Two studies, one in Puerto Rico and one in Japan, assessed the effects of pauses and hesitation markers on listening comprehension of university students who were learners of English as a Second Language. In one, 61 students of basic English were assigned to three groups to hear monologues under three conditions: (1) normal speed; (2) with 3-second pauses inserted, on average, every 23 words; and (3) with similar pauses filled with hesitation markers (e.g., "well, I mean, uh"). Students responded in Spanish to questions immediately after each monologue. Results indicate comprehension of the version with filled pauses was significantly higher than comprehension of the normal version. The version with blank pauses was understood slightly less well than the filled-pause version. In the second study, 48 Japanese education majors were randomly assigned to four groups. Three heard the monologues used in the previous study and the fourth heard a mechanically slowed monologue. Comprehension questions were in English. Results indicate comprehension of the filled-pause version was significantly better than for the normal, slow, and blank-pause versions, with little difference in comprehension found among those versions. Overall, insertion of hesitation markers was the most effective aid to listening comprehension. Instructional implications are considered. (MSE)
MORE ON COMPREHENSIBLE INPUT: THE EFFECT OF PAUSES AND HESITATION MARKERS ON LISTENING COMPREHENSION

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Research on modifications to aural input directed to non-native speakers (NNS) that effect comprehensibility has gotten perhaps less attention than one might expect, given the assumption that comprehensible input (CI) is a crucial ingredient in second language acquisition (SLA). Comprehensibility of input is particularly important when the input is one-way; that is when the NNS and the interlocutor do not have the opportunity to interact and negotiate meaning. The lecture and the language lab are two examples of one-way oral input.

The ways in which input to NNS can be modified to make it easier to understand include:

- slower rate
- more and longer pauses
- (unnaturally) clear pronunciation (e.g. sometimes louder voice)
- more basic vocabulary
- less use of subordination, i.e. more one-clause sentences
- repetition and other forms of redundancy (use of synonyms, paraphrase, definition, even explanation to clarify meaning)

We will look first at some of the modifications that do not seem to help comprehension and then focus on pauses which do. In the area of redundancy, Chaudron (1983a) has found that simple repetition and unambiguous forms of redundancy are helpful, but he questions elaborations and paraphrases meant to clarify vocabulary items as they may be mistaken as additional concepts (Chaudron, 1983b & 1988). My own efforts to determine the effect of redundancy in the form of paraphrasing and defining and integrating paraphrases and definitions into a mini-lecture on glaciers include "retreated" vs. "retreated or moved further north,"
"caught behind" vs. "caught behind or trapped." Such alterations had no effect on listening comprehension, though these supposed aids to comprehension did help reading comprehension somewhat, and there is evidence (Myers, 1987; Brown, 1985) that in the written mode these devices do clarify meaning and enhance comprehension.

Previous research (Blau, 1990) revealed no effect on listening comprehension for sentence structure while again there was a positive effect (Blau, 1982) on reading comprehension using the same texts. There was also no significant effect for speech that was mechanically slowed on a VSC Soundpacer tape recorder. In fact as proficiency in English increased the effect of mechanical slowing became more negative. Having questioned the effect of redundancy, sentence structure, and mechanical slowing on listening comprehension, let us now zero in on the effect of pauses, which is another means of slowing the overall rate of delivery.

Most older studies on pauses and hesitation markers (Boomer, 1965; Butterworth, 1980; Levin and Silverman, 1965; Henderson, Goldman-Eisler and Skarbek, 1965; Rochester, 1973) deal with the use of these phenomena by native speakers (NS) from the production side and view them as indications of cognitive activity such as planning and decision making while speaking. William Safire (1991) discusses pauses as an attention-getting device, a device to engage the audience. Butterworth (1980) mentions that pauses "...may serve not only to make time available for the speaker's cognitive processes, but also to assist the listener in his task of understanding the speaker" (157). This is a rare mention of the effect of pauses on the listener's comprehension.

Some researchers consider the use of pauses the principal
means of slowing the rate of input rather than by means of a mechanical device. Griffiths (1990) concluded from the study he conducted with young adult EFL students in Japan that comprehension suffered when low intermediate students listened to fast texts (200wpm). They did better with slow and average speeds (100-150 wpm) which were slowed by means of pauses, mostly at clause boundaries. Blau (1990) also found this with Puerto Rican and Polish students. So there is evidence that insertion of pauses to slow the overall rate of delivery renders input more comprehensible. The next step, then, is to focus on the nature of those pauses.

Griffiths (1991) favors slowing by means of pauses but claims that pauses with hesitation markers, while not problematic for NSs, do hinder the comprehension of NNSs. Both his most recent study and Voss (1979) support the notion that pauses filled with hesitation markers cause perceptual problems for NNSs. It is important to note, however, that the dependent variable is dictation rather than global comprehension.

I am going report on two studies with NNS, one done in Puerto Rico and one done in Japan. The effect on listening comprehension of pauses filled with hesitation markers is examined, but the dependent variable is comprehension rather than perception as measured by dictation as in Griffiths (1991) and Voss (1979), and the results are indeed quite different.

**STUDY ONE**

Study One was conducted with 61 students in basic English at the Mayaguez Campus of the University of Puerto Rico. Three existing classes were each randomly assigned to hear three monol-
ogs from Listening In and Speaking Out (Bode, Whitley, & James, 1981) under one of three conditions (shown on Table 1 of your handout): (1) "normal" rate (approximately 200 wpm), (2) with three-second pauses inserted on the average every 23 words at selected sentence, clause, and phrase boundaries which, in effect, slowed the rate of delivery to approximately 150 wpm, and (3) with the same number of pauses filled with hesitation markers such as well, I mean, uh, you know, um, mm, oh. These filled pauses often, but not always occurred at the same junctures as the blank pauses. This modification to the input lowered the speech rate to about 142 wpm. In all three versions the segments of speech were delivered at the same "normal" rate; it is only because of the inserted pauses that the overall rate is lowered.

Students answered information questions in Spanish immediately after hearing each monolog. Students were also asked to rate themselves on the percentage they thought they understood. Group means on both the comprehension test and the self assessment appear in Table 1.

Data were analyzed using a regression approach to analysis of covariance with the English as a Second Language Achievement Test (ESLAT) as the covariate to control for different levels of proficiency. The analysis indicated that comprehension of the version with filled pauses was significantly higher than comprehension of the "normal" version (t(57)=3.03, p<.005). The effect on comprehension of blank pauses, while slightly less than filled pauses, was also significantly higher than "normal" (t(57)=1.925, p<.05). The group that heard the version with blank pauses was slightly better, as measured by ESLAT, than the group that heard the ver-
sion with filled pauses, accounting for the 77% (BP) vs. 74% (HM).

On the self-assessment, again, the version with filled pauses was rated significantly higher than the "normal" version \(t(57)=2.035, p<.025\). The self-assessment on the blank pause version was not significantly different from that of the "normal" version \(p>.25\), supporting the notion that there is a tendency for text with filled pauses to be more comprehensible than text with blank pauses.

**STUDY TWO**

Study Two was conducted at a university in Japan with 48 education majors\(^2\). In this study four intact groups were randomly assigned to hear the same three monologs in one of the four conditions you can see on Table 2: (1) at "normal" speed, (2) with blank pauses, (3) with pauses filled with hesitation markers, and (4) slowed on the VSC Soundpacer tape recorder (approximately 185 wpm). The fourth treatment was included as the effect of mechanically slowed input had not previously been tested on this population whereas it had been tested on a Puerto Rican sample (Blau 1990). The same comprehension questions were used as in Study One, but in this case the questions and answers were in English. Again, comprehension questions were answered immediately after hearing each monolog. Group means on comprehension and self-assessment ratings appear in Table 2.

A one-way analysis of variance was used in this study as no covariate was available. The null hypothesis that there was no difference among the four group mean scores on the comprehension test was rejected \(p<.005\). Pairwise comparisons indicated that comprehension scores for the version with filled pauses were sig-
nificantly better than comprehension scores for the "normal" and slow versions. There were no significant differences among the version with blank pauses, the slow version, and the "normal" version. In other words, for these subjects, whose abilities in listening comprehension are rather low, only the modification of input by inserting filled pauses was beneficial. There were no significant differences among the treatments on the self-assessments.

Discussion

The modification to aural input that most aided listening comprehension in these two studies was pauses filled with hesitation markers; thus they were not a problem for NNSs as Griffiths and Voss had claimed. Blank pauses were also helpful, particularly to the Puerto Rican sample, and they were helpful to a Polish sample used in Blau (1990). Mechanical slowing proved again in the present study not to be a useful modification to input.

Overall, inserting hesitation markers seems to be a more helpful modification to input than inserting blank pauses. Speech characterized by hesitation markers sounds more natural, especially if the listener realizes that the speaker is taking time to think and will soon get back on track. In other words, as long as listeners recognize that hesitation markers are semantically empty, they can take advantage of the processing time provided. Blank pauses, on the other hand, may be distracting if listeners waste processing time waiting for something meaningful to follow. It is puzzling, however, that blank pauses did help Puerto Rican and Polish students while they did not appear to help the Japanese students. One must keep in mind that the small sample size and
lack of covariate in the Japanese study may be yielding atypical results. Or might it be that Japanese students more easily tune into the version with filled pauses because hesitation markers may be more characteristic of Japanese discourse than of Spanish and Polish discourse? Or might the naturalness criterion be more important for these subjects?

As hesitation markers and pauses are characteristic of unplanned speech and are often used by speakers to make decisions while planning, it is possible that non-fluent, unplanned speech is, in a sense, more comprehensible to NNSs than polished, fluent speech. It is possible then, that well-planned or read lectures are more difficult for NNSs to comprehend than less fluent discourse.

The present studies are limited by the use of only brief monologs. As aural input gets longer, other factors such as organization and organizational markers play an increasingly important role in comprehensibility. Chaudron and Richards (1986) found that macro-markers aided in the comprehension of a lecture while micro-markers were not an aid to comprehension. They suggested that the micro-markers might even make a lecture seem vague and disorganized and distract the listener's attention. This concern may be true for longer texts, but it is not supported by the findings of the studies I have just reported on. The difference may be due in part to the fact that the micro-markers used by Chaudron and Richards were more varied and not so obviously without meaning compared to the hesitation markers used in the present study. The latter were more likely to be recognized as time for the speaker to think and plan and were consequently used by the listeners as
processing time. More work along these lines is clearly needed with longer stretches of discourse.

In the meantime a few tentative suggestions can be made. In delivering teacher talk, whether full-fledged lectures or shorter more mundane types of teacher talk, we should, without being vague and disorganized, allow ourselves hesitation and breathing time in order to allow students processing time. Students may require some direction so that they are not distracted by semantically empty fillers and can make use of the extra processing time they provide.

I think that it is encouraging that studies done so far indicate that some modifications to aural input help NNS. This should stimulate further research as there is evidence that there are ways we can help our students by rendering input more comprehensible.
### TABLE 1
GROUP MEANS
STUDY ONE
(PEUERTO RICO)

<table>
<thead>
<tr>
<th>Group Mean</th>
<th>Self-Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal N=18</td>
<td>52% 52.5%</td>
</tr>
<tr>
<td>Blank Pauses N=15</td>
<td>77% 66%</td>
</tr>
<tr>
<td>Filled Pauses N=28</td>
<td>74% 70.5%</td>
</tr>
</tbody>
</table>

### TABLE 2
GROUP MEANS
STUDY TWO
(JAPAN)

<table>
<thead>
<tr>
<th>Group Mean</th>
<th>Self-Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal N=13</td>
<td>25% 8%</td>
</tr>
<tr>
<td>Slow N=11</td>
<td>27% 13%</td>
</tr>
<tr>
<td>Blank Pauses N=11</td>
<td>31% 9.5%</td>
</tr>
<tr>
<td>Filled Pauses N=13</td>
<td>40% 14%</td>
</tr>
</tbody>
</table>

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REFERENCES


