This article was originally published in the Encyclopedia of Language & Linguistics, Second Edition, published by Elsevier, and the attached copy is provided by Elsevier for the author's benefit and for the benefit of the author's institution, for non-commercial research and educational use including without limitation use in instruction at your institution, sending it to specific colleagues who you know, and providing a copy to your institution’s administrator.

All other uses, reproduction and distribution, including without limitation commercial reprints, selling or licensing copies or access, or posting on open internet sites, your personal or institution’s website or repository, are prohibited. For exceptions, permission may be sought for such use through Elsevier's permissions site at:

http://www.elsevier.com/locate/permissionusematerial

Paulston, Christina Bratt (b. 1932)

Director of the Language Acquisition Institute from 1971, and the Chairwoman of the Department of General Linguistics from 1975 to 1989.

Paulston has worked extensively on sociolinguistics, especially bilingualism. Her *International handbook of bilingualism and bilingual education* is an outstanding example of her broad research activities. In this context, she has worked intensively on minority languages. Her research was intended not only to cover descriptive material for minority-majority bilingualism (cf. her co-editorship of *Language minorities in Central and Eastern Europe* of 1998), but also to give concrete – and often controversial – advice regarding minority politics (cf. her “implications for language policies” in Paulston (1994)).

Paulston expanded the scientific field of minority linguistics from a mono-dimensional linguistic viewpoint to a much broader one. She showed that social questions are directly connected to the linguistic development of minority and majority languages and introduced the claim that minority groups act through ‘social mobilization,’ which can result in either language shift (to the majority language) or language maintenance, while balanced bilingualism is observed only exceptionally. Social mobilization is described as a reaction to economic and political causes.

Another field of Paulston’s research that had a political impact is bilingual education, which she accounted for theoretically in Paulston (1980). In all her sociolinguistic studies, Paulston based her work on international perspectives, including those of the United States and Europe; she also did intensive work on her homeland Sweden and Scandinavia.

Christina Bratt Paulston wrote, edited, and co-edited more than 15 books and published many journal articles. She received the award of the American Educational Research Association in 1980 and was granted a Fulbright-Hays scholarship to Uruguay in 1985. She is member of numerous linguistic associations, including the MLA and the International Association of Teachers of English as a Foreign Language, holding leadership positions in some. Paulston was part of the American Council on Teaching of Foreign Languages.

See also: Minority Languages; Oppression; Multilingualism: Pragmatic Aspects; Politics and Language: Overview.

**Bibliography**


---

**Pauses and Hesitations: Psycholinguistic Approach**

H H Clark, Stanford University, Stanford, CA, USA

© 2006 Elsevier Ltd. All rights reserved.

To pause is to suspend an action temporarily, and it is common to pause in the action of speaking. The term *pause* is often taken to mean silence even though speakers have other ways of suspending speech as well. Consider the spontaneous utterance in:

(1) Alan but at the same time, . u:m I uh I did. accuse them, of of uh having misled us, . on April the twenty-third, (1.2.142)

(All the examples cited, unless marked otherwise, come from a corpus of British English conversations [Svartvik and Quirk, 1980]. Each is identified by text number and line. Brief pauses are marked by periods [.], unit pauses by dashes [-], prolonged syllables by colons [:], and ends of tone units by commas [,] or question marks [?].) Alan suspends his speaking not only by going silent, but by inserting the fillers *uh* and *um*, by prolonging words (e.g., “u:m”), and by repeating words (“I uh I” and “of of”). The term *delay* will be used for any temporary suspension of speaking; the term *pause* will be reserved for silent delays.

Delays in speaking tend to be either reactive or rhetorical. Reactive delays arise as speakers react to, or try to deal with, problems in producing speech. Alan may have needed extra time to decide on the next message, formulate the next phrase, or retrieve the next word, and that led to his delays. Rhetorical delays, in contrast, have rhetorical purposes. Speakers may pause briefly, for example, as a way of emphasizing a point or heightening the suspense of a narrative (O’Connell and Kowal, 1998). The focus here is on reactive delays.
Timing

Delays are a matter of timing. When people talk, they recognize that there is a conventional way of producing each sentence in context—its ideal delivery. An ideal delivery is characteristically a single action with no suspensions—no silent pauses, no fillers, no repeats, no self-corrections, no delays except for those required by the syntax of the sentence. For Alan’s utterance in (1), the ideal delivery would be “but at the same time I did accuse them of having misled us on April the twenty-third.” That makes the ideal delivery a model against which speakers can judge their actual delivery. It defines what it is to be a delay—a temporary suspension of the action of producing the conventional form of that utterance. Reactive delays arise when speakers are unable to produce an ideal delivery. Rhetorical delays arise when speakers choose to suspend an ideal delivery for rhetorical purposes.

In conversation, there are also conventions about how to go from one utterance to the next. In many styles of conversation, speakers are expected to move smoothly, without undue gaps, both between units within turns and between turns (Sacks et al., 1974). In (1), for example, Alan’s partner Ben is allowed to start speaking once Alan has completed the units ending “dem misled us” and “twenty-third,” and if Ben does start first at either point, he gets the next turn from then on. This practice, applied generally, tends to minimize gaps both between units within turns and between turns.

The conventional standards of fluency, however, are almost impossible to live up to. Speakers cannot produce an expression until they have formulated it, and it may take longer to formulate an expression than time allows. The result is often unwanted delays. Also, people in conversation owe their partners an account for any extra time they take. If they delay, they may want to say when and why they are doing so. In (2), Duncan has been just asked about recent books he has read:

(2) Duncan I’ve um recently read um, oh, Lord of the Flies (3.5a.110)

When he is delayed in recalling a book he has read, he doesn’t remain silent after he suspends speaking. He inserts first um to say that he is delaying and then ob to say that he has only just recalled the name of the book. Many delays are marked with comments like this.

Dealing with such delays requires speakers to monitor what they are saying (Levett, 1989). They need to compare what they actually are producing with what they ideally should be producing. It is only by monitoring their progress that they can anticipate when to delay and what comments to add. Speakers must also monitor their partners. If their partners aren’t attending or understanding, or are starting to speak themselves, speakers may need to stop to deal with those problems as well.

Formulating Delays

Delays don’t just happen. As parts of the speech stream, they need to be formulated with as much care as the speech itself. The act of delaying has three phases: (1) the suspension of fluent speech; (2) a hiatus in which speakers may say and do other things; and (3) the resumption of fluent speech (Clark, 1996). In (2), fluent speech was suspended at the end of read and resumed at the beginning of Lord. The hiatus, the interval in between, contained “um, oh,”

Suspending Speech

Speakers have to formulate when and how to suspend speaking. When people monitor what they are about to say or what they have just said, there is often a point at which they first detect an imminent problem in continuing. Call this the point of detection of trouble. Remarkably, speakers rarely interrupt their speech at this point. Instead, they wait for the right moment and, when they do stop, mark their suspensions in special ways. They do much of this as a way of signaling why they are delaying. Here are several common forms of suspensions; the properties of each have been derived empirically in large corpora of spontaneous conversations.

1. Complete words. Speakers ordinarily wait until the ends of words to suspend speaking. In (1), the points of suspension come right after time, of, and us, and in (2), right after I’ve and read. If speakers interrupted their speech precisely at the point of detection of trouble, the points of suspension should occur far more often within words than at the exact boundaries between words. In fact, they do not. Speakers prefer to complete each word, just as they would in an ideal delivery.

2. Mid-word. When speakers do suspend speaking mid-word, they do so for special reasons. One reason is to mark a word as incorrect (Levett, 1983, 1989), as in: “do you and your husband have a j-car?” (8.21.335). Here the speaker started a word beginning “j” and, detecting it as an error, broke it off and replaced it with car. Another reason is to forecast an immediate repeat of the word (Clark and Wasow, 1998), as in “and even if promises are given, th- the actual words, (3.4.410).”
3. **Prolongations.** Speakers can also suspend speaking by prolonging a word beyond its normal length. Consider (3) (in which prolonged syllables are marked with dashes, and pauses in seconds):

(3) George [1.25] A—and this little boy—, [1.2] the scene [.3] focuses on this little boy.

(Chafe, 1980: 303)

George, who is in the middle of telling a story, prolongs and apparently while formulating the next sentence. Later, he prolongs boy and adds a silence apparently while formulating the next clause. Prolongations are used to mark delays already in progress (Clark and Fox Tree, 2002).

4. **Non-reduced vowels.** The words a, the, and to are normally pronounced with a brief, reduced vowel, the final schwa in sofa. They can also be pronounced with the non-reduced diphthongs that rhyme with day, see, and flew, but only in special circumstances, as in “She’s not just a doctor in town, but the doctor in town.” When the rhymes with see, it will be written ‘thiy’; when it rhymes with the last syllable of sofa, it will be written ‘thuh.’ So, in an ideal delivery, the monastery would ordinarily be pronounced ‘thuh monastery.’ Yet in conversation, one speaker produced:

(4) Julie it’s thiy, thuh monastery, - you know thuh very Gothic monastery, (2.13.666).

Julia apparently had trouble describing the building, so she delayed while choosing monastery and again while choosing very Gothic monastery. She signaled her first point of suspension to begin at the end of the by pronouncing it ‘thiy.’ In one large sample of conversation, speakers suspended their speech 81% of the time after thiy, but only 7% of the time for thuh. So when thuh is the appropriate pronunciation for the, speakers can signal a suspension of speech by using thiy instead. They can do the same by using the pronunciations of a and to that rhyme with day and flew (Fox Tree and Clark, 1997).

**Hiatuses**

The hiatus is the time interval between the point of suspension of fluent speech and the point of its resumption. Speakers may do many things in this interval. Here are several common patterns, again as borne out in evidence from large corpora of spontaneous speech.

1. **Silence.** Most hiatuses contain silence either alone or accompanied by commentary. In (3), George produced “the scene [.3] focuses on this little boy” with a simple 0.3 sec silence between scene and focuses. In many styles of conversation, such a silence cannot exceed 1 second without the participants saying or doing something to cut it off (Jefferson, 1989). By contrast, hiatuses may have no duration at all. When one speaker produced “The Lord says that and eventually you’ll have to re-answer to him” (Blackmer and Mitton, 1991), there was no time between the end of re- and the beginning of answer.

2. **Fillers.** In English, speakers often insert uh or um into hiatuses. Evidence shows that these are conventional English words (interjections) that speakers use to announce that they are initiating a delay in speaking. Speakers use uh to announce what they expect to be a minor delay and um to announce what they expect to be a major delay (Clark and Fox Tree, 2002). Speakers announce such delays for many reasons. The commonest reason, illustrated in (1) and (2), is to let their partners know that they are delayed in retrieving a word, formulating a phrase, or deciding on a message. An added reason may be to hold, or cede, the floor, or, in overlap with another person’s current turn, to display a desire to speak next. Fillers take other forms in other languages.

The English fillers uh and um often do double duty. Consider this example:

(5) Alan And from thi-yuh spectator point of view it looks like airplanes going in all directions (Clark & Fox Tree, 2002, p. 103).

Here Alan pronounces the as ‘thiy’ (rhyming with see), but also adds uh as a so-called clitic at the end. In the process, he shifts the syllable boundary to before the y (as marked by the hyphen). The result is the trochee “thi-yuh” (a word with strong-weak stress). Other typical examples are ‘an-duh,’ ‘bu-tuh,’ and ‘tu-wuh’ (for to + uh). In all these cases, speakers are using uh both to help mark the point of suspension and to announce the initiation of a brief delay.

3. **Commentary.** Speakers often insert into hiatuses other comments about current problems. They may add you know or I mean or that is to say they are about to qualify or explain what they are saying, as in “is there a doctrine about that, — I mean a doctrine about uh — disfavouring American applicants, (2.6.978).” They may add no or pardon or sorry to say that they are about to correct an error, as in “Sunday, the twenty-fifth, - sorry twenty-fourth (211a.173).” They may add interjections such as well, oh, and ab to comment on the current state of their thinking, as in (2), “I’ve um recently read um . oh, . Lord of the Flies (3.5a.110).” They may even suspend
speaking to carry out an action independent of what they are saying. One speaker produced “I’m not - oh, thanks, not really comfortable, like this, (1.3.1),” taking time out mid-utterance to thank his partner for a cup of coffee he had just been handed.

4. Self-talk. Speakers can also talk to themselves, softly, as evidence that they are busy doing something during the delay. When one person was asked, “What is the name of the extinct reptiles known as ‘terrible lizards?’” she replied, “[4.5] terrible l- (to self) [2.0] uh [4.0] um uh dinosaurs I guess” (Smith and Clark, 1993: 33). She repeated the question to herself, but aloud, as evidence that she was working on the answer.

5. Continued phonation. Once speakers have suspended fluent speech with a prolonged word, they can use the prolongation itself to fill the hiatus. In (3), when George said “A—nd this little boy—,” he prolonged the word and to fill the hiatus.

Just as nature abhors a vacuum, speakers abhor a silence, as they add speech and gestures to their hiatuses. But what they add does more than fill a silence. It helps explain the delay itself.

**Resuming Speech**

Hiatuses end when speakers resume speaking fluently. Speakers have four main options in resuming, once again as documented in spontaneous speech.

1. **Continuations.** Speakers most often continue a sentence where they left off, picking up on the next word with the intonation of the phrase they suspended. This is illustrated in examples 2 and 5.

2. **Restarts.** Speakers also often return to the beginning of the current constituent and restart it, as Julia did in (4) with the “it’s thirty . thuh monastery.” Evidence shows that speakers are more likely to restart a constituent the more disruptive the hiatus has been—the more commentary or time it contained (Clark and Wasow, 1998). So, even though their original attempt at a constituent may have been interrupted, their ultimate delivery of the constituent is fluent, befitting an ideal delivery. There is good evidence that speakers prefer to produce constituents with a continuous delivery (Clark and Wasow, 1998; Levelt, 1983).

3. **Replacements.** Still other times, when speakers resume speaking, they replace earlier material in order to correct an error, as in “Sunday . the twenty-fifth, - sorry twenty-fourth (211a.173).”

4. **Fresh starts.** Speakers sometimes resume speaking with a fresh start on an entirely new sentence, as in (3).

**Why Delay?**

If speakers delay in order to deal with problems in production, what types of problems are they? One of the earliest proposals was that delays come at points of unpredictability in production (Goldman-Eisler, 1968; Maclay and Osgood, 1959). Unpredictability was measured by deleting words from transcripts of spontaneous speech and counting the number of guesses it took other people to identify the deleted words. The more guesses it took for a word, the less predictable the word was in context. Indeed, speakers tended to pause longer and more often just before the words that were later shown to be less predictable.

According to another early proposal, speakers should also be delayed in formulating major units of their utterances. One such unit is the intonation unit (Boomer, 1965). These units are clauses or other phrases that are pronounced under a single intonation contour. Intonation units, in this proposal, should have many delays near their beginnings, where most planning is done, and fewer delays later on. Indeed, pauses, fillers, and repeats have been shown to be common before or after the first word of intonation units and rare later on (Chafe, 1979, 1980a; Clark and Fox Tree, 2002). Likewise, within intonation units, there tend to be more delays before long phrases than before short ones (Clark and Wasow, 1998; Ford and Holmes, 1978; Holmes, 1988).

Narratives consist of series of intonation units, as in this excerpt from a retelling of a silent film (each line is an intonation unit) (Chafe, 1980b):

(6) (1.15) A—nd (.1) then a boy comes by,
(.1) on a bicycle,
the man is in the tree,
(.9) and the boy gets off the bicycle,
and .. looks at the man,
and then (.9) uh looks at the bushels,
and he .. starts to just take a few,
and then he decides to take the whole bushel.

Many of these units begin with and or and then, and delays are common before or after these words. But narratives are hierarchical. These eight intonation units combine to form a sentence. A series of such sentences combine to form an episode (analogous to a paragraph). And a series of such episodes combine to form the entire story. In one study (Chafe, 1979, 1980a), narrators were shown to produce many delays in entering each new intonation unit (as in lines 1, 2, 4, 5, 6, and 7 of example 6), still more delays in entering each new sentence (as in the first line of (6)), even more delays in entering each new episode (or paragraph), and the most delays in entering the story at its beginning. The larger the
unit, the more planning it took, and the more often speakers had cause to delay.

Speakers are more likely to be delayed, therefore, the larger and more complicated the unit they are planning. Still, speakers don’t delay simply because the unit they are planning is large. Rather, they suspend speaking on each occasion because of a specific problem that keeps them from proceeding.

Summary

Delays are common in spontaneous speech. Reactive delays are almost inevitable as speakers try to remain fluent while deciding on, planning, and formulating what to say. Rhetorical delays, in contrast, are part and parcel of what speakers are trying to say. The remarkable point is that delays themselves are planned. Speakers must formulate each suspension, each hiatus, and each resumption with the same care that they formulate their speech.

See also: Dialogue and Interaction; Psycholinguistics: Overview; Speech Errors: Psycholinguistic Approach; Spoken Language Production: Psycholinguistic Approach.

Bibliography


Pedagogical Grammars: Second Language

Y Kachru, University of Illinois at Urbana-Champaign, Urbana, IL, USA

© 2006 Elsevier Ltd. All rights reserved.

People learn languages for interactional purposes. Even a so-called library language involves interaction between a reader and texts that the reader reads. While experts agree that learning language in a natural setting, by interacting with speakers of the target language in their own community, is the best way of acquiring a language, it is not always possible to do so. Since time immemorial, people have felt the need to learn languages in classrooms, whether these were tailored to an individual or to a group. For instance, in medieval times the aristocracy employed tutors to give their wards individualized instruction, whereas religious institutions had language