

THE PERCEPTION OF HESITATION PAUSES IN AMERICAN SIGN LANGUAGE CONVERSATION

by
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The filling of pauses in American Sign Language (ASL) conversation is said to be optional (Baker 1977). However, like speakers, signers must indicate to the addressee that they are not about to yield the floor when hesitating. This paper examines how ASL signers think they fill these pauses. The analysis reveals that ASL signers perceive themselves as users of many different signs to fill hesitation pauses. This finding indicates that a large variety of signs, gestures, facial expressions, and body postures exists which can be used as a conversational strategy to hold the floor; signers seem to know all these different signs. Furthermore, the study shows interesting gender differences in that men and women have different perceptions of themselves regarding the usage of hesitation signs.

Introduction¹

Nearly all we know about conversation has come from the study of spoken conversation. When looking at major publications dealing with conversation and/or discourse (e.g., Grice 1975, 1978; Werth 1981; Brown and Yule 1983; Levinson 1983; Schiffrin 1990, 1994; Sperber and Wilson 1995), we recognize that none of them consider another modality but the spoken or written one. Nevertheless, in the US and Canada, as in many other countries, there is a linguistic minority using a different modality when communicating. I am speaking of sign languages in general and American Sign Language (ASL) in particular.

Ever since William C. Stokoe (1960, 1978) demonstrated that ASL is a proper linguistic system, there has been a dramatic increase in sign language studies. However, most of these studies focus on structural characteristics of signs and their use in linguistic units no larger than a sentence (see overviews and discussions in Wilbur 1979; Isenhardt 1990; Schein and Stewart 1995). The ASL experts take about as little notice of conversation as the conversation analysts take of ASL.

In the 1970's, Charlotte Baker (1976) started to examine signed conversation. Since then, only a few ASL studies have analyzed characteristics of linguistic units larger than a sentence, that is signed

conversation, narration, or discourse. Baker (1977) investigated regulators and turn-taking in ASL conversation. A few years later, Wilbur and Petitto (1983) concentrated on topic flow in ASL discourse and Gee and Kegl (1983) examined structures and pauses in ASL narration, while Winston (1991) as well as Liddell (1996) focused on spatial referencing as a discourse function.

A common property of these studies consists in their analysis of data from only one or two signers in one single communicative event (the exception is Baker (1977), who collected data from two different conversations made each by a set of two signers). Hence all these investigations allow only preliminary conclusions. A much larger range of signers in a variety of communicative situations is needed to reduce the risk of making statements merely about individual varieties in ASL use. That is why I chose a different approach when looking at a particular device in signed conversations: hesitations or hesitation pauses.

Psycholinguistic and sociolinguistic research has revealed that different functions are attributed to hesitation pauses in spoken conversations: verbal and/or cognitive planning, interactive tasks, and symbolic functions (e.g., see discussion in Hänni 1980; Levinson 1983, Chapter 6; and Rieger 2000). Hesitation pauses are usually filled with verbal manifestations such as *uh*, *erm*, *err*, *eh*, *ahem*, *umh*, *muh*, *hmm*, *huhm*, *mhmhm*, *well*, *let's see*, etc.² or non-verbal actions such as finger snapping, touching one's own forehead or mouth, and so forth. While hesitation pauses in spoken conversation have been the focus of interest for forty years, hesitation pauses in signed interactions have never been investigated systematically.

Since signed conversation serves the same purpose as spoken conversation and there appears to exist a conversational contract between signer and addressee (cf. Wilbur and Petitto 1983), we can expect that features particular to conversation – as we know them from conversation analysis – appear in both spoken and signed conversations. I assume that this is the case for hesitation pauses as well.

Baker (1977) has looked briefly at hesitation pauses in ASL conversations. She suggested that the filling of pauses with signs, gestures, or facial expressions is optional. She described these as 'movements that indicate thinking (e.g., looking up, frowning brow, slight shaking of index finger or palm, postural shift)'. According to Baker, the most common signals that signers use to fill

pauses and indicate that they are not about to yield the floor, is a brief look away from the addressee ('-GAZE') or the keeping of their hands in the signing space ('not returning to a rest position'). While this might be true for short pauses between two propositions, it will not be the case for hesitation pauses. My hypothesis is that ASL signers adopt a much more active behavior and use a variety of signs, facial expressions, and body positions as well as combinations of all these when hesitating in a conversation. Furthermore, it is my working assumption that ASL speakers are aware of their vivacious behavior.

Finally, another objective of my investigation has been to determine whether there are gender differences to be observed in the perception of the use of various hesitation signs. Since hearing men and women do perceive themselves differently with respect to hesitation (Coates 1993), I expected to find gender differences in the perception of ASL signers as well.

Method

Thirty-five deaf signers using ASL as a primary means of communication³ (13 women and 22 men; their age ranging from 17-70 years) volunteered to participate. All participants were chosen by an interpreter⁴ who considered them fluent signers. Although the study later revealed that 6 participants (1 female signer and 5 male signers) considered themselves just 'adequate' signers, I did not ignore their answers because, together with the interpreter, I presumed that they might be overly modest.

A questionnaire (see Appendix A) about signs, facial expressions, and body movements used to fill hesitation pauses in ASL conversations was distributed and signed to all participants. The questionnaire included Baker's (1977) examples except for the 'slight shaking of index finger or palm'. I left this out because neither the interpreter nor a native speaker and teacher of ASL knew what gesture or sign this description stood for. However, it might be identical with my second example: open five, rotating with one hand.

An interpreter assisted the interviewees with all questions and problems and provided a given explanation in ASL of hesitation

pauses: 'When you stop signing in the middle of an utterance or turn because you are not sure which signs to use to express your ideas or when you have to think about what to say/sign.' This explanation does not include the symbolic functions of hesitation pauses; I tried to keep it simple and offer a generally understandable idea of hesitation pauses.

Before counting and tabulating all answers, every questionnaire was carefully checked for possible errors or misunderstandings. The aforementioned hypothesis was subsequently tested against the collected data and it was determined how ASL signers fill hesitation pauses or better: how they perceive their filling of hesitation pauses.

Results and Discussion

All thirty-five participants answered questions one to nine, while only thirteen answered question ten, and twenty-one answered question eleven. Of those who did not answer these last two questions, quite a few put a note in the margin: 'could but didn't want to'; others told the assisting interpreter the same thing. I therefore assumed that the questionnaire was too long and took too much time to be completed.

However, those who did answer the question about further signs, expressions, and movements, as well as the one about the combination of miscellaneous fillers, gave a variety of different examples (see Appendix B): seventeen different pause fillers and twenty-five different combinations were listed.

This result already confirms that ASL users know and seem to use a large variety of pause fillers and that there is a tendency to perceive themselves as using a combination of signs, facial expressions, and body movements when hesitating in a conversation.

The answers to questions one to nine are shown in Table 1a. They were examined for evidence of a random distribution, using the chi-square test. A statistically significant distribution was found for item number one: repetitions of last sign or signs ($\chi^2 = 9.914$, $p = 0.0190$), number six: keeping hands in the signing space ($\chi^2 = 10.143$, $p = 0.0173$) as well as number eight: furrowing brow ($\chi^2 = 12.657$, $p = 0.0058$).

Table 1a. Results of questions one to nine as answered by thirty-five signers

Signs for hesitation pauses	Frequency of use			
	often	sometimes	seldom	never
1. Repetitions of last sign or signs	8	15	10	2
2. Open five ¹ , rotating with one hand	13	10	6	6
3. Open five, rotating with both hands	7	8	12	8
4. Color sign on the mouth ²	4	12	9	10
5. Looking away from the addressee	11	11	10	3
6. Keeping hands in the signing space	16	7	9	3
7. Looking up	6	13	11	5
8. Furrowing brow	11	16	6	2
9. Postural shift	13	12	7	3

¹ 'Open five' is the sign for the number five (showing the five fingers of the signing hand) with fingers spread.

² The color sign is similar to the sign for the number five; in addition the five fingers are slightly bend and move back and forth. Here, they move up and down above or around the signer's lips.

Interestingly, these three signs or facial expressions were the ones that were quite often named as being used in combination with other signs, expressions, or movements to fill hesitation pauses. In contrast to this, item number five (looking away from the addressee) and number two (open five, rotating with one hand), while both revealing a rather random distribution, were listed as being the most frequently used in combination with other fillers.

To further explore and analyze these findings, a different arrangement of the same results was made and tabulated (Table 1b). I collapsed the first two columns into one set called 'used frequently' and the second two columns in another set called 'used infrequently'. Again, the results were evaluated using the chi-square test. A statistically significant distribution was found for items number eight: furrowing brow ($\chi^2 = 10.314$, $p = 0.0017$) and number nine: postural shift ($\chi^2 = 6.429$, $p = 0.0109$), while items one: repetitions of last sign or signs, two: open five, rotating with one hand, and six: keeping hands in the signing space, all approached significance; chi-

square and probability being $\chi^2 = 3.457$, $p = 0.0595$ in all three cases. All these signs were perceived as being used in combination (see Appendix B).

Table 1b. Collapsed results of answers to questions one to nine

Signs for hesitation pauses	used frequently	used infrequently
1. Repetitions of last sign or signs	23	12
2. Open five, rotating with one hand	23	12
3. Open five, rotating with both hands	15	20
4. Color sign on the mouth	16	19
5. Looking away from the addressee	22	13
6. Keeping hands in the signing space	23	12
7. Looking up	19	16
8. Furrowing brow	27	8
9. Postural shift	25	10

Finally, I collapsed columns one, two, and three into a set called 'used,' whereas the 'never'-column was now titled 'not used'. The result of this grouping is not presented, as the evaluation of the newly arranged results by chi-square test manifested a statistically significant distribution for all nine answers.

The primary objective of this investigation was to determine whether fluent ASL signers think they use a variety of signs, facial expressions, and body movement to fill hesitation pauses. Of secondary interest was to learn how often they do use particular signs. Therefore, it is justified to look at the answers in different orderings.

The results indicate that ASL users perceive themselves as very active signers who utilize a large variety of gestures and expressions to fill hesitation pauses, all of which – more or less frequently – they seem to use. In addition, signers seem to have and to take the opportunity to use different signs, expressions, and movements at the very same time when hesitating and trying to hold the floor. It should also be noted that the items taken from Baker's (1977) study are among those that are perceived as being used most frequently.

Gender differences in the perception of hesitation pauses

A further objective of my investigation was to determine whether there are gender differences in the perception of the use of various signs indicating hesitation. Table 2 shows that there is an obvious trend for men and women to perceive themselves as different sign users when filling hesitation pauses. Men think they use the signs or gestures 'open five, rotating with one hand', 'open five, rotating with both hands', 'color sign on the mouth', 'looking away from the addressee', 'keeping the hands in the signing space' and 'furrowing brow' less frequently than women think they do. In general, men seem to believe that they use whatever given filler less frequently than women believe they do.

Table 2. Gender differences in sign use perception for hesitation pauses

Signs for hesitation pauses	22 Male Signers		13 Female signers	
	used frequently	used infrequently	used frequently	used infrequently
1. Repetitions of last sign or signs	68%	32%	61.5%	38.5%
2. Open five, rotating with one hand	50%	50%	92%	8%
3. Open five, rotating with both hands	32%	68%	61.5%	38.5%
4. Color sign on the mouth	36%	64%	61.5%	38.5%
5. Looking away from the addressee	45%	55%	92%	8%
6. Keeping hands in the signing space	55%	45%	85%	15%
7. Looking up	50%	50%	61.5%	38.5%
8. Furrowing brow	68%	32%	92%	8%
9. Postural shift	64%	36%	85%	15%

I can only speculate about the reasons for this different perception in male and female signers. First of all, I do not think that this is a very surprising result, since hearing men and women also perceive themselves as different users of language (cf. Coates 1993). The common view in our society is that the female conversational style is characterized by, among other things, insecurity and tentativeness. Whereas empirical research does not support these stereotypes (cf. Coates 1993), other studies do confirm that women and men perceive women's speech as hesitant, tentative, and insecure (Fishman 1980; Coates 1993). It is quite likely that the male participants in my study think that frequent use of these pause fillers indicates that they hesitate frequently, that their conversational style consequently is insecure and hesitant, or even that they themselves are poor language users. Furthermore, although I am convinced that signers, just like speakers, know what signals they send an addressee when hesitating in a conversation, I also believe that signers (or speakers) are not necessarily completely accurate in their recollection of the *frequency* in use of the different hesitation signs. Men may be more (or less) successful than women in retrieving that information from their memory while answering the questionnaire. In addition, we should also consider the possibility that there is a different understanding and/or use of words/signs like 'often', 'sometimes,' and 'seldom' in men and women. Moreover, the observed trend could also be due to chance, such that a larger number of participants would reveal a different picture altogether. Finally, results from gendered studies of hesitations and other self-repair strategies employed in spoken conversations may complete the picture and help with the interpretation of this particular finding.

Regarding spoken conversations, researchers have only recently started to investigate whether women and men use different self-repair strategies, such as hesitation pause fillers. Shriberg (1994) found that men use more quasi-lexical fillers (such as *uh* and *uhm*) than do women, and Lickley (1994) reports that men produce more self-repairs in general than women do. According to Bortfeld, Leon, Bloom, Schober, and Brennan (1999), men use more self-repairs, especially more quasi-lexical fillers than do women, while Branigan, Lickley and McKelvie (1999) assert that women use more self-repairs than do men, when they cannot see their addressee. Rieger (1999, 2000) found that most of her male subjects used more quasi-lexical fillers than other fillers (such as lexical fillers, like *you know*, or non-

lexical fillers, like lengthened sounds), while most female subjects display the reverse pattern. This also means that men use significantly more quasi-lexical fillers than women do, and that women employ significantly more lexical fillers than do men. The total number of self-repairs employed was found to be affected, too: men make use of significantly more self-repairs than women do.

All these studies have one common characteristic; they investigate the speech of few subjects, and generalizations of their results are premature. Furthermore, it remains uncertain whether the gender of the speaker is indeed the main factor responsible for this variation in the usage of hesitations and other self-repairs. Other, non-isolated factors such as age, status, relationship with the addressee, or any other factor, as well as the interaction of these and other factors might be responsible for the differences in self-repair strategies. In any case, further research is required not only to confirm these findings, but also to explore possible reasons for such a gender-preferential variance.

On the other hand, it has to be stressed that the initial findings on spoken self-repair do not contradict, but rather confirm or complement each other. They would, however, contradict the fact (which remains to be investigated) that male signers use less fillers than female signers, just as male speakers seem to use more fillers than female speakers. Even so, contradictory results in the field of gender studies are not rare.

Over the past twenty-five years, many studies have explored gender differences and language usage (cf. Freed 1999), and they have often yielded contradictory results. These contradictions are in part, but not exclusively, due to differences in the design of these studies. Contradictory results are not surprising to all scholars. They are surprising to those researchers who assume that sex or gender is a non-linguistic factor that has a *uniform* effect on language usage; among the latter are Tannen (1986, 1990, 1994) as well as Coates, who is convinced 'that women and men do pursue different interactive styles' (1993:139).

Contradictory findings come as no surprise to those researchers who are not convinced that women and men employ different conversational styles and who believe that gender is only one factor among many that influence language usage, and not necessarily in a uniform manner. Many other factors also affect language production, interacting with each other in complex ways; this makes

it impossible to isolate just one factor and to designate it as the one responsible for a particular phenomenon of language production. 'Gender, like ethnicity and class and indeed age, is a social construction and may enter into any of a variety of interactions with other social phenomena,' writes Eckert (1989:253); Branigan, Lickley, and McKelvie (1999), having described the interaction between two non-linguistic factors, of which the one is gender, agree.

This excursion, however interesting and educative, does not allow us to make any further conjectures on whether there are indeed gender differences in the filling of hesitation pauses in signed conversations. Thus far, we can only assume that there are gender differences in the perception of these fillers. Certainly, many questions remain that make it worthwhile to undertake further studies, in order to determine whether female and male signers as well as speakers do indeed adopt different communicative behavior when hesitating in a conversation.

Conclusion

The simplest conclusion which can be drawn from the reported results is that in American Sign Language conversation, hesitation pauses occur and that signers do have strategies to hold the floor in such occurrences. This conclusion seems to be supported by the use of the signs and gestures observed by Baker (1977), which does not appear to be optional, but in fact seems to happen regularly; at least, signers perceive themselves as regular users of signs, gestures, and body postures in holding the floor. In addition, there are many more signs, facial expressions, and body movements that ASL signers say they use to fill hesitation pauses; also, they believe they use several signs in combination.

However, this study does not reveal which signs are actually used in communicative events, which ones are used most frequently, or even which ones are part of a local or just individual register. Likewise, while men and women seem to perceive themselves as different sign users, this study gives us no opportunity to decide whether they actually use fillers of hesitation pauses in a different way. Evidence from spoken discourse suggests that women and men fill hesitation pauses differently, but these findings do not allow conclusions about signed fillers. Thus, the taping and analyzing of

ASL conversations should be a step towards a better and more profound understanding of hesitation pauses. The results of such studies will provide much needed information for second language learners and interpreters, so as to make them more effective ASL users.

As the recognition of American Sign Language and other sign languages as proper languages becomes more widespread and the grammatical structure of sign languages becomes better understood by linguists all over the world, it will be of great interest to turn to the communicative aspects of this language and focus on areas such as ASL conversation and discourse structure. I am convinced that such research will give us a more complete knowledge not only about sign languages, but about conversational strategies and language in general as well.

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Notes

1. The author wishes to thank Gary D. Prideaux and two anonymous reviewers for their helpful commentary on previous drafts of this paper.
2. These utterances are not only used to fill hesitation pauses. They may be used in different contexts to fulfill different functions, such as back-channeling for instance (cf. Owen 1981; Rieger 2000).
3. All participants use ASL as their first language, although they are not exclusively native speakers.
4. I would like to thank Donna Korpiniski for all her assistance in this study.

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Appendix A: Questionnaire

Age: ____ years
 Sex: female male

I consider my competence in ASL: fluent adequate marginal
 Which of the following signs, facial expressions and body positions do you adopt when hesitating in a conversation:

	often	sometimes	seldom	never
1. Repetitions of your last sign or signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Open five, rotating with one hand	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Open five, rotating with both hands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Color sign on the mouth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Looking away from the addressee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Keeping your hands in the signing space	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Looking up	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Furrowing brow	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Postural shift	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Other, please specify: _____

11. Do you use combinations of the above to fill hesitation pauses? If so which ones (eg. No 1, 3, 7 etc.) and how often?

	often	sometimes	seldom
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B

Answers to question 10

The number in brackets indicates how often the item has been chosen.

looking down (3)	holding one (3)	two hands surf (1)
stroking beard on chin: (1)	snapping (1)	considering with motion (1)
gesture (1)	facial expression (1)	sound (1)
lip movement (1)	expanding signs (1)	sign for pausing (1)
clear big expression (1)	starring (1)	what do (1)
sign umm (1)	one hand 'wait' palm down (1)	

Answers to question 11

The number in brackets indicates how often the item has been chosen.

2, looking down (3)	2, 5 (2)	2, 9 (2)
5, 6, 8 (2)	2, 7 (2)	1, 6 (1)
1, 8 (1)	1, 3, 7 (1)	1, 5, 7 (1)
1, 9 (1)	2, 3 (1)	2, 8, 9 (1)
3, 6 (1)	3, 8 (1)	3, 5, 8 (1)
3, 5, 7, 8 (1)	4, 9 (1)	5, 8 (1)
5, 7, 9 (1)	6, 7 (1)	6, 8 (1)
1, starring (1)	2, 5 or looking down, holding one (1)	
5, 6, 8, looking down (1)	5, 8, 9, one hand 'wait' palm down (1)	
5, 6, holding one (1)	7, stroking beard on chin (1)	