

Repairing the common ground in a joint ASL narrative: A mental space approach

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ABSTRACT. Traditional explanations of conversational repair point to trouble spots in the words of a piece of discourse that speakers need to fix. In this paper mental spaces representations of the common ground in a signing dyad and between the signers and the audience are used to examine repairs in an ASL joint narrative. Repair sequences occur when the signers recognize a discrepancy in their mental space representation of the common ground between themselves or between the signers and the audience.

Keywords: ASL, cognitive linguistics, common ground, discourse analysis, joint narrative, mental spaces, repair

1. INTRODUCTION

1.1. REPAIR. Conversational repairs have been examined by many researchers over the last several decades, looking at such things as the structure of repair (e.g. Schegloff, Jefferson & Sacks 1977; Schegloff 2000; Svennevig 2008), ways it is used by children (e.g. Konefal & Fokes 1984, Salonen & Laakso 2009), and pragmatic uses of repair (e.g. Liebscher & Dailey-O’Cain 2003). However, the question of motivation behind a repair has been largely unaddressed, with researchers simply referring to ‘trouble spots’ in the discourse.

The traditional analysis of repair is that when either a speaker or a listener detects trouble in speech, they move to repair that trouble, usually in the same or the next turn (Schegloff, Jefferson & Sacks 1977). In most cases the speaker initiates the repair (self-initiated repair). The speaker can then complete the repair (self-completed repair), perhaps without the trouble ever being detected by a listener (e.g. revising word choice without altering the flow of signing), or the listener may complete it (other-completed repair). Other times a listener will bring attention to the trouble, usually on the next turn (other-initiated repair) and either repair it (other-completed repair) or allow the speaker to repair it (self-completed repair).

Clark (1996:153) describes four levels of contribution included in an utterance, any one of which can be implicated as a trouble source in the case of a repair.

- Level 1 is EXECUTION AND ATTENTION, making the sounds or motions involved in forming words, signs, and gestures, and seeing or hearing them. Trouble at this level would involve failure of the speaker or signer to articulate properly or, on the part of the interlocutor, to accurately see or hear.
- Level 2 is PRESENTATION AND IDENTIFICATION, saying or signing the utterance as an utterance, and recognizing the words or signs. Trouble at level 2 might involve misstating or not recognizing the utterance as an utterance.
- Level 3 is SIGNALING AND RECOGNITION, or MEANING AND UNDERSTANDING. Trouble at level 3 involves problems with understanding the meaning of the utterance.
- Level 4 is PROPOSAL AND CONSIDERATION of joint projects, which can be small (asking and answering a question) or large (moving to another city). Trouble at this level would involve the interlocutors having different goals.

Recognizing the source of trouble can be difficult, especially in self-repairs or when an utterance is aborted and a new utterance is presented in its place. This difficulty has been noted (Schegloff, Jefferson & Sacks 1977:363), saying that, ‘In view of the point about repair being initiated with no apparent error, it appears that nothing is, in principle, excludable from the class “repairable”.’

1.2. COMMON GROUND. Common ground is a concept that has sometimes been given different nomenclature such as COMMON KNOWLEDGE, MUTUAL KNOWLEDGE, or JOINT KNOWLEDGE (Clark 1996:93). It refers to the shared knowledge that exists between two people, which they understand to be shared. Common ground is built up between two people as they have shared experiences, which include both shared real-life experiences and shared descriptions of things that have happened when they were separate. If two people both know something but neither has reason to believe that the other knows it, it is not counted as common ground. Similarly, one can be mistaken as to what is in the common ground and believe that something is common ground when it is not. Sometimes these differences go undetected, and sometimes they become apparent during a piece of discourse.

In a conversation, each piece of information is presented as a potential addition to the common ground and must be accepted by the other participant before it is considered part of the common ground (Clark & Schaefer 1989). This ACCEPTANCE can be tacit, consisting of continued attention, or explicit, with the interlocutor verbally agreeing with the information, or somewhere in between.

A joint narrative has implications in looking at common ground because it necessitates reference to several different common grounds. When a single speaker produces a narrative the common ground is between the speaker and the listener. In a joint narrative we need to consider the common ground between the two speakers as well as between each speaker and the listener. If, for instance, two friends are telling another friend about an experience they had, one speaker might well turn to the listener and reference common ground between the two of them that is not shared with the other speaker.

1.3. MENTAL SPACES. According to Fauconnier’s (1994) theory of mental spaces, speakers and listeners construct mental spaces that each contain their conceptualization of the reality for a different situation. Mental spaces can be constructed for times, places, domains (game, field of science, type of literature, etc.) (1994:31) or hypothetical situations.

An essential feature of mental spaces is that elements in a person’s various mental spaces can represent the same person or thing and can be connected using the IDENTIFICATION (ID) PRINCIPLE, which states that if two elements of mental spaces are linked by a pragmatic function, a description of one may be used to identify the other (Fauconnier 1994:3). Pragmatic functions include such things as links between persons and names or persons and information about them. The ID Principle is important in that it links corresponding items in different mental spaces so that they can be discussed as single entities.

2. DATA. This study presents an analysis of the common ground construction and repairs in the joint narrative of a Deaf¹ couple introducing themselves and their family and telling of the birth of their first child (RSA Region V Project 2003). This video is part of a series of videos to train ASL-English interpreters for working in medical situations. The video of the Bartons² was separated into pieces, one for each individual introduction, one for the family introduction, and

one for the birth story of each of their five children. Despite this separation, there is contextual evidence in the segments to indicate that they were recorded in the order presented.

The joint project the Bartons undertake in this video is to provide information for interpreters so they will be better prepared to interpret for a childbirth. They complete this project by telling their story in great detail. The combined time of the eight video segments is 39:17, and the segment devoted to the story of the birth of their first child is the longest at 12:19. Both signers seem to be very willing to initiate repairs and to add information to the narrative, making this video appropriate for looking at the construction of mental spaces and their states at the time of repairs.

The video showed both signers simultaneously, making it possible to see when attention was being paid to the other signer. This is crucial for determining that each utterance was accepted into the common ground by the other signer because the extended turns of the narrative mean that explicit acceptance is rarely given. For long stretches of the narrative, continued attention is the only acceptance given.

The only common ground that is assumed to exist with the viewer at the beginning of the narrative is a knowledge of American Sign Language and general cultural background. The common ground between the signers and the viewer is built up as the narrative progresses. There is no separate common ground between the viewer and the individual signers, as the signers work together throughout the video to build up the common ground with the viewer.

The common ground between the signers is considerably more extensive, as they have been married for nine years and have five children, and they are telling the story of the birth of one of their children, an event they were both intimately involved in. However, some discrepancies arise involving the common ground between the signers, and these are the focus of repairs.

3. HOW COMMON GROUND IS CONCEPTUALIZED. Over the course of the joint narrative a variety of mental spaces are built and used by the signers. I will focus on five mental spaces for each signer: reality; a discourse space; an intention space; and two common ground spaces, one representing that person's common ground with their spouse and the other representing the couple's common ground with the viewers. The sequence and use of these spaces was developed by William Croft in a seminar entitled *Mental Spaces and Discourse*, taught in 2011 at the University of New Mexico (UNM).

3.1. REALITY SPACE. The most basic mental space is the REALITY mental space. For the signers, the Reality mental space includes the two of them, the set, and the camera, as well as the camera crew or any others who may have been in the room (see Figure 1). While each signer has a separate mental representation of reality, I will present a single schematic representation to limit the size and complexity of the figures. The camera (C) represents both the camera and, from the viewpoint of the signers, the generic viewer. For the viewer, Reality space involves the situation in which they are viewing the video (classroom, computer, projector, other students, or whatever may be present) as well as the contents of the video.

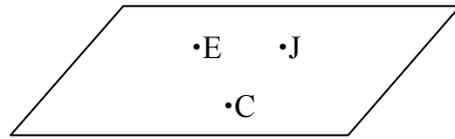


FIGURE 1. Reality space for the signers. Camera crew and any other people present at the filming are not included as they are not referenced and they may or may not be present.

3.2. DISCOURSE SPACE. The next mental space is the DISCOURSE SPACE. Each signer has a separate mental representation of what is being said (M_E and M_J) and I show these spaces separately, as in Figure 2. Each discourse space includes an INTENTION SPACE (I) so that not only what is being said but also the intended meaning is represented. Each of the initials repeated in the successive mental spaces should be connected by the ID Principle, as each represents the same person or entity in the successive spaces. For the sake of simplifying the diagrams these connections are omitted in the diagrams in this paper.

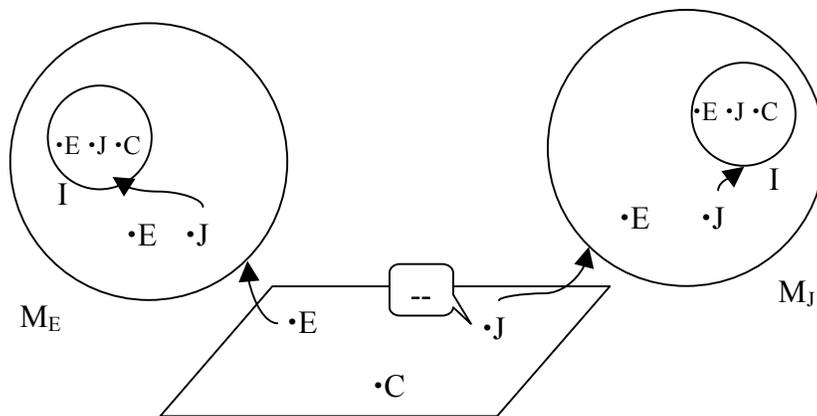


FIGURE 2. Reality space plus the discourse and intention spaces for the two signers.

3.3. COMMON GROUND SPACES. Finally, four different COMMON GROUND SPACES are used in the diagrams (see Figure 3). Each signer has a mental representation of the common ground they have with their spouse and also a mental representation of the common ground the couple has with the viewers. The common ground they have with each other is extensive and long-standing, though it increases with the making of this video. The making of the video itself increases the common ground between them, and some new information is shared in the video that does not seem to have been in their common ground previously.

Since discrepancies can arise between the speakers as to what is in the common ground, each signer's representation will be shown in my diagrams, with separate spaces for their common ground with each other (CG_{EJ} —the common ground between Elaine and John) and the common ground with the viewer (CG_{EJC} —the common ground among Elaine, John, and the audience (represented by the camera)).

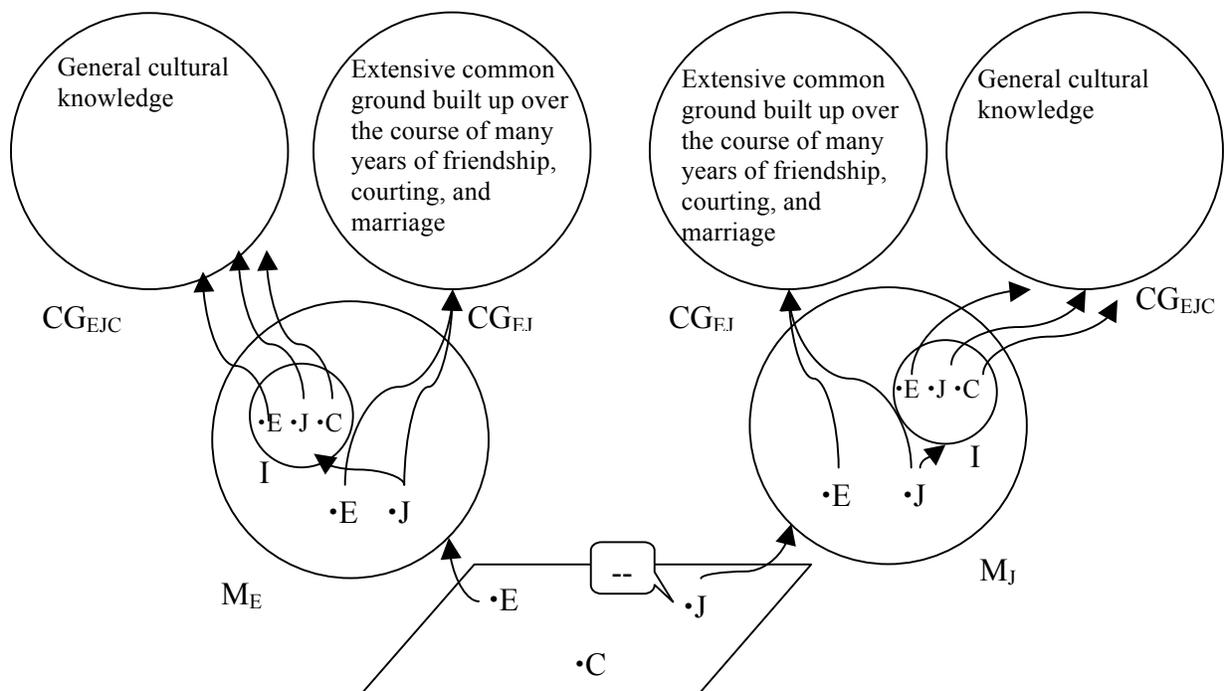


FIGURE 3. The mental space diagram at the beginning of the video.

3.4. ESTABLISHING COMMON GROUND: INTRODUCTIONS. The first two segments of the video involve the couple introducing themselves. First John Barton introduces himself, giving, as is traditional in Deaf introductions, the hearing status of his family and also naming the different places he's lived. These facts are added to the common ground without dispute. All this information seems to already be in the common ground between Elaine and John, given Elaine's attention and lack of surprise as he introduces himself. Figure 4 shows the status of the common ground as it exists after John's introduction. The information is the same in the representations of all four common grounds. While Elaine and John have considerably more than this in their common ground, that other knowledge is not in focus and most of it is not pertinent to the current joint project.

4. REPAIRS. In the course of the narrative a number of repairs occur, illustrating several different common-ground-based motivations.

4.1. GETTING THE IMPORTANT STUFF RIGHT: FAMILY INTRODUCTIONS. There is an interesting juxtaposition in this video because John and Elaine each introduce their children. John's introduction is split off as a separate segment of the video, and Elaine's introduction appears at the beginning of the long segment that is mostly taken up with the birth of their eldest child.

Lists of children are a structured piece of discourse in ASL. The non-dominant hand forms a LIST BUOY (Liddell 2003:223–242) with the number of fingers extended matching the number of children. The dominant hand then touches each finger in turn, with the top finger representing the oldest child and the bottom representing the youngest, and after touching the corresponding finger, gives information about that child. This information typically includes the child's name, name-sign, age, hearing status, gender, and any other information the parent

wishes to include. As we'll see in these introductions, there is a fair amount of leeway in the information included, but the form of the introduction is strongly present.

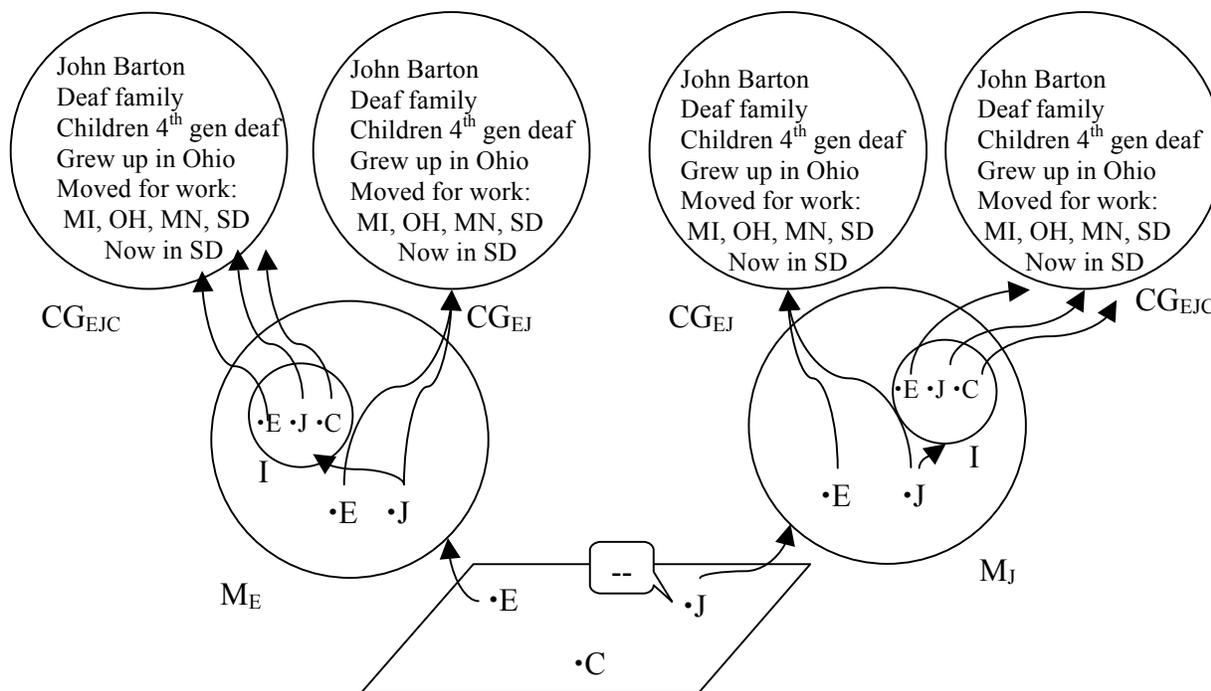


FIGURE 5. Common Ground after John's introduction.

John's introduction of the children is given in its entirety in 1. For the first two children he gives their ages, names, and name-signs, then when he gets to the third child he realizes he hasn't given their hearing statuses so he goes back to add them (and forgets to add it for the subsequent children). For the fourth child (line 6) he puts her hearing status where he had put the name-signs of the older children. Elaine senses the tension of his introduction not matching the expectation she has for the framework of these additions to CG_{EJC} , and she gives Ernestine's name-sign while John tells her hearing status. It isn't clear whether she is trying to prompt him or if she doesn't expect him to see. In any case, John isn't watching her and her contribution passes unaccepted and unacknowledged. However, we can see in Figure 5 the framework expected for the addition of new information to the common ground. Because he gave the first three children's information in the same order, Elaine (and the viewers) expected that he would continue in the same pattern. John, however, did not necessarily have the same expectation and in this case switched the order of the last two elements.

(1) JB: O-K 5-LIST-1 EIGHT NAME E-S-T-H-E-R ESTHER-NAME-SIGN³
 OK. Of our five children, the oldest is eight and is named Esther.

JB: 5-LIST-2 AGE-SIX J-O-H-N-N-Y P-A-L SUMMARY NAME J-P
 Our second child is six years old. Johnny Pal--we call him JP for short.

- JB: 5-LIST-3 OH 5-LIST-2 DEAF 5-LIST-1 DEAF
 Our third child, oh wait, our second child is deaf, and our oldest child is deaf.
- JB: 5-LIST-3 THREE AGE-FOUR 5-LIST-3 E-M-I-L-Y EMILY-NAME-SIGN
 Our third child is three, four years old, Emily.
- JB: 5-LIST-4 E- AGE-TWO TWO WILL AGE-THREE 2-MONTHS E-R-N-E-S-T-I-N-E
 Our fourth child is E-, two years old, two, will be three in two months, Ernestine.
- (0.5)
- JB: [HEARING ONE] ERNESTINE-NAME-SIGN 5-LIST-4
 That child is hearing--Ernestine.
- EB:[ERNESTINE-NAME-SIGN]
 Ernestine
- JB: 5-LIST-5 J-A-S-O-N JASON-NAME-SIGN BOY AGE-ONE FOURTEEN MONTHS
 Our youngest child is Jason, a boy. He's one year old, actually 14 months.

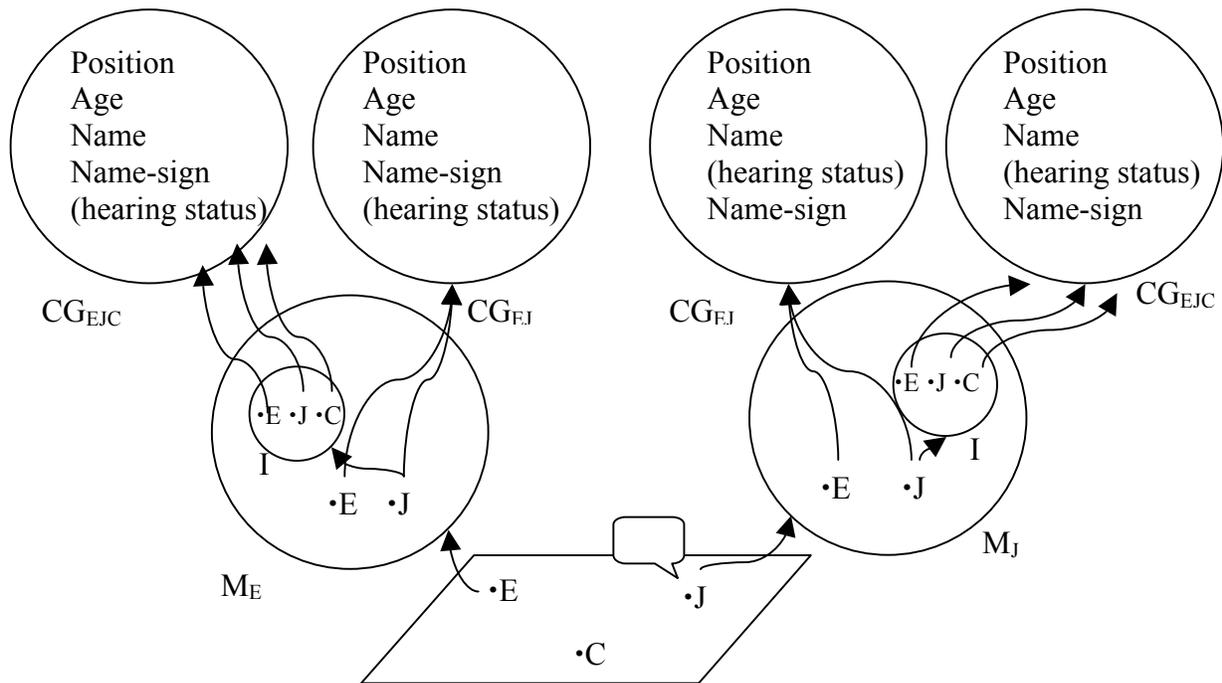


FIGURE 5. Expected form of introduction.

Elaine also introduces the children, but she does not need to give the information supplied by John, since that has already been placed in the CG_{EJC}. Her introduction, given in 2, is a different implementation of the listing structure, in that she discusses them in groups. She starts with the age range, then groups them by hearing status, then by gender.

(2) EB: TWO-OF-US HAVE FIVE CHILDREN

‘We have five children.’

EB: 5-LIST-1 EIGHT 5-LIST-1 5-LIST-5 AGE-ONE

‘The oldest is eight and the youngest is one.’

EB: NOW 5-LIST-ALL 5-LIST-1-2-3-5 DEAF 5-LIST-4 HEARING

‘Now, of all our children, numbers 1, 2, 3, and 5 are deaf, and number 4 is hearing.’

EB: 5-LIST-4 GIRL

‘She’s a girl.’

→ EB: HAVE THREE GIRLS 5-LIST-1 5-LIST-2 5-LIST-4 TWO BOYS 5-LIST-3 5-LIST-5

‘We have three girls, numbers 1, 2, and 4, and two boys, numbers 3 and 5.’

JB: WHOA HAVE CLEAR MISTAKE

‘Wait a minute, we obviously have a mistake here!’

EB: [O-O-P-S]

‘Oops!’

→ JB: [5-LIST-2] BOY 5-LIST-4 5-LIST-5 BOY

‘Number 2 is a boy, and number 4, no 5, is a boy.’

JB: LOSE COUNT O-K

‘You lost count; that’s ok.’

It’s at this point that trouble appears, as she makes a mistake in saying which children are boys and he jumps in to repair the error. Other-repair is overwhelmingly initiated in the turn following the error (Schegloff, Jefferson, & Sacks 1977:367), and that is the position in which it occurs here. Even though there are no regular turns being employed at this point in the discourse, he initiates the repair at the end of her prosodic unit, the place where a turn would normally be taken in conversation. In line 7 of 2 Elaine acknowledges her error, but he is not looking and her ‘oops’ goes unaccepted, and she allows him to complete the repair. The common ground at the point just before he initiates repair is shown in Figure 6.

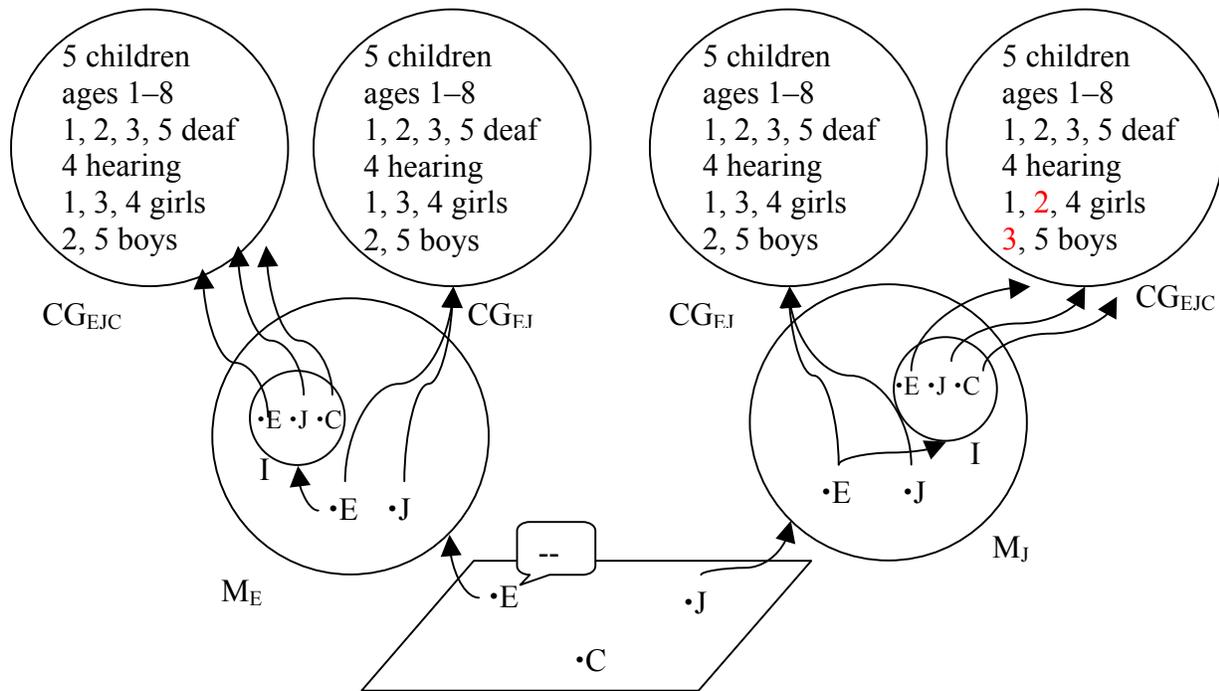


FIGURE 6. Common Ground at the point of repair.

As far as Elaine knows at this point she has communicated accurate information about her children. And there is no doubt that John believes Elaine knows which of her children are girls and which are boys, but he recognizes a discrepancy in the common ground with the unseen audience C, so he makes the repair.

It is interesting that each signer initiated some level of repair when the other was introducing the children. There is evidently some level of anxiety that this information be added properly to the common ground.

4.2. ‘NO-FAULT’ REPAIRS. Schegloff, Jefferson, and Sacks (1977:363) point out that sometimes ‘repair [is] initiated with no apparent error,’ such as replacing a word with a synonym or aborting a phrase and restarting with a different phrase, as in 3. Because of this, they say that ‘it appears that nothing is, in principle, excludable from the class “repairable”.’ However, I propose that the trouble is not something that is present in speech, but rather arises in the mental representations of the common ground between the speakers or between the speakers and other listeners.

(3) PRO-1 FINE
that was fine with me

PAR-- YOUNG COME-ON
Par-- We were young and just said Oh, come on!

In 3, Elaine starts to sign PART but stops and changes to YOUNG. She may have been going to sign something along the lines of ‘Part of the reason...’ or something like that but

realized that that wasn't what she wanted to put into the common ground. This discrepancy led to a change in what she was signing.

4.3. TELLING A PARALLEL TRACK OF THE STORY. The most common situation where overlaps and interruptions occurred in this narrative were times when there were several things going on at the same time in the story, and each partner had a different part they want to emphasize. In 4 we see Elaine talking about getting ready for the induction of labor. She tells of her excitement, getting the injection, and then waiting. John jumps in on line 2 with a description of his readiness and the time passing while Elaine continues to emphasize the waiting. Then he starts talking about the Lamaze breathing, which had slipped from her focus in her memory of the event, as evidenced by her remark on line 10.

(4) EB: HAVE INJECTION [WAIT]

'I got the injection, then we waited.'

→ JB: [READY DRESSED CLEAN] HANDS READY STRETCHING
'I was ready, got the scrubs on, scrubbed my hands.'

JB: ENERGY READY
'Feeling lots of energy, really ready'

JB: MORNING BECOME AFTERNOON
'Then morning turned into afternoon'

JB: READY STRETCHING
'We were still ready.'

→ EB: [PRO-1 WAIT]
'I waited.'

JB: [UNEXPECTED] #DO HAPPEN [WHAT WHAT NOTHING WHAT]
'Unexpectedly, nothing happened.'

EB: [WAIT TWENTY H-O-U-R-S]
'I waited twenty hours!'

→ JB: NOT-YET TWO-INDIVIDUALS-FACING-EACH-OTHER [BREATHE]
'Nothing yet, but we started breathing.'

→ EB: [PRO-JB BREATHING RIGHT PRO-JB]
'Oh yeah, breathing, right'

JB: PRO-EB NOT-YET++ WAIT COME-ON WRONG
'You were saying, "Not yet, come on. What's wrong?"'

In this situation it is not so much a discrepancy of content among the common ground mental spaces that is an issue, but rather a discrepancy of focus, as illustrated in Figure 7. I have highlighted the focus information for each speaker and placed Elaine's memory of breathing in parentheses to show its very low focus level. The CG_{EJC} spaces are shown as at the end of 4.

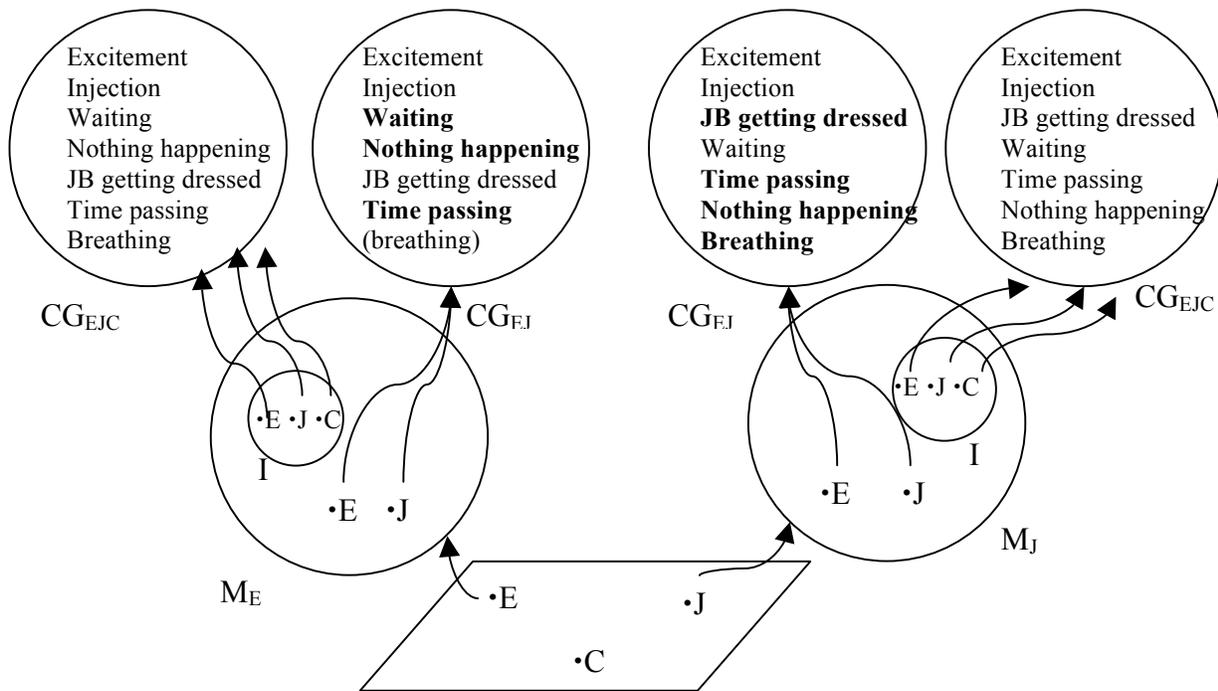


FIGURE 7. Different focus information.

In this passage, no speech error or misstatement of fact has been made. However, there is tension in the common ground that needs to be resolved. This resolution is achieved by the spontaneous offering of additional details, either in turn or by co-speaking or interrupting.

5. CONCLUSION. There are many configurations in which common grounds can exhibit discrepancies. In the narrative I have looked at here we have seen discrepancies in expected frameworks, in the common ground shared with the viewer but not with each other, in the common ground shared with each other, and in focus elements. Each time repair has been initiated by the party who experienced a discrepancy between their representations of CG_{EJ} and CG_{EJC} at the time the discrepancy became apparent. The tension involved in having differences between the two common grounds is resolved through repair.

The ability to represent common grounds in a mental space framework allows us to see these discrepancies at the cognitive level where they cause tension that the speaker feels the need to resolve. Past discussions of repair have looked only at the surface manifestations and have been unable to account for some repairs where the trouble is not an actual error. However, this model shows the motivation behind all repair as the desire to resolve discrepancies in the common ground.

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NOTES

¹ I follow the standard convention of using deaf to refer to people who have the physical condition of deafness and Deaf to indicate those who are culturally Deaf.

² The names of the speakers have been changed to preserve their privacy.

³ GLOSSING CONVENTIONS:

NAME	An uppercase English word identifies a single ASL sign.
GROW-UP	Uppercase English words separated by hyphens also represent a single sign.
O-H-I-O	Single letters separated by hyphens indicate fingerspelled words.
SAME ^{→JB}	^{→x} indicates that the sign is directed toward entity x, in this case JB.
5-LIST-2	The first number indicates the number of fingers in a list buoy, the second the finger selected
NOT-YET++	+ indicates a reduplication of a sign, which can signify plurality of nouns or intensification.

