestingly ironic that repair is heard as creating grammatical utterances, when in fact, if one looks at the whole structure created, it makes no sense grammatically (see also Goodwin 1980, 1981, Schegloff To appear).

Utterances such as (13) are obviously grammatical only if we hear the repairing segment to have in some sense 'attached' to an earlier piece of syntax. This is not to say that the recipient is actually asked to delete or forget the repaired segment; Jefferson (1975) presents convincing evidence that the repaired segment, far from being deleted in any real sense, is interactionally still significant. But the repaired segment must be heard as not directly syntactically implicative of the repairing segment if the utterance is to be interpretable.

One of the obvious questions raised by this feature of repair is the following: How do recipients of repaired utterances know what segment of the utterance is being repaired? or, stated in another way, How do recipients know where syntactically to attach the repairing segment? Consider the following utterance:

- (14)  $\Delta$ D: if you just write it out like this [you really sa-\*] **it's very clear.**

Our interpretation of this utterance is that a final reading of it could be: 'if you just write it out like this it's very clear' (we hear *sa-* to be the beginning of the

verb *save*). How do we (and presumably the original recipient of the utterance) know that *it's very clear* is meant to 'reach over' (but not in the sense of delete) all of *you really sa-* and not just *sa-* or *really sa-?*

One obvious answer is that the attachment of *it's very clear* as the consequent of the earlier *if* clause is the only possibility that makes grammatical sense. It would be odd English to say 'if you just write it out like this you really it's very clear'. *You really* requires some kind of verb and predicate phrase, not an entire clause.

Levelt (1983) proposes a hypothesis for how hearers calculate repair attachment ( $r_1$  refers to the first word within the repairing segment, and  $o$  refers to an item within the original utterance):

...if the syntactic category of  $r_1$  is equal to the syntactic category of the last word of OU [original utterance] before interruption ( $o_n$ ), then  $o_n$  should be replaced by  $r_1$  with maintenance of the constituency of  $o_n$ . (The repair is interpretable as a continuation from the thus replaced  $o_n$ . (p. 89)

...if  $r_1$  is lexically identical to  $o_1$  (i.e., is the same word and of the same syntactic category), for any  $1 < i < n$ , then replace  $o_i$  by  $r_i$ , and insert the repair from there on, maintaining the constituency of  $o_i$  but replacing whatever follows in  $o_i$ . (p. 90)

A more general formulation of these two constraints is (p. 93):

...if  $r_1$  is category identical to some  $o_i$  of  $o_i$ , then replace  $o_i$  by  $r_1$ .

Let us now reconsider the repair in (14) using Levelt's proposal:

- (15)  $\Delta$ D: if you just write it out like this you really sa-\* **it's very clear.**

The first part of the proposal does not apply:  $r_1 = \textit{if}$ , which is not of the same syntactic category as *sa-* (which must be a verb, probably *save*). The second part of the proposal also does not apply: there is an instance of *it* in the original utterance, but the repairing segment is clearly not meant to replace that (such a replacement would yield 'if you just write it's very clear', which is not the intended meaning of the utterance). If we use the general formulation, the replacement seems to work: *it* is of the same syntactic category (noun) as *you*, so we should replace *you* with *it* and then replace the rest of the original utterance with the rest of the repairing segment, yielding: 'if you just write it out like this it's very clear'.

But now consider the following utterance:

- (16) AG: But (.) in unix there is not: \* (1.0) you- you have the current version.

If we apply the general formulation, we run into trouble:  $r_1 = \text{you}$ , which is a noun, *no* is also the beginning of a noun, so we might try to replace *no* with *you*, but this yields 'But in unix there is you have the current version', which is clearly not the intended replacement. The grammatical status of *there* in constructions like this is controversial: there is some evidence that native speakers of English treat it as the subject of the clause, hence as a nominal; but there is also evidence that it is a locative phrase, which might be considered to be a different syntactic category than a subject pronoun like *you*. *unix* is also a noun, although it is the object of a prepositional phrase, and it is not clear how Levelt's hypothesis would treat this. Our understanding of this transcript leads us to guess that the intended meaning is 'But in unix you have the current version', where *you* replaces *there*, but it is not clear how Levelt's proposal would lead us to this choice over the others.

The difficulty with Levelt's basically insightful formulation is that the notion of 'category' which the recipient must make use of is perhaps more complex than the formulation allows for. For example, should the relevant category for (16) be 'noun' or should it be 'subject', or perhaps 'clause beginning'? Our guess is that recipients make use of all of these levels, with the result that there is not necessarily a prescribable single interpretation of a repaired utterance.

So, like Levelt, we suspect that recipients use the organization of the repairing segment, in conjunction with the site of repair initiation, to make a possible interpretation. But we would allow for a complex notion of 'syntactic category'. If the repairing segment is a clause, or the beginning of a clause, it replaces the clause, or beginning of clause, which includes the item at which repair is initiated. If the repairing segment is a word, then the recipient hears that word as replacing or redoubling the word at which repair was initiated; if the repairing segment is a phrase (e.g. prepositional phrase), then the recipient will try to hear it as replacing or redoubling the phrase which includes the item at the repair site. In (17), for example, the repairing segment *that didn't have a directory command* is a relative clause; we thus hear it as replacing the relative clause which includes the site of repair initiation:

- (17) AG: You can imagine (0.4) defining a user interface (0.2) [that never (2.6) ha-\*] **that didn't have a directory**

command

In (18), the repairing segment is a headless relative clause; there is no relative clause in the utterance-so-far. But a headless relative is a kind of noun phrase, and the speaker was in the middle of a noun phrase (*two shells*) when the repair was initiated; so the recipient can hear the complex noun phrase of the repairing segment as replacing the simple noun phrase of the repaired segment.

- (18) AG: hhh There are at least two [sh-\*] **what they call shells**

This analysis is not meant to suggest that speakers and recipients consciously know about noun phrases or headless relative clauses or existential clauses; we are merely suggesting that they know what kinds of units can occur in similar slots in similar syntactic formats and they may thus have some notion of syntactic similarity or substitutability (not necessarily conscious knowledge, of course).

Nor is this analysis meant to suggest a simple mechanistic interpretation of repair; on the contrary, we assume that speakers and recipients bring a great deal of (unconscious) experience and knowledge to bear in deciding what kinds of phrases are structurally like other phrases, or in deciding what is acceptable English and what is not. Understanding a repaired utterance is thus seen, like all social activities, as essentially interpretative, not mechanistic.

In most cases, the repairing segment is carefully designed to show what it is replacing (e.g. by repeating key words, see section 3.3 below).<sup>5</sup>

We now turn to the syntactic organization of repair. We found the following general possibilities for repair in the data and we correlated them with our syntactic codings:<sup>6</sup> (A) repair could be initiated at a word, and that word could be recycled by itself; (B) repair could be initiated at a word, and that word could be replaced with a single item; (C) repair could be initiated at a word, and some part of the turn leading up to that word could be recycled, including the word at which the repair was initiated; (D) repair could be initiated at a word, and some part of the turn leading up to that word could be repeated, with a replacement word for the repairable; (E) a phrase could be recycled, with the addition of new elements; (F) repair could be initiated at a word, and that word is repeated but placed within a modified syntactic frame;

5 We have not in the current study attended to the use of stress and intonation in the production of the repairing segment, but we are quite certain that prosodic features play a major role (see Local 1992, Bear, Dowding & Shitberg 1992).

6 These categories do not exhaustively classify all of our instances of repair, but they classify the great majority of our data.

(G) repair could be initiated at a word, and the turn constructional unit including that word is aborted, and a new Turn Constructional Unit (TCU) is begun.<sup>7</sup>

- TYPE A recycle word
- TYPE B replace word
- TYPE C recycle prior phrase including word
- TYPE D recycle prior phrase, replace word
- TYPE E recycle prior phrase, add new elements
- TYPE F change syntactic framework
- TYPE G abandon structure, start new structure

We will describe the patterns of repair starting with the beginning of the TCU and working to the end, assuming a typical SY(O) pattern. Wherever possible, we have provided at least tentative explanations for our findings. But given that we do not have explanations for all of the patterns that we discuss below, to some extent the list of findings represents a catalog of occurrences and non-occurrences of repair-types. A complete set of explanations for the repair facts of English awaits further research.

3.1.0 *Repair initiated during the subject NP* Schegloff (1979, 1987) claims that the beginning of a turn is the site of a great proportion of repairs. While we did not attempt any frequency counts to substantiate this claim, it does seem that repair is often found early in a turn.

It should be noted that Schegloff's phrase 'turn beginning' conflates two notions: it is both the beginning of a TCU and the beginning of a potentially larger turn. Consider the following example:

- (19) A: No, you want to say three squared. Because the secant is three.

It is possible to analyze the turn in (19) as having two TCUs. The beginning of the first TCU — *No, you want...* — is also the beginning of the whole turn and hence is a turn beginning. The beginning of the second TCU, *Because the secant...*, is not the beginning of the whole turn, it is therefore TCU-initial but not turn-initial, and hence is not a turn beginning. We take it that Schegloff uses the term 'turn beginning' to refer to just those beginnings which are the beginnings of TCUs and of whole turns. That is, he does not include as a

turn-beginning the beginning of a unit which is not turn-initial. So for our purposes we will distinguish three different kinds of beginnings

- (a) turn-initial TCUs (turn beginnings)
- (b) non-turn-initial TCUs (TCU beginnings)
- (c) clause beginnings which are syntactically embedded and hence do not occur at the beginning of a TCU (clause beginnings)

In this subsection we look at repair initiated during the subject, at the beginnings of all TCUs (both turn-initial and non-turn-initial). We found instances of each of the repair-types:

TYPE A (recycle word):

- (20) B: I don't know. The [school-**\***] **school** uh. (1.0) bookstore  
doesn't carry anything anymo(h)re.

TYPE B (replace word):

- (21) H: I hadn't either. hhh But anyways, u-en then the [moo-**\***]  
**thing** was the Dark at the Top of the Stair//rs.

N: Mm hm.

TYPE C (recycle phrase):

- (22) B: [And this-**\***] **an::: this** guy for linguistics lass-laughs at h i s  
own: jokes (h)y<sup>3</sup>know<sup>8</sup>

TYPE D (recycle phrase with word replacement):

- (23) A: So [the syst-**\***] u- eh- y<sup>3</sup>know **the program** would- ( )  
would fork, Nexus would- (0.1) pause, and- and wait.

TYPE E (recycle with addition): No examples.

TYPE F (change syntactic framework):

8 We treat examples like this as cases of simple recycling, although the prosody of the repairing segment is different from the prosody of the repaired segment. Since we have not examined prosody in the present study, we do not know if recycling + change of prosody should be treated as a different category than recycling without change of prosody (if in fact the latter occurs).

7 TYPE G includes a diverse range of syntactic types, some of which are discussed in section 3.2.



- (24) A: D: Okay, so [the main-\*] **I mean the main thing** you do, is  
you figure out the field at A due to this charge.<sup>9</sup>

TYPE C (about):

- (25) A: D: [The prob-\*] is it multiple choice?

**Summary**

Repair during a subject NP is clearly very common and not highly constrained.

3.1.1 *Repair initiated after the subject NP* Repair can be initiated after the subject NP is possibly complete. We have included in this category instances in which a subject pronoun is cut-off with a glotal stop if that pronoun had gone far enough in its production to be hearable as a particular pronoun (and hence possibly complete).

Many TCUs begin with what Schiffrin (1987) has called discourse markers — words such as *well*, *so*, *okay*, *oh* and the like. If repair is initiated after the discourse marker and after the subject (between subject and what could be the rest of the clause), it is rare for the discourse marker to be repeated as well (hence the absence of TYPE C and D repairs here; see below):

TYPE A:

- (26) B: And [she\*], **she** had gained about 40 pounds anyway.

In fact, as Schegloff (1987) points out, it is rare in any kind of recycled turn beginning for the discourse markers to be recycled.

Other examples of subject recycling in turn-initial TCUs (turn beginnings) are given below:<sup>10</sup>

- (27) J: Tch! No [I\*], **I** find I just get very euphoric.

- (28) D: And [he\*], **h//e** identifies numbers on, Sesame Street'n that

<sup>9</sup> It is quite possible that *I mean* in this case is not acting as a 'higher' clause, but is just a marker of repair, if such an analysis is correct, this utterance would not be an instance of TYPE-B repair.

<sup>10</sup> If we compare the examples from section 3.1.0 with the examples below, it appears that the major difference is between full noun phrase subjects (in section 3.1.0) and pronominal subjects; we do, however, have examples of repair initiation during the production of a pronominal subject, and repair after the production of full noun phrase subjects.

- kinda stuff=  
B: Mmm.  
B: =Mm hm?

From a syntactic perspective, it is important to determine if subjects of non-turn-initial TCUs (TCU beginnings) behave like the subjects we saw above. As far as we can tell, they do; that is, they can be redone or repeated without any other part of the utterance being redone:

- (29) A: n:No definitely not [He\*], **he'n** Gail were like on the outs,  
y'know?

Syntactically embedded subjects (clause beginnings) also display this possibility:

- (30) N: And, en the fact that [you\*], **you** feel guilty about eating  
them that's what makes you break out

- (31) A: No, she ain't there anymore,  
B: No I know I mean [she\*], **she's** gone a long t(h)ime  
(h)alrea/dy? hh

A: Mm, hhhnh!

For subjects we also find TYPE B repair, where the subject is replaced with another formulation:

- (32) N: No I thought you said [you-\*] **he'd** be married, (.) with six  
kids,

- (33) H: hh And [she-\*] **this girl's** fixed up omma da-a blind date.

The following example illustrates TYPE B repair in turn-beginning:

- (34) A: Ye(h)(h)ah!  
(0.2)  
B: [I-\*] ah- y-y'know **this gu-y** has not done anything yet that I  
understand.

We found no instances of TYPE C repair in this case; that is, we found no utterances in which repair was initiated immediately after the subject was

produced and elements prior to the subject (e.g. discourse markers) were recycled with the subject. This was true of subjects in non-turn-initial TCUs and embedded subjects as well. This fact almost certainly arises from the tendency to not recycle discourse markers (see Schegloff 1987, for a similar finding).

Similarly, no instances of TYPE D were found for any of the subjects.

TYPE E (recycle with addition):

- (35) K: I dunno where she is [but I-\*] (0.9) **talks about her every so often but I dunno where she is**

Examples of TYPE F are given below (change of syntactic framework):

- (36) N: 'n that made me feel good [he-\*] **I guess he sees some pretty bad cases**
- (37) G: He's a policeman in Bellview but [he-\*] (0.4) **I guess he's, not afraid to drive a car.**
- (38) A: Don said get something hot'n spicy and [his-\*] **they said this was and it isn't.**

We find examples of TYPE G — aborting an utterance structure in progress — for both turn-initial and non-turn-initial subjects:

- (39) B: hh[He-\*] eh- **his fingers don't bend**
- (40) B: But they, and [they\*], and, everything, for sale in Powelton like, except for one-tenth or... y'know one-twentieth. (0.5)
- B: of //Powelton
- A: is under them

#### Summary

Repair after a subject NP appears to be constrained in the following way: material that precedes the subject (e.g. discourse markers) is not recycled with the subject. All other kinds of repair occur. The distinctions between turn beginnings, TCU beginnings and clause beginnings do not seem to correlate with differences in post-subject repair.

3.1.2 *Repair initiated during construction of the verb* In most constructions, after the subject has been produced some kind of verb form is produced. This subsection explores what kinds of repair occur if repair is initiated *during* (not after) the formulation of the verb complex (including auxiliary and main verb combinations).

Simple TYPE A repair occurs (recycle word), but not often, and never in turn-initial position. This finding is discussed in some detail in section 3.4.

- (41) AK: I looked at the book once and I [dɪdn't\*] (0.2) **didn't** open it then.

TYPE B repair occurs as well (replace word).

- (42) AC: which- (in math) is .hh generally [It-\*] **written** 2 root 2.

TYPE C (recycle phrase) is extremely common. This fact is discussed at length in section 3.4.

- (43) B: .hhhh And then we had- they had trouble [They ha-\*] **they have** no place for our class.
- (44) AM: Okay, well we could- do it [from that angle then, because I don't-\*] **I don't** really .hh encounter that conceptual problem (0.3) in any of the problems.

- (45) AP: I [don't-\*] **I don't** [oll//ow,  
J: (Okay)

Another important pattern emerged here, for TYPE C repairs: In each case, the recycle goes back either to the beginning of the TCU or to the beginning of an embedded finite clause. It thus appears that recycling of non-complete verbs is tightly constrained, and we will see below that some form of this constraint is exhibited by repair later in the clause as well. The tendency for English speakers to recycle back to the beginning of a clause is discussed in section 3.4 (see also Fox, Hayashi & Jaspersen To appear).

TYPE D (recycle phrase, replace word) is exemplified below:

- (46) AK: Now, I [want to simp-\*] | **I want to break it down** further than that, right?

- (47) VA: So [I could-\*] (0.3)
- I should be able**

TYPE E (recycle phrase with addition):

- (48) VG: 'k, So, hh the parent and the child (0.2) [de-\*]
- usually diverge**

TYPE F is found in cases where the verb is placed in a different syntactic environment, as in:

- (49) AK: Well [that ma-\*]
- that should make**
- this a lot easier, shouldn't it?

TYPE G, in which the emerging syntactic stream is aborted and a new structure is started, is fairly common:

- (50) H: And [I haf-\*] ( )
- my class starts at two:**

- (51) B: [And we k-\*]
- and there was a little o:pening.**

**Summary**

The distinctions among types of beginnings seems to be relevant to repair initiated during the construction of the verb, in that simple word recycling (for example of an auxiliary) does not occur in turn beginnings. Moreover, recycling always goes back to a (finite) clause beginning, whether that clause beginning is TCU-initial or not. These facts are clearly important and deserving of explanation: they are discussed at length in section 3.4

3.1.3.1 *Repair initiated after the verb* The next possible locus of repair is after the verb complex is hearably complete and before a required object noun or locative phrase — that is, within what has been traditionally called the Verb Phrase. This subtype, like some of the others, exhibits constraints on recycling, such that the speaker recycles back to the beginning of a finite clause (either an embedded finite clause or the main clause).

The only example we found of TYPE A repair (recycle word) is a case of overlap at precisely the verb: it is thus possible that the repair is a recycling of the verb in order to get the verb in the clear (and note that the repair is not in a turn-initial slot). The rarity of this type of repair is presumably related to the rarity of TYPE A repair during the verb complex (see section 3.1.2); both phenomena are probably related to the tendency to recycle to the beginning of a

unit. These facts are discussed at greater length in section 3.4.

- (52) B: And I went to buy a book the other day. I # [went\*] .hh
- 
- went**
- down to NYU to get it because it's the only place that
- 
- car/ries the book

A: (Mm)  
A: Mmm

TYPE B (replace word) is exemplified below:

- (53) M: in reality I'd just [go:ne\*] (0.2)
- went up**
- // 'n talked to them
- 
- to ( )
- 
- S: Did Sandy 'n Germaine go to that?

TYPE C (recycle phrase) is the most common type of repair for this category:

- (54) VA: [What if you put\*] (4.6)
- what if you put**
- double quotes
- 
- around
- 
- (55) AD: Cause I tutored for a class last semester [that had\*] (0.7) u hm
- 
- (0.7)
- that had**
- a multiple choice exam

As we saw in section 3.1.2, the recycle (repairing segment) does not start at some random point in the utterance — it always goes back either to the beginning of the whole TCU (as in 54) or to the beginning of a finite clause within that TCU (as in 55).<sup>11</sup> This point is dealt with in section 3.4.

TYPE D (recycle phrase, replace word) can be seen below:

- (56) B: She said they're usually harder markers 'n I said wo: wuh
- 
- huhh! .hhh [I said there go\*],
- I said there's-**
- there's three
- 
- courses already that uh(hh)hh//f

A: Yeh  
B: I'm no(h) gonna do well i(h)n.

- (57) AM: Taking physics 302. [I didn't have-\*] (0.4)
- I had**
- 301, but I
- 
- had it a long time ago at Arizona State

<sup>11</sup> The copula is an important exception to this pattern (see section 3.1.3.2).

TYPE E (recycle phrase with addition):

- (58) AD you know you got this 300 electron volts, [and you go-<sup>\*</sup>] **and you always go**, oh my God what (0.4) what is an electron volt

TYPE F can be seen in the following example, where the clause 'you might have' is embedded under 'let's say':

- (59) AD: for instance- [you might have<sup>\*</sup>], in this case you don't, but **let's say you might have** the mass, of one of these things on both sides

TYPE G (abort) occurs with this site of repair initiation, as with all sites:

- (60) H: .hh [I went-<sup>\*</sup>] (0.2) **Alright like I get off at work at one,**=  
N: =uh hu'h,  
(61) AD: Okay, [so (0.6) you've got<sup>\*</sup>], (0.8) **so here you dro-** drew ea2 and ea1.

### Summary

Recycling in this context, as in others, is constrained: speakers tend to recycle to the beginning of a finite clause.

3.1.3.2 *Repair initiated after the copula* In some utterances, the main verb is some form of the verb *be*, which we expect to be followed by a predicate nominal or predicate adjective. We found not significant constraints on the operation of this kind of repair.

TYPE A (recycle word):

- (62) VA: so delete [is<sup>\*</sup>] (1.6) **is** what, r?  
(63) VA: in many ways that [are<sup>\*</sup>] (0.3) **are** are not (0.9) very useful.

TYPE B (replace word):

- (64) VG: .hh V1 (1.0) [is<sup>\*</sup>] (1.2) **h-has** (0.2) modes associated with it.

TYPE C (recycle phrase):

- (65) D: They really like it. .hh I mean [it's-<sup>\*</sup>] **it's-** it's- it's nicely located

- (66) C: [He's-<sup>\*</sup>] **he's** pm the Usac. (0.1) trail // isn't he?

TYPE D (recycle phrase, replace word):

- (67) B: ...[She was over-<sup>\*</sup>] **she's lo:ng-** she was long overdue

TYPE E (recycle phrase with addition):

- (68) AD: [What is,<sup>\*</sup>] **in SA units, what** is the unit of energy.

TYPE F: No examples.

TYPE G (abort):

- (69) VM: It's uhm\* (1.3) What they want is the force. Right?

### Summary

We found no significant constraints in this type of repair.

3.1.4 *Repair initiated during a direct object NP* After the verb is completed, the next possible place to initiate repair is during the object noun phrase (in a transitive clause; we'll look at prepositional phrases in section 3.1.5). In this subtype of repair we found perhaps the most interesting syntactic constraint on recycling: in cases where repair is initiated during the direct object, speakers do not recycle back to the verb; rather, speakers recycle either to the beginning of the local constituent (the direct object noun phrase), or they recycle to the beginning of the larger constituent (a finite clause). This constraint is discussed in greater detail in section 3.4.

TYPE A (recycle word):

- (70) B: in this building- we finally got [a-<sup>\*</sup>] .hhh **a** room today in- in

the leh- a lecture hall.

TYPE B (replace word) is rare but does occur:

- (71) AG: You know that the alias command permits you to have [two different\*]  
(1.0)  
or, y<sup>h</sup>know: **different** ways of expressing the same (  
A: Mhmm  
(0.2)  
G: system function.

Interestingly enough, we found no examples in which one kind of article was replaced with another kind of article just by replacing that single word; that is, we found no examples of the sort: 'I have a-\* the book'.

TYPE C (recycle phrase):

- (72) B: ((to J)) (I don't think- I bedju would // nex'time we-)<sup>12</sup>  
D: Hey, would you like [a Trent'n.: \*] a **Trent'n** telephone directory.  
(73) K: Plus once [he got- (0.8) some\*] uh'm (1.3) **he got some** battery acid on (0.2) on his trunk or something

As we have seen before, the constituency of the recycle is constrained; it is not the case that the person backs up, as one would listening to a tape, to some random point in the TCU. For example, we found only one instance in which the speaker recycled back to the **verb** which preceded the object noun:

- (74) D: B't they have somebuddy there, who talks ing-  
I  
Je: Mommy?  
D: **talks English** like it's - like English.

In this example, the speaker initiates repair before completing a direct object (*English*), and he recycles back to the verb to begin the repairing segment.

<sup>12</sup> D's utterance here is technically in overlap with B's utterance to J. But given that B's utterance is addressed to someone other than D (it is in fact addressed to a child), the overlap might not be the reason for D's repair.

This example is the only one we have found in which the speaker initiates repair during a direct object and recycles back to the verb to begin the repairing segment (unless the verb is the first word of the TCU). Although we do not have a clear explanation for this unique case, its organization may be the result of one of several factors: for instance, it may be relevant that the repair was initiated during overlap by another speaker; it may also be relevant that the repair was initiated in a subordinate clause rather than a main clause; it may be relevant that *talk English* is a fixed phrase. Further research is needed to determine the principles at work in this highly unusual case.

The possible implications of this finding are discussed in section 3.4 below. But for now we can note that this finding could potentially call into question the existence of the verb phrase as an important unit of syntactic organization (a possibility already suggested for so-called 'flat' structure languages). At the very least, it is possible that 'verb phrase' is not a unit that organizes repair.

TYPE D (recycle phrase, replace word):

- (75) A: Oh [I have the-\*] **I have one** class in the evening

TYPE E (recycle phrase with addition):

- (76) B: .hh Hey do you see [V-\*] (0.3) **fat old Vivian** any more?

TYPE F (change of syntactic framework): No examples.

TYPE G (abort) occurs at this site, as with all sites:

- (77) AG: You have to figure out the uh-\* (1.0) I don't know what it  
was.

### Summary

Recycling is constrained in this subtype as in many of the others, but in this case the constraint seems to be of a somewhat different nature: speakers do not make use of the verb phrase as a recycling constituent. That is, speakers either recycle to the beginning of the direct object noun phrase or to the beginning of a finite clause, but **not** back to the verb. This very interesting finding is discussed at length in section 3.4.

3.1.5 *Repair initiated during prepositional phrases* In many clause types, prepositional phrases come at the end of the TCU, either following a direct object or coming immediately after the verb complex. In this subtype, we find the same constraints on recycling we saw with direct objects, that is: speakers recycle to the beginning of the prepositional phrase, or to the noun phrase within the prepositional phrase, or to the beginning of a finite clause, but they do not recycle back to the verb. This constraint is discussed in section 3.4.

TYPE A (recycle word):

- (78) K: Plus once he got- (0.8) some uhm (1.3) he got some battery acid [on-\*] (0.2) **on** his trunk or something
- (79) B: ...we finally got a- .hhh a room today [in-\*] **in** the leh- a lecture hall. .hhh

TYPE B (replace word):

- (80) D: They get- their g- teeth keep growing round from the [fron-\*] **back** to the front.

- (81) A: Like they- the biggest debate th- in our department. [in-\*], **at** Trenton was that when we had these faculty meetings.

TYPE C (recycle phrase):

- (82) M: ... on the back of his pickup truck [with a\*], **with a** jack.

- (83) B: ...are you going here [for an-\*] .hh **for an** Indian class by any chance

TYPE D (recycle phrase, replace word):

- (84) <sup>1</sup>AK: Now I'm going to look (0.5) [at my\*] (1.1) **at this**,  
C: Yeah

As before, recycling is constrained to repairs initiated in prepositional phrases. The recycle can go back to the article, as far back as the preposition, or as far back as the subject of the TCU, but it does not just go back to the verb.

TYPE E (recycle phrase with addition):

- (85) H: .hh And (she- this girl's fixed up on [a da-\*]) **a blind date**

TYPE F (change syntactic framework):

- (86) <sup>1</sup>AG: Now this terminal (1.2) is smart enough to show you (0.4) that you're in (1.6) [ins-\*] **what they call insert** mode or append mode.

TYPE G (abort):

- (87) <sup>1</sup>VA: .hh Well that's one nice thing about\* (0.9) one thing I really appreciated (in) vms (0.1) is (0.2) that (1.3) um<sup>13</sup>

### Summary

Speakers recycle within the local constituent (the prepositional phrase, including the noun phrase within it), and a larger constituent (a finite clause), but they do not recycle to the beginning of a more intermediate constituent (the verb, or verb phrase). This constraint is discussed at length in section 3.4.

3.1.6 *Repair initiated during a predicate nominal/adjective* If the verb is a copula, then it is followed not by a direct object but by a predicate nominal or predicate adjective. Repair in this position differs in interesting ways from the postverbal nominal repair-types we saw in sections 3.1.4 and 3.1.5. In particular, it seems that speakers do not treat the copula like other verbs.

TYPE A (recycle word):

- (88) <sup>1</sup>AC: He's a [good-\*] **good** student

TYPE B (replace word): No examples.

TYPE C (recycle phrase) [only with adjectives]:

- (89) <sup>1</sup>VA: And generally the short versions I think [are very-\*] (0.2) **are very** reasonable.

<sup>13</sup> It is possible that the intended interpretation of this repair is 'Well that's one thing I really appreciated (in) vms is that ...' in which case this is not an instance of TYPE G.

TYPE D (recycle phrase, replace word):

- (90) AM: [It's the-\*] (0.7) **it's that**, isn't it?

TYPE E (recycle phrase with addition):

- (91) AK: Sine is [the wai\*], **equivalent to the wai** a//Xis, right?  
C: Mhm

- (92) VA: and this is [a Berkl-\*] **a bun/ch of Berkeley**  
G: Yeah  
G: Right Un//iversity of California at Berkeley.  
A: Berkeley files,

TYPE F (change syntactic framework): No examples.

TYPE G (abort):

- (93) H: And ao I mean it's just ( ) a [fantastic moo-\* qh and then the one that's bigotted, hhh she's married to this guy w'ho's ( ) really quiet 'n inhibited

### Summary

This subtype exhibits a different set of constraints than the subtypes involving postverbal nominals. For example, we do find cases (like (88) above) in which speakers recycle back to the copula, although this apparently only occurs with predicate **adjectives** and not with predicate nominals, for reasons that are still unclear to us. We do not know why speakers treat the copula differently than other verbs, and we do not know why speakers treat predicate adjectives differently than predicate nominals. These topics await further study.

In this section we have seen the basic patterns of repair in typical SV(O) sentences. The next section explores in a bit more detail TYPE G repair.

### 3.2 Repair involving change from one syntactic type to another

As we saw above, repair can be initiated anywhere in an utterance, where 'anywhere' can be defined in terms of syntactic constituents, syllables from the beginning, seconds into the turn, etc. Moreover, whenever repair is initiated, the syntactic construction so far can be abandoned, with the repair starting a new syntactic construction. So a change from one syntactic construction to another is always possible. It is even possible to change from one mood-type

to another, as in a change from interrogative syntax to declarative syntax (we have omitted asterisks in these examples):

- (94) AD: So what is th- (1.1) So what is the uh, there are- That es- that equation's still wrong.

There seems to be no constraint on how the syntax can change with repair. However there is one interesting pattern concerning how the two syntactic units can be fitted together: this pattern was noted by Schegloff (1979). Consider the following examples:

- (95) AM: Is that? That's fine, isn't it?  
(96) B: (No).  
I  
A: Why whatsa matter with y-you sou//nd HA.PPY, hh  
B: Nothing.  
B: u- I sound ha.ppy?

- (97) AP: this substitution rule is not exactly what I lear- I learned (0.2) trig substitutions but they never really taught this kind

- (98) D: This's the beef, the, with the- the bean sprouts Beef Peking.<sup>14</sup>

In these examples, a word is used to 'pivot' (Schegloff 1979) from one construction to the other. This word participates in each of the two constructions, but with potentially a different grammatical role in each. For example in (96), *you* is first part of a prepositional phrase (*with you*) and then the subject of the second construction (*you sound happy*). This is certainly not how all TYPE G repairs are organized; we have focused on it here because it displays a syntactically sophisticated strategy for bridging two construction-types and thus is potentially relevant to the study of syntax.

In this section we have seen that repair can operate to change not only minor details of the utterance under construction, it can recast the utterance into an entirely new syntactic type.

<sup>14</sup> We hear this utterance as: 'This is the beef, the bean sprouts Beef Peking.'

### 3.3 *The design of repair*

Repair must achieve at least two functions: (1) indicate to the recipient that the repairing segment is not a continuation of the syntactic unit under construction, and (2) indicate to the recipient exactly how the repairing segment should be understood with regard to what has come before. Repairs must thus be designed to accomplish both of these functions. In this section we would like to examine a few cases of repair to understand better how the second function might be achieved. Consider the following examples (we have put the repairable in bold face):

[In a discussion about absolute values]

(99) AJ: Because that is true. If you have the **natural log** of a number e-\* or absolute value of a number ex, .hh it's ex if ex is (0.4) positive.

(100) AG: And it creates two **images** (0.2) .hh (0.3) of the current (0.3) ima-\* two copies of the current image.

(101) AG: That's something **you** can\* ( ) each individual user can ch//ange.

A: Yeah.

(102) VA: you **put** it-\* you don't have to put it in quotes but it's a good idea.

In each case, the repair is not a possible grammatical continuation of the turn-so-far (e.g. 'you put it you' or 'that's something you can each individual user' are not acceptable English). So one obvious strategy adopted by speakers is to begin the repair in a way that is clearly not a continuation of what has been said so far (of course, the use of a repair initiator — such as a cut-off — is often used as an important indicator of upcoming repair).

But the most interesting aspect of these examples is the design of the repairing segment, the way in which the repairing segment carefully reproduces the exact format of the TCU so far, with the exception of replacing the repairable: the rest of the TCU that is recycled is preserved completely intact in the repair. This fact suggests that speakers carefully design repairs so that what the repairing segment 'replace' and how they are to be understood as 'replacing' can be 'read off' of the repair. What the recipient hears is: a phrase which cannot be heard as continuing what has gone before and which exactly replicates what has just gone before with **one exception**. The repair is thus heard

able as replacing what has just come before, and the piece within the repair which does not simply redo what was said before can be heard as the reason for the repair — the exact item of replacing.

The hearing of the exceptional item as replacing a prior item is further aided by in each case being from the same class of items as the first item. For example, *absolute value* can be heard as belonging to the same class of entities as *natural log* — standard mathematical number concepts that represent a value arrived at by performing some operation on a prior number. *Images* and *copies* are both potentially visual representations of a secondary sort (and in this case, the repair is not initiated until we hear the source of *images* in its first use; the speaker thereby displays the first use of *image* to have been incorrectly produced by anticipation of the second use, and with that helps the recipient to hear *copies* as the intended correction for the first use of *images*). *Put* and *don't have to put* are clearly opposite polarity verbal instructions. By selecting a repair item which can easily be heard as from the same category as the repairable, the speaker designs the repair for maximum success.

In some cases, the speaker overtly acknowledges that the TCU so far needs repair:

(103) AG: .hhh ( ) one of the first ( ) modules is to take each **line** in the file, (0.3) and (0.8) uh- sorry each (0.2) ((click?)) word in the file

(104) AJ: like- the tangent is the **adjacent** over the- oops, I meant to say // opposite .hh  
P: Opposite over adjacent, ha

In these instances, we can see the care with which repair is managed in displaying the new structure that is being created through the repair.

In this section we have presented the basic repair patterns which will concern us here. There are, of course, kinds of first-position repair which we have not addressed here, and many issues having to do with repair which we have not touched on; these remain topics for future research.

#### 3.4 *Discussion of the basic patterns*

There are many intriguing patterns in the data presented above; in this section we focus on just three of the patterns displayed.

3.4.1 *Repair obeys sequential nature of syntax* The first pattern is perhaps so obvious that it has drawn little attention in previous literature on repair,



nonetheless, it seems to us to reflect an important facet of syntactic organization.<sup>15</sup> The pattern can be stated as: The repairing segment of an utterance is integrated using normal syntactic patterns into what follows it. For example, one does not find utterances like the following (# marks an invented utterance):

- (105) #I saw the cat that went \* dog into the woods.

where the final interpretation is meant to be 'I saw the dog that went into the woods'. The segment that follows the site of repair initiation is always syntactically coherent in our data, that is, it forms a syntactic constituent.

We found one apparent exception to this pattern in a paper by Schegloff, Jefferson & Sacks (Schegloff, Jefferson & Sacks 1977):

- (106) K: He siz uh (1.0) w<sup>1</sup> then what 'r you so [ha-\*] er wuh-  
**unhappy about.**

It appears in this example that the repairing segment could have been 'what unhappy about', which would be, in our terms, not syntactically coherent. But the speaker, perhaps because of the constraint on syntactic coherence, cuts off *wuh-*, thereby indicating initiation of repair, leaving *unhappy about* to serve as the repairing segment. This example thus seems to be the exception that proves the rule, the rule in this case being a constraint on the syntactic coherence of the repairing segment.

This finding suggests that repair does not distort normal sequential syntactic patterns; if repair did distort normal syntactic patterns, and therefore if there were no syntactic constraints on repair, recipients would have few reliable cues to make use of in determining the role of the repairing segment with regard to the preceding utterance — hence repair would not be successful in achieving comprehensible utterances. Repair must thus operate within normal syntax.

We have found some interesting twists to syntactic coherence in examples from Ono & Thompson (this volume). In their chapter Ono & Thompson give two examples which exhibit a pattern that did not surface in our corpus (we have modified their transcription slightly):

- (107) Afrika 6  
A: tsk they did [a... post mortem, on her\*], **autopsy on her,**

- (108) Farm 10  
B: Jeez that's a shame, that [that didn't\*]... **spray didn't work,**

In both of these examples, the repairing segments begins with a noun which relies on a determiner in the repaired segment for its complete constituency; in other words, the repairing segment is not a constituent by itself, since it relies on an item which is produced in the repaired segment and is not repeated in the repairing segment. So we may 'calculate' the repair in (107) to be *they did an autopsy on her*, and the repair in (108) to be *that's a shame that that spray didn't work*. The repairing segment in each case is coherent, but it is not a constituent. The implications of such 'twists' are as yet unclear. Both of these cases involve determiners; whether there are other kinds of dependencies, and what constraints there might be on them, awaits further research.

3.4.2 *Variations in recycling* We have seen above that speakers have several options open to them in the repairing of an item. For example, in the same syntactic environment, a speaker can repair just a single word, recycle to the beginning of a relevant phrase boundary, or recycle all the way back to the beginning of the TCU. The following examples illustrate these choices:

- (109) B: building- we finally got [a-\*] hhh a room today in- in the  
leh- a lecture hall.  
(110) B: are you going here [for an-\*] hh **for an** indian class by any  
chance  
(111) ^A: [Do you have to put\*] **do you have to put a\*** do you have  
to put quotes around it?

In (109), the speaker just recycles the previous word; in (110), the recycle goes back to the beginning of the prepositional phrase; in (111), the speaker recycles back to the beginning of the TCU. What determines how far back a speaker will recycle? In some cases in our data we were not able to find an answer to this question. But in many cases the answer was clear: timing is important in interaction in a variety of ways, and the extent of a recycle is one way of controlling the timing of an utterance.

Schegloff (1979) describes certain kinds of recycling, especially repeated recycling, as 'marking time', giving the speaker time to think of a word that is not coming to mind, or indicating to the recipient that help is needed in

<sup>15</sup> The first pattern is assumed in Javelle's (1983) formulations of repair attachment.

generating the sought-after word.

Schegloff (1987) demonstrates the importance of timing in recycling turn beginnings. Turn beginnings are routinely recycled as part of managing turn-initial overlap, by redoing a turn beginning which is in overlap with the end of a prior speaker's turn; the current speaker is able to produce the entire turn in the clear, not in overlap.

Goodwin (1979, 1981) discusses another timing-related use of recycling: the extra time provided by the recycling can be used to redirect the speaker's gaze to another recipient, so that the speaker can produce the turn for an appropriate and engaged recipient.

In the tutoring data, recycling is often used to coordinate different parts of the tutoring activity — it is used to help align the talk with movements of the tutor's and student's pencils, with changes in their body postures with regard to each other and to the materials they are working with, and so on. The extent of the recycle seems to be related to the time needed to accomplish these other tasks.

The extent of the recycle seems also to be related to whether the repair is initiated in turn beginning or elsewhere. The most striking finding in this regard is the following: in turn beginnings, if repair is initiated after an auxiliary or main verb, the verb and its subject are always recycled together; the verb is never recycled by itself in turn beginnings.<sup>16</sup> Outside of turn beginnings, however, verbs are sometimes recycled by themselves, without their subjects.<sup>17</sup> Compare (112), which is an example from a turn beginning, with (113), an illustration of verb-only recycling from a non-turn beginning:

(112) D: [I don't-*\**] I **don't** thi- I think knives // are more common (in // these kind)

(113) B: Sharks do that they have- only they have rows that-[push-*\**] **push**:: (0.3) out.

We have one example which contradicts the pattern:

<sup>16</sup> It is possible that this lack of verb-only recycling is related in some way to the findings regarding verb-phrase recycling; that is, that the verb is not a common starting point for recycling. If this possibility is real, it weakens our argument regarding the status of the verb phrase, since in the case of verb-only recycling no verb phrase constituent is involved.

<sup>17</sup> It is perhaps relevant that all but two of the verb-only recycles were of auxiliary verbs (e.g. *I don't- don't* or *I couldn't- couldn't*) and the copula. This pattern provides further evidence that the copula does not behave like a normal main verb and is perhaps best treated as an auxiliary.

(114) D: Dju have any preference? I mean, wouldju // like a girl?  
((clatter))  
D: 'r are you- are you not bothered  
B: Nno, I [don't-*\**] **don't**- Not really.

In this case, we have a verb-only recycle in turn-beginning position. It is perhaps relevant to note, however, that the recycle is not a successful repair; the speaker abandons the structure and starts with another construction (the first structure answers D's first question and the second structure answers D's second question).

The only regular exception to this pattern is the copula: one can find copula-only recycles in turn beginnings. The copula turns out to be an exception to the patterns for verb recycling; these findings suggest that the copula is probably not a member of the class **verb** (see GB's treatment of the copula as an auxiliary for an unexpected source of confirmation).

The pattern of verb-only recycling is intriguing. Schegloff (1987) suggests that turn-beginning recycling is essentially a timing strategy whereby speakers who start their turn in overlap can end up producing the entire TCU in the clear, but we have found that whole turn beginnings are recycled (as in: 'I don't- I don't think so') even in the absence of overlap. The fact that we find recycled turn beginnings when there is no overlap suggests perhaps another motivation for recycling turn beginnings. The fact that we do not find partial recycles within turn beginnings (i.e., verb-only) is further evidence that some powerful set of constraints is at work.

One possible explanation for this pattern is the **potential** for overlap or interruption. In the first few syllables of a turn, a speaker is vulnerable to overlap, since the turn is not yet well underway (in their study of interruption, for example, West & Zimmerman (1983) count overlap as interruption only if it occurs after the first two syllables of the prior speaker's turn). It is possible that full recycling is used to give the speaker the greatest possible advantage for continuing the already-started TCU should another speaker start up; a second speaker starting up will overlap a part of the turn that is being repeated, and hence does not need to be heard. The first speaker is also heard as starting again, rather than as simply continuing.

It is the vulnerability of the beginning of a turn which could explain why recycling of direct objects is different from the recycling of subjects, and in particular, verbs. We have seen that repair initiated after a turn-beginning subject or verb results in the recycling of the whole turn beginning. But repair initiated within a postverbal noun phrase does not always result in recycling of the whole turn-to-that-point. Consider the following examples:

(115) AD: Yeah:  
(0.4)

M: So we could just do [the\*] like the problems

(116) D: Hey would you like [a Trent'n...\*,] a Trent'n telephone directory.

These cases involve a turn-initial TCU in which repair is initiated within the direct object. The recycling in this case is just of the noun phrase so far, not of the entire TCU. Again, this could be due to the difference in vulnerability between the beginning of the TCU and the later parts of the TCU, with regard to potential overlap.

It is also possible that it is not potential overlap that produces this behavior; rather, it could be that turn-beginning recyclings (even those not in overlap) are produced due to the fact that it is possible, sometimes necessary, to start speaking before one knows what one is going to say. So one strategy for dealing with this situation is to get 'a foot in the door', that is, to get a TCU started, and then use the start of that TCU to plan further what the rest of the TCU will look like. So one can start a TCU, plan more of it, cut it off and start again.

In Fox, Hayashi & Jaspersen (To appear) we suggest yet another possible explanation for the common pattern in English conversation for speakers to recycle turn-beginnings. In that study we found that Japanese speakers do not engage in turn-beginning recycling to the extent that English speakers do, and we hypothesized that this difference between Japanese and English arises from the different syntactic organizations of the two languages, to wit: in conversational English, the beginning of a turn has a regular syntactic form, namely the subject (often a pronoun), followed by a verb (often an auxiliary verb); in conversational Japanese, there is no consistent syntactic form for the beginning of a turn. The regular syntactic form of turn-beginnings in English may make turn-beginnings available as an interactional resource, an option not made feasible by the syntax of conversational Japanese.

How these different sources of motivation for the observed variations in recycling interact with one another remains to be elucidated.

3.4.3 *Syntactic constraints on recycling* As Schegloff (1979) notes, repair can be initiated anywhere in an utterance — there are no syntactic constraints on repair initiation. As we have seen, however, there appear to be syntactic constraints on the **organization of the repairing segment** with regard to the placement of the repair initiation.

Perhaps the major finding in this regard is that the verb is not used as the beginning of a repairing segment if repair is initiated in a post-verbal phrase (with the exception of copular constructions and where the verb occurs at the beginning of the TCU). We have only two possible exceptions to this pattern, (74) above (see discussion there) and (117) below:

(117) AJ: So what we're going to do with partial fractions is [start with\*] (0.9) .hh **start** with a rational function.

In example (117), the speaker initiates repair during a prepositional phrase and recycles back to the verb. In this case the verb is used as the beginning of the repairing segment for a repair initiated in a postverbal phrase. We would like to suggest that this apparent counterexample arises because of the syntactic organization of the whole utterance.

This utterance displays what is commonly described as a pseudo-cleft structure. Such a structure has the basic form X is Y, where the X element is a headless relative and the Y element is a non-finite clause. This is obviously a complex syntactic structure where X and Y form separate clausal components.

We believe it is this separateness of the Y element, which in example (117) begins with a verb, which distinguishes this structure from many other positions in which verbs can occur. The verb in the Y element of this construction can thus be seen as beginning a unit, and we would like to suggest that it is this 'beginning' nature of the verb which enables the recycling in (117).

The tendency we have observed for speakers to avoid recycling back to the verb in cases where repair is initiated postverbally suggests to us that the verb-NP or verb-PP bond is not very great; it certainly suggests that the category of Verb Phrase may not have much cognitive-interactional significance for conversationalists, at least with regard to repair. This is an especially interesting finding given that the distinction between languages with verb phrases and languages without verb phrases has been an important one in certain cross-linguistic studies. Of course, it is possible that a category (like verb phrase) could be significant for some syntactic processes and still not be oriented to in self-repair. The exact relationship between more traditional notions of syntax and syntax-in-repair has yet to be established.

The exception of copular constructions in this case, as in the earlier discussion of verb-only recycling, suggests that the copula is not a verb, and that the copula+predicate constituent has a different status grammatically than the verb+NP constituent.

### 3.5 *Repair and micro-syntax*

Schegloff (1979) suggests that a language might not be organized by one overarching set of structures; rather, he proposes as a possibility that language is organized by local environments (Schegloff 1979:282):

The notion 'a language' seems to be the product of an assumption about some common, stable, underlying properties of an immense range of human behavior — from talking to the family to reciting Shakespeare to cadging aims to writing memoranda to lecturing, etc. — each of which is embedded in its own combination of organizational structures, constraints, and resources. Much attention has been devoted to these supposedly common features; relatively little to their respective environments of use, which differentiate them ... In any environment of so-called 'language use', there is a locally organized world in which it is embedded ... Until the characteristics of these locally organized settings are investigated and explicated in appropriate detail, the extraction of 'language' from them is a procedure with unknown properties and consequences.

In some recent work (see Fox 1992), we have tried to extend this proposal to include the possibility that a language might not be characterized by an overarching set of grammatical principles or grammatical rules; but might rather be made up of local patterns specific to certain interactional environments. We refer to this possible organization of grammar as *micro-syntax*. While it is beyond the scope of the current study to explore this issue in depth, certain aspects of the repair data make a limited discussion of the topic possible and worthwhile.

Analysts working within CA noted long ago that disagreements, rejections, corrections, and other utterances of the types known as dispreferred seconds, have an unusual structure: they tend to be delayed in their production, either with silence, an inbreath, or a discourse marker such as *well*, *so*, *um* and the like (Pomerantz 1975, 1984). It has also been noted that repair (or 'dysfluencies') occurs with some frequency in these utterance types.

Utterances of these types therefore seemed like a possible locus of syntactic organization with regard to repair. To limit the scope of this small analysis, we selected utterances from our collection of self-repairs which were negative, either by virtue of disagreeing with a preceding utterance or by virtue of answering a yes/no question with a 'no'. While the second subclass is not necessarily a dispreferred second, it could be; and the syntactic organization of these utterances was extremely similar to the organization of more traditional disagreement utterances, so we think that the two subclasses are reasonably treated as a natural class.

What we found was an interesting pattern within these utterances. Not all of the utterances display the pattern, but a fair number do — enough do, we would

say, to suggest that there is a bit of local syntactic organization at work here (see also Schegloff To appear)

Consider the following examples:

- (118) B: But it still helped U/O reinforce your determination (thi//s way or that.)  
 J: It didn't bother me,  
 => J: No it dh-\* it didn't really (related to )
- (119) AD: No, distance is-\* velocity isn't distance times time.
- (120) D: Dju have any preference? I mean, wouldju // like a girl?  
 ((clatter))  
 D: 'r are you- are you not bothered.  
 => B: Nno, I don't-\* don't- Not really.
- (121) M: No, (eh) not at aw-\* not at all.
- (122) N: =nNo., it's awr-\* it's alright,

In these examples, the negative utterance begins with the negative *no*, continues with a subject, then a verb (and in the last example, goes on to the predicate adjective); repair is initiated before the TCU is possibly complete, and it is recycled, in most of the cases to possible completion. The fact that repair is initiated a few syllables within the turn, and that there is recycling of at least part of the turn-so-far, indicates a kind of micro-syntax, with repair as an integral part. The repair here could be another strategy for delaying the completion of the turn, but the speaker initiates repair only after the turn has been secured (i.e., a few syllables into the turn). The strategy thus works to keep the turn going while not yet bringing it to completion.

#### 4.0 *Repair as a resource for syntax*

We argued above for a strong interdependence between repair and syntax. One way of characterizing this interdependence is to say that syntax is a resource for repair, and repair is a resource for syntax. In this section, we'd like to focus on the latter relationship. To that end, this section explores the ways in which speakers make use of repair to expand the syntactic resources available to them at any given moment in an interaction.

4.1 *Repair and syntactic 'failure'*

Repair is more than a method by which participants may 'correct an error' which has been produced or which is about to be produced. Many instances of repair simply do not involve any identifiable error (Schegloff, Jefferson & Sacks 1977). Goodwin (1981), for example, shows how repair can be used to achieve an appropriate organization of gaze: perturbances in the speech stream function to request gaze from recipients. In a different vein, Jefferson (1974) argues that repair can function to allow one to 'say' more than one actually utters. Jefferson considers an Error Avoidance Format, 'uh+[]', which can in its use in avoiding an inappropriateness require that the recipient make sense of what was not said. We would like to suggest yet another role: Repair provides a method by which to expand the lexico-syntactic resources<sup>18</sup> available in designing talk.

The following stretch of conversation provides an instance of first-position repair which can be seen, we will argue, as maximizing the resources available for purposes of the particular moment. The repair of interest is indicated by an arrow. A longer portion of the conversation which contains this stretch is given in Appendix B.

- (123) H: =W'll my experience was a bit diff'rent from (0.3) probably  
 (0.5) mo:sl (.) American=  
 =PLUS I don't- (0.4) -: >think they probably< show more  
 respect to somebody who (.) looked older... a cis older...  
 hh and has a more um traditional type classroom=>I was<  
 very...  
 (0.6)  
 B: lch  
 (0.4)  
 H: BLUNT- an' (0.3) yu'know  
 (0.3)  
 B: I get (.) sh:t from a German (0.3) student in my class: (0.4)  
 becu:z I look younger than  
 he- I don't think he thinks I'm as old as .hh  
 →  
 H: You are  
 B: I am=

18 By lexico-syntactic resources, we mean, at this point, a pre-theoretic notion of syntactic constructions which may be lexically specified. Such linguistic 'chunks' may range from, on the one hand, any sort of lexical head with its projected argument slots (which may be lexically specified to varying extents) to, on the other hand, Pawley and Syder-like lexicalized sentence stems, including their 'non-institutionalized' memorized morpheme sequences (Pawley & Syder 1983)

- B: =But I know if lk- like I looked older had greying hair or  
 something?  
 (0.5) I would//n' get it.  
 H: ↑Doesn't that bug you? =

In analyzing this repair, we must first characterize the overall structure which this stretch of conversation occasions. Then, in section 4.1.1, we argue that the only lexico-syntactic resources available to B (the participant who produces the repair) at that moment fail. We suggest that repair provides a method by which B can overcome the syntactic gaps he has encountered at that moment. That is, we would like to propose that repair can be used to expand the syntactic resources available to a speaker at a given moment in an interaction.

In broad outline, this stretch of conversation involves the telling of two stories: the first, told by H, relates her thoughts based on a classroom experience she had, and the second, told by B, relates a parallel experience of his own.

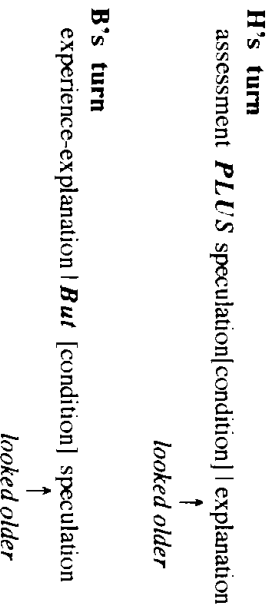
Generally, the telling of stories in conversation make relevant an appreciation (Sacks 1991). Appreciations are places which allow story recipients to show an understanding of the story. For example, following B's telling of his experience, H shows an understanding of his story with the appreciation (*Doesn't that bug you?*), accompanied by a smile.

Another type of display of understanding which recipients can undertake is the telling of a further story which involves elements which instantiate the point of the prior story (Sacks 1991). B's telling displays an understanding of the point of H's story (her speculation about how she would have been treated had she looked older, etc.), and as such functions to satisfy the appreciation-relevancy set up by H's story.

4.1.1 *The repair and the expansion of lexico-syntactic resources* To see how repair in this instance expands the syntactic resources available to B, we must begin with an understanding of B's story, and how certain aspects of its structure emerge as a product of the requirements of showing appreciation for H's story:

Before this point in the conversation, H has been talking about specific experiences she had working as a young, middle-class teacher in an inner-city high school, focusing especially on certain behaviors of her students which bothered her. She assesses her experience in general: it was *different from probably most American*. H then launches into a story — a new contribution in the turn-so-far — by the technique of 'latching' and a generic linker *PLUS*. The

point of H's story, which has the form of a speculation, appears to be that her students would show *more respect* to a teacher with certain qualities, qualities which H did not display. H is making a speculation contingent on certain conditions (*looked older* etc.). H did not exhibit these qualities — she was very: (1.1) *BLUNT*, which is proffered as a kind of explanation for the students' bothersome behavior. B's point parallels this. B gets *shit* from a student in his class and he *wouldn't get it* if he displayed certain qualities. The fact of the matter is that the student doesn't think B is *as old* as he (B) is. If he *looked older had greying hair or something*, B speculates, he *wouldn't get it*. And it is the quality 'looking older' which provides the point of contact between the two stories. The rhetorical structure of the two turns, then, may be described as:



Some words about this diagram are in order. The square brackets indicate that the enclosed element modifies some head element, the latter being indicated by the absence of typographical space. The vertical stroke 'I' indicates a rhetorical relationship which obtains between the adjacent heads on either side of the stroke (note B's linker *But*; we might loosely characterize this rhetorical relationship as concession, if a label is needed). The dash '-' corresponds to the break occasioned by the repair itself (phonetically, a glottal stop).

This diagram embodies no ontological commitment. It is simply offered as a way of making apparent certain important features of the structures of the two stories and the roles which certain of their elements play. Thus we can see that B's speculation achieves the appreciation of H's speculation, and thereby of her story, by placing the same lexical material, *looked older*, in the same rhetorical location, the condition.

A further bit of evidence in support of our argument that *looked older* is interactionally pivotal can be seen in the organization of B's gaze (cf. Figure 1). B is H's gaze-secured recipient for much of the telling of her story. As H ends her story, B withdraws his gaze. As B begins his story, he brings his

gaze to H, but finds that she is not gazing at him. This results in a violation of the mutual gaze norm whereby a recipient should be gazing at the speaker when the speaker gazes at the recipient (Goodwin 1981). In locating the violation, B produces a micro-pause and removes his gaze. By the time B relocates H, she is returning his gaze; orientation to the gaze norm has been achieved. These features of the interaction so far argue for the relevancy of gaze in this conversation as a device for locating the recipient of a stretch of talk.

The analytical importance of gaze for locating the recipient of a stretch of talk, H's turn, B distributes his gaze to two of the three participants in the interaction, H

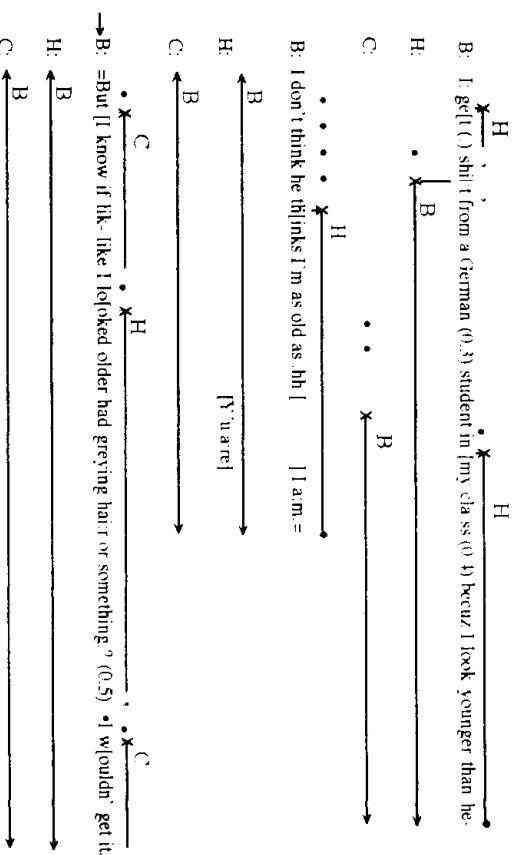


Figure 1. Gaze organization.

and C.<sup>19</sup>

H is the gaze-located recipient through much of the first TCU. B then directs his gaze at C through the beginning of his next TCU. However, just as B produces *looked older*, he returns his gaze to H (who is gazing back at him). B thus locates H as a recipient of the appreciation which has come to fruition. And, as mentioned, H produces a one-unit appreciation complete with a smiling face.

<sup>19</sup> The fourth participant in the conversation, T, is B's spouse. B and T are guests at H and C's house.

To this point, we have enjoyed an analyst's perspective on events which have already been achieved. From this vantage point we have argued that there is a reason for B to use the phrase *looked older*, which is that it directly ties B's appreciation to H's speculation/story.<sup>20</sup> Now let us consider the interaction from the participants' on-line perspective.

B's tie-in must of course come before the end of his story, since after such place, an appreciation from the recipient, H, becomes relevant. B starts with his personal experience that parallels H's experience: *I get shit from a German student in my class*. However, B does not immediately follow this with the tie-in TCU (i.e., *But I know if like like I looked older...*), but instead opts to explain why he gets it.

Why should B explain why he gets it? Why not just go on to say that if he *looked older*, he *wouldn't get it*? One plausible explanation is that *shit* is a negative descriptor when used, as it is here, in a serious manner.<sup>21</sup> (Indeed, B displays dissatisfaction with the descriptor *shit* in a third-turn repair – *NOT. It's NOT shit* and spends much of the ensuing conversation reformulating *shit*.) B knows he is accountable for this. An explanation for the assessment might mitigate its accusatory, negative (and perhaps racist) tone.

Elsewhere, we find that B accounts for another negative assessment in the following way:

- B: He doesn't know what's culturally okay =  
=B'cu/ German culture'z a little bit diff'rent.

The assessment *He doesn't know...* serves as an explanation for the student's lack of knowledge, but it is an explanation which renders the state accountable in its own terms. One way of rendering such a state accountable is by suggesting that, from the point of view of others, it is beyond the control of that person, and a normal procedure for doing that is to attribute certain beliefs to that person. The explanation mitigates the severity of the assessment by proposing that it is beyond the control of the person: the student doesn't know American culture because the student's culture is different. Similarly, in the case of the explanation for the student's inappropriate behavior, the student behaves badly because he has beliefs (cf. *he thinks*) which are caused not by himself but rather by his perceptions of B.

<sup>20</sup> It seems to us that speculations are story-like in their organizations, in that they are internally complex, and receive assessments and appreciations from recipients.

<sup>21</sup> B provides no nonverbal which would suggest *shit* is used 'jokingly'. B presents a 'dead pan' face. Moreover, it should be noted that none of either H's or B's students are present in the conversation.

Now, as long as B is accounting for his negative assessment of the student, he is not displaying an appreciation. And the absence of an appreciation is noticeable as such (Pomerantz 1975). One possible solution to this dilemma, which B adopts, is to incorporate into these 'other matters' material which projects an (impending) appreciation. One way to project this is to use lexical material which is semantically close to a possible point of appreciation. The phrase *look younger* satisfies this requirement, by being semantically related to *looked older*, and thus maintains the relevancy of the on-going explanation-engaged TCU by projecting the second part of the contrast (i.e., *looked older*). This is illustrated below:

**B's turn**  
assessment[explanation]  
↓  
*look younger* >>>> *looked older*  
↓  
[condition|speculation]

That is, we are proposing that *look younger* functions to display an orientation to the presently absent appreciation by projecting material which will serve as a direct appreciation of H's story. *Look younger* is thus a kind of promissory note for a closer tie-in and appreciation to come.

To briefly summarize, then, it appears that the speaker uses the phrase *look younger* to satisfy two simultaneously present interactional requirements: (1) as part of an account and softener of the negative descriptor *shit*, and (2) as a promissory note for an upcoming appreciation of H's story.

So far, we hope to have provided a motivation for the interactional importance of the use of the phrase *look younger* where it appears in the structure of the on-going conversation.

We can now turn to the material contained in the explanation part of B's story, and in particular to the repair in question, which occurs following the promissory note, *look younger*. Why does B initiate repair? In answering this question, we argue that in spite of the more global, story/appreciation-design advantages enjoyed by *look younger*, there is a local disadvantage with respect to its employment in the explanation part. B cannot complete the syntactic construction he has started (that is, the one that includes *look younger*) and achieve the semantic relationship he intends.

The following is a list of the candidate lexico-syntactic resources that we might suppose are available to B in the design of his explanation. The assessment part of B's actual utterance is given first: (a) - (d) are lexico-

syntactic possible completions for this beginning, and his real attempt at completion is given last

*I get (...) shi:t from a German (0.3) student in my class: (0.4) becuz*

- (a) he thinks I look younger than I am
- (b) I look younger than he is
- (c) I look younger than I am
- (d) I look younger than he thinks

*I look younger than he*

There are at least two important criteria for a member of this list adequate to B's task. The first criterion is, as we have argued, that the phrase *look younger* be included. For example, whereas a plausible explanation for the student's behavior might have been constructed as

becuz he thinks I'm younger than I am

this construction does not satisfy the requirement that *look younger* be present, and therefore would not be adequate as a resource. The second criterion is that somehow the negative descriptor *shi:t* be accounted for, which as the subsequent talk shows is done by suggesting that the student has certain beliefs about B (and therefore not just that the student is a bad person). *He thinks* is thus important for the TCU because it softens B's earlier descriptor (*shi:t*).

How successful would any of these imaginary completions be? Member (a) fails because it simply wouldn't account for the student's behavior, since it implies that the student knows how old B is, but thinks that B looks young. (b) would describe a situation which would be consistent with other beliefs that would account for the behavior, but would not in itself be a suitable account. On the face of it, (c) does not satisfy the criteria insofar as it does not include material such as *he thinks* which would explain the student's behavior. (d) just doesn't match the semantics of the situation. Hence, none of the members of the list are adequate for B's needs. In this particular location, then, it appears that the 'normal' lexico-syntactic resources available to B are not appropriate for the interactional tasks B is facing.

Another resource exists, however, in the format set up by the comparative morpheme *er*, namely, its projected continuation, '*than* NP PREDICATE'. The problems posed by *look younger* can be solved by projecting but not actually completely uttering 'than he thinks', which fits the projected format,

and brings the utterance back to the student's cultural beliefs, that is what the thinks'. The recipient, H, can hear from B's intonation of repair that a repair is completing the utterance 'I look younger than he thinks' at this location would be semantically incorrect as an account of the student's behavior, and yet H can also 'hear', without actually hearing the word 'think', that B is putting the student's behavior in the context of the student's beliefs.

Thus, the placement of the cut-off allows the completion of a semantically ill-formed TCU to be avoided and simultaneously allows the projection of material whose sense can be found in contextualizing the student's apparently rude behavior as part of the student's (cultural) beliefs, which the student is thus not to be held accountable for. Most importantly for the turn as a whole, this turn is constructed to give *look younger* a place in the unfolding explanation of the negative assessment, a place from which it projects the impending appreciation with its counterpart, *looked older*. The repair thus allows for the achievement of two potentially conflicting goals.

*-look younger* can be used as a promissory note for a more direct appreciation of H's story

—'...he thinks' can be projected without actually being said, which allows B to put the student's behavior into the context of the student's (cultural) beliefs, thus relieving the student of the responsibility for his behavior implied by the negative descriptor *shi:t*.

This passage thus provides a good illustration of the way in which repair is used as a resource in accomplishing competing interactional-syntactic goals. Repair from this view is therefore not disruptive or destructive of syntactic flow; it is an invaluable resource in the creation of syntax that serves the communicative needs of its speakers.

##### 5.0 *Repair and the organization of syntax*

We have tried to argue in this paper, following Schegloff (1979), that repair is relevant to the study of syntax because it is relevant to the organization of syntax. In sections 2 and 3 we presented evidence for the relevance of repair to syntax at a low level; for example, we saw some repair evidence which suggests that the category **verb phrase** may not be oriented to in repair in English conversation. We also saw evidence that the copula behaves in a way distinct from other verbs.

In this section we would like to explore the relevance of repair to the organization of syntax at a more global level, from a more theoretical perspective.



5.1 *Walking and falling*

In her performance piece "Walking and Falling", Laurie Anderson explores the possibility that everyday human walking is organized by and through falling (Anderson 1982):

You're walking. And you don't always realize it.  
 but you're always falling.  
 With each step, you fall forward slightly.  
 And then catch yourself from falling.  
 Over and over, you're falling.  
 And then catching yourself from falling.  
 And this is how you can be walking and falling  
 at the same time.

Falling here is seen as integral to the activity of walking. Walking would not be walking as we know it without falling.

It is easy to transfer the metaphor to talking: You're talking, and you don't always realize it, but you're always entering the possibility of failing — the realm of repair. With each word, you fall into the possibility of not being able to continue, of not being able to find the next right word, or the syntactic pattern which will map what you have started to say. Repair mechanisms are the processes by which you catch yourself from failing, and bring yourself back into talking. Just as falling is integral to walking, failing — and the potential for repair — is integral to talking, to syntax-in-use.

It is failing in at least the following sense. Recipient design is the requirement that the speaker design the utterance for this here-and-now. And designing for this here-and-now includes not only being sensitive to behaviors of the recipient, for example frowning, but also to the speaker's own realization of inadequacies of the utterance-so-far. In fact, to combine the two, frowning may retroactively contextualize the utterance-so-far as (having been) inadequate, poorly designed. Repairability of an utterance-so-far is thus a prerequisite for recipient design.

Without failing, we would not walk. Without failing, and the possibility of repair, we would not be able to talk, we would not have syntax as we know it.

Syntax is the knowledge speakers use to understand the relationships among elements in a temporally sequential string (This characterization holds for oral/aural languages only. For sign languages, which can make greater use of temporal simultaneity than can spoken languages, there are spatial relationships which must be understood; so for sign languages, syntax refers to temporal and spatial organization.) The notion of sequentiality is crucial here:

if recipients heard all the elements simultaneously, there would be no need for syntax. Of course, recipients **cannot** hear all of the elements simultaneously, nor can speakers produce the elements simultaneously; we must have temporal order, sequentiality, for aural/oral languages.

Let us suppose for a moment that syntax exists for the benefit of the recipient. We have seen that we cannot have syntax without temporal sequentiality. And since we as recipients cannot know in advance what we are going to hear, since we cannot know for sure what the next word from the speaker will be, the syntax we attribute to the utterance-in-progress is only a guess; we must be able to revise it as we hear more. That is, with every new element in the string, we must be able to be wrong, to fail, and we must be able to repair the failure, to make a new guess at the syntax-in-progress. Syntax must thus be thoroughly organized by the always-tentative nature of temporal interpretation.

Now let us look at it from the speaker's perspective. Pawley & Syder (1983) have suggested that speakers can at most plan one clause ahead at a time. But there are several factors which make it impossible to plan even that much in advance of speaking. The first is the pressure to speak when others are competing for the floor. In such a case, it is sometimes necessary to start speaking without having fully planned the utterance which one is now embarked on. We have some evidence for this from rush-throughs, for example, where the speaker gets quickly from the end of one TCU into a second TCU, and then initiates repair part-way into the second TCU; once the floor has been temporarily secured.

The second factor is the interactional nature of all talk. A speaker may have planned an utterance fully in advance, but then finds part-way through that his/her interlocutor is in disagreement with what is being said, given the preference for agreement (Pomerantz 1975), the speaker will almost certainly modify the utterance-in-progress to avoid the impending disagreement. Thus one may try to carefully plan in advance what one is going to say, but interactional forces may act as a pressure against unilateral planning. (Goodwin 1979, 1980, 1981 describe in detail how interactional pressures can shape the emerging syntax of an utterance.)

The third factor is memory failure. It is always possible, for reasons unknown to scholars of memory, for speakers to experience temporary memory failure — they suddenly cannot remember the rest of what they were going to say, or cannot find the particular word they are looking for. This can happen to any speaker at any time; it cannot be planned for in advance.

These factors make it impossible to fully plan in advance what one is going to say. And since it is impossible to know in advance what one is going to say,

then 'failure' is relevant at any moment in the talk (although it may be statistically most common at certain points in utterances). At any moment in the talk, the speaker may not know what to say next, or how to get from the syntax so far into the meaning she really intends. The possibility of failing and repair is thus always present.

We have seen that there cannot be syntax without temporal sequentiality. And now we have seen that there cannot be temporal sequentiality without the possibility of failure and repair. So we must conclude that there cannot be syntax without the possibility of failure, and hence of repair. Failure, and repair, must thus be integral to the organization of syntax (see also Goodwin 1981, for a clear statement of this point).

Exactly what this kind of organization 'looks like' is not clear to us at this time. But some general principles of this organization might be the following (notice that many of these appear completely obvious; nonetheless, we propose them in order to make our assumptions overt).

There is a constraint on repair, that it not destroy syntactic information.

There is a constraint on syntax, that it be repairable: that is, syntax cannot license structures which are not amenable to repair, or that are cognitively difficult to repair.

If recipients have to be able to compare the repairing segment with the repaired segment, then they must be able to retrieve from short term memory the syntactic structure which is being repaired; so syntax must be organized so as to be cognitively easy to retrieve.

If recipients must be able to compare the repairing segment with the repaired segment, then they must be able to engage in syntactic analysis to accomplish this. And since repair can be initiated anywhere in an utterance, syntax must be organized so that syntactic analysis can be accomplished at any point in an utterance.

Speakers (and recipients) orient to syntactic patterns as **norms**; syntactic patterns are not determinative of behavior.

Syntax operates trans-repair, that is, speakers (and recipients) must be able to compare syntactic structures across an instance of repair initiation.

Syntax must be flexible to allow speakers to accomplish multiple competing goals; in other words, speakers must be opportunistic in their use of syntax, and syntax must allow for this.

#### 6.0 *Conclusions*

The goal of this paper has been to describe the operation of first-position self-repair in naturally-occurring English conversation, and to sketch the relationships between repair and syntax.

The findings of the descriptive section include the following:

- The relationship between the repairing segment and the repaired segment is interpreted on the basis of the syntactic organization of the repairing segment.
- If the repair is initiated postverbally, the repairing segment does not recycle back to the verb. This finding suggests that repair is not organized through the notion of verb phrase, which perhaps indicates that the notion of verb phrase is syntactically problematic.
- The copula *be* does not behave in repair like other verbs.
- The extent of the recycle can be used to organize the timing of an utterance.

These findings, especially finding #2, raise a critical issue in the study of syntax in conversation, namely: what is the relationship between syntax-in-conversation and more traditional notions of syntax? Schegloff (1979) acknowledges that the relationship between repair and syntax, or syntax-for-conversation, is as yet unknown (Schegloff 1979:262).

No decision can be reached at this time as to whether 'same-turn repair' should be considered a sort of 'super-syntax' that operates second-order on whatever syntax, otherwise conceived, organizes, or whether same-turn repair should be considered a part of syntax proper but a syntax reconstructed as a syntax-for-conversation....

We agree that the relationship between repair and syntax, and the nature of syntax, remain to be fully elaborated. We would like to suggest, however, that the findings of the present study — in particular the finding that speakers use repair to expand the syntactic resources available to them in a given context — indicate that the relationship is not one of structure and use. That is, it does not seem to be the case that a pre-existing set of structures are simply put to use in a conversation, rather, it appears that syntax is **created** during the course of a conversation, and one of the strategies for creating syntax is repair, which creates grammatical/interpretable utterances out of apparently 'ungrammatical' segments.

The importance of this possibility cannot be overstated: it calls into question our common understanding of syntax as a set of structures which can be deployed in a discourse (see also Hopper 1987, 1988). If it is true, as we suspect, that interaction and syntax are not in fact separable but are rather different ways of looking at the same phenomenon, we may be better off thinking of syntax as a 'hermeneutic for interpretation' (a term suggested to us by Stephen Tyler), and interaction as the occasion for that interpretation. This

view of syntax recasts the academic fields of conversation analysis and syntactic analysis as essentially the same enterprise, with different foci of course, depending on the interests of the analyst. And it allows us to see how, for participants in a conversation, they might be one and the same.

The present study was not designed to answer these questions, nor is it clear to us exactly how these questions can be answered. Nonetheless, they represent crucial issues in the study of syntax, especially for those of us committed to the exploration of syntactic patterns in conversation. They await further investigation.

## APPENDIX A

### NOTATIONAL CONVENTIONS IN TRANSCRIPTS

The following notational conventions are used in the transcripts.

Point at which current utterance is overlapped by the next utterance produced by another speaker	//
Length of silence	(0.0)
Stressed syllable	—
Lengthened syllable	:
Glottal stop cutting off a word	-
Relationship between two utterances in which there is not the usual beat of silence between them	=
Rising intonation	?
Non-linguistic action	(( ))
Unintelligible stretch	( )
Audible outbreath	hh
Audible inbreath	.hh
Laughter within a word	(hh)
Increase in tempo, as in a rush-through	>
	<

## APPENDIX B

- B: It's a little bit diff' rince from Japan. =Ha:hn  
 T: (H)c( ) ((continues into beginning of H's telling below))  
 H: [[  
 A(H)A(h)ahaha ((continues! D)) .hhe: .hhe=  
 [Heheheh]  
 H: =W'll my experience was a bit diff' rent from (0.3) probably (0.5) mo:st  
 B: ( ) Ame:rican=  
 =PLUS I don't- (0.4) -I->think they probably< show more respect to  
 somebody who ( ) looked older:; acts older:; .hh and has a more  
 um traditional type  
 H: classroom=>I was< very:; (- - - - - [-] - - - -) BLUNT- an' (0.3)  
 B: [tch]  
 H: yu' know  
 B: (0.3)  
 I: get ( ) shi:t from a German (0.3) student in my class: (0.4) becuz I  
 look younger than he- I don't think he thinks I'm as old as .hh| |  
 H: Y'u are|  
 B: I am=  
 =But I know if lik- like I looked older had greying hair or something?  
 H: (0.5) •I wouldn't get it.  
 H: [↑Doesn't that\* bug you?=  
 B: =NOT- It's NOT shi:t>it's more of a< .hh [He doesn't know:;w  
 H: [He's not respectful.]  
 B: what' js:; (0.2) culturally okay:;=  
 C: =>B' cuz< ( ) German culture' z a little bit diff' rent=  
 H: =It's very rou: gh.  
 H: It's very respect oriented too:; isn' t' // it' ?  
 C: No.

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### ASSERTING IDENTITY

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#### 1. Introduction

I am sitting in the toilet on the fourth floor of Storchengasse 17, in Chur, a toilet we share with another impecunious student. Two young women knock at his door, and getting no answer there, proceed down the hall to me:

— "Herr Schlaefli?"

— "Ich bin nicht er",

I stammer.

Their giggles as they chattered off first raised for me the question which I want to look at now, twenty-four years later: how do languages handle agreement and anaphora in equational sentences? In the following survey, I will consider two alternatives to simple subject-verb agreement: unlicensed agreement, where verbs agree with NP they are not supposed to agree with, and agreement cop-outs, where verbs will agree with nothing at all.

#### 2. Unlicensed agreement

I very rapidly realized, of course, that my correct answer to the young women in Chur should have been 'Ich bin es nicht' or perhaps a sophisticated 'Der bin ich nicht', but a somewhat deeper question which did not immediately occur to me was how languages decide between saying 'It's me' (like English, Provençal, and French) and some version of 'I am it' (as do German, Italian, Spanish, Romanian, Latin, Greek, Hungarian, Turkish, and most other European languages, including Medieval French and Middle English, and as do many other languages in other parts of the world, among them the Papuan languages Hia and Alambak (cf. for the latter, Bruce 1984: 127).

What is often going on in these — the majority of European — languages, is that in equational sentences of the form

(1) A is (not) B

where A and B differ in person, gender, number, or some combination of these, the equative verb agrees not with its subject 'A', but with the predicate