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LOOK WHO'S TALKING

Turn taking in sign language interpreted interaction.

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“I don't get it. I just don't get it. And, I don't like it. Where'd I go wrong?”

(Mikey in ‘Look who’s talking’, 1989)

More than once these words expressed the way I felt. And always someone was there to structure my thinking, to get me a coffee, to let me explain what was bothering me, to read my work (again), to make me a dinner, to get me on the right track again, to give me a pep-talk or a combination of those acts of encouragement. Combined with my own passion for being a sign language interpreter and some persistence, I managed to make it this far. Nevertheless, the interest, help and sympathy of my supporters (in every sense of the word), inspired and motivated me to keep on going and as a result of years of hard work and being stimulated, this final work was written. Even though I never could have foreseen I would finish an MA study, I enjoyed all steps along the road. I found myself becoming interested in science and have been developing my academic skills. My knowledge is extended and my reflective skills have improved. Now is the time to thank the people who helped me to make this progression.

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Introduction

When people are in interaction they organize the flow of their conversation unconsciously. Somehow, they know when to take a turn or how to keep a turn once started, based on unwritten conventions that are part of their cultures (e.g. Appel et al., 2002; Mesthrie, 2000). This is not only true for spoken languages, but also for signed languages (e.g. Johnston & Schembri, 2007; Baker & Van den Bogaerde, 2008). Even in interpreted situations, participants may feel that they are in interaction with each other, that they exchange turns with each other, while in fact they exchange turns with the interpreter (Metzger, 1999; Roy, 2000; Van Herreweghe, 2002; Wadensjö, 2002; Gavioli & Baraldi, 2011). From the literature it does not become clear whether the interpreter herself is fully aware of this fact during an assignment (e.g. while interpreting). Because of the unawareness of the interpreter, she may disregard opportunities to consciously improve the smooth interaction between the participants or she may not recognise hitches that arise in the interaction (whether or not caused by her presence). Until now, few studies focussed on the turn taking processes in interpreted situations on a linguistic level, let alone studies concerning signed interpreted situations. This study tries to adapt to this niche of knowledge.

Even though the general idea (and the general feeling) in interpreted situations is that participants interact directly with each other (Roy, 2000), in fact the participants mainly exchange turns with the interpreter, since they do not speak each other's languages (Metzger, 1999; Roy, 2000; Van Herreweghe, 2002; Wadensjö, 2002; Gavioli & Baraldi, 2011). The interpreter is the only one in an interpreted situation who understands all that is said (or signed) and as such she may have influence on the interaction (which may be positive or negative). Moreover, her main role is said to be to translate, at least on an propositional-linguistic level. Literature in sign language interpreting explores predominantly the role of a sign language interpreter as being more than just a translating machine, for example the cultures and language specific characteristics she needs to take into account while translating (e.g. Fishberg, 1990, Metzger, 1999; Roy, 2000; Napier, 2002; Wadensjö, 2002; Mindness, 2006). Until now, only few studies focussed on the interactional linguistics of an interpreted event, for example on discourse markers, prosodic features and turn taking. One can imagine that the presence of the interpreter influences the conversation

with regard to these features, and especially for interpreter training and education more knowledge concerning these topics is desirable.

In this study, the focal point will be the turn taking processes that take place in interpreted situations and the role of the interpreter in this type of interaction.

At first sight the primary role of an interpreter is to translate the utterance(s) from Speaker 1 (S_1) to Speaker 2 (S_2) and vice versa. Therefore, the turn taking model of Sacks, Schegloff & Jefferson (1974) may apply, that proposes that two participants (S_1 en S_2) exchange turns one by one (one at a time). Nevertheless, an interpreter is the only one who understands the turn exchange patterns of both languages and is thus the only one present who knows how the conversation runs. Besides that, an interpreter can consciously or unconsciously contribute to the conversation, for example by asking the participants to speak one at a time if they start talking at the same time (otherwise she cannot translate all what has been said by all participants) or by asking for clarification if she does not understand what one of the participants is saying/signing. As such, the interpreter seems to have a certain level of influence on the interaction between Speaker 1 and Speaker 2 through the turn taking processes. To this point, literature has not yet provided clarity on this issue. Therefore the main question that will be addressed in this thesis is:

What is the influence of a sign language interpreter
concerning turn taking in interpreted conversation?

In order to explore the background to this topic, the general concept of turn taking in spoken languages and signed languages will be discussed. There are several alternative ways in which people may exchange turns and thus construct, mostly unconsciously, their conversation in different ways. In this study, two models will be considered: the one-at-a-time model by Sacks, Schegloff & Jefferson (1974) and the collaborative-floor model by Coates (1997).

To answer the research question, three interpreted conversations were recorded, coded and analysed. The general turn taking patterns were assessed, but more specifically, the turn taking behaviour of the interpreter was investigated. Put differently: what does an interpreter *do* in turn taking processes (i.e. giving a turn/yielding the floor, keeping a turn/the floor and getting a turn/bid for the floor)?

In this thesis (similar to almost all literature concerning sign language (interpreting) and/or Deaf people), 'deaf people' -written with a small d- refers to deaf people who regard themselves as hearing people with a disability, while at the same time, deaf people who feel they are part of the Deaf Culture are referred to by 'Deaf people' -with a capitalized D- (e.g. Metzger, 1999; Van Herreweghe, 2002; Mindess, 2006; Baker et al., 2008; Napier et al., 2010). Furthermore, the convention is used to refer to interpreters using 'she' or 'her' taking into account that the majority of interpreters is female (Metzger, 1999; Wadensjö, 2002; Napier, 2002; Mindess, 2006) and although this is not true for spoken language interpreters, in this thesis all interpreters will be referred to as 'she'. Signers or speakers other than the interpreter will be referred to with 'he' to make a clear distinction between the interpreter and the participants. Additionally, 'participants' refer to the people in interaction who do not understand each other's language, thus not the interpreter.

The outline of this thesis is that in the first chapter a well-known model of turn taking will be discussed, which serves as the basic concept of turn taking. Secondly, a second model will be introduced, followed by a discussion of the applicability of those models to signed languages. Thirdly, a brief introduction on interpreting will be provided, subsequently focussing on turn taking in spoken interaction and finally on signed interaction. In the second chapter the methodology will be addressed, including a description of the recorded conversations, the classification system that was used, and the process of data analysis. In chapter three results will be presented in terms of conversational contributions and turn transitions. This thesis will come to a close in chapter four, with a summary of the findings, the discussion of the main conclusions, a critical reflection on the study and some suggestions for future research.

1. Theoretical background

In this first chapter, theory will be provided concerning turn taking in spoken interaction and in signed interaction. In section 1.2, a well-known theory of turn taking will be discussed, namely the 'one-at-a-time' model of Sacks, Schegloff & Jefferson (1974). After discussing the basic principles of this model, the applicability to signed interaction will be the focus of the next section (1.3).

A brief introduction on interpreting is given (section 1.4), later focussing on turn taking in interpreted spoken interaction (e.g. interpretation between two spoken languages, section 1.5) and finally concentrating on turn taking in interpreted signed interaction (e.g. interpretation between a spoken and a signed language, section 1.6).

1.1. Turn taking in spoken interaction: 'One-at-a-time' model

A model that is often mentioned in literature about turn taking is the model of Sacks, Schegloff & Jefferson (1974). This model concentrates on the question of how speakers organize sequences of talk in face-to-face interaction. It is applicable to different languages since it does neither focus on grammar nor on the meaning of the utterance, but strictly on the structure and organisation of the allocation of turns. The basic concept of this model is that in conversation only one person speaks at a time, which is why the model is also called the 'one-at-a-time' model. Overlap is regarded as an 'error' and in need of repair. However, Sacks et al. (1974) also provide occurrences of simultaneous speech that are not seen as errors. These principles and other characteristics of this model will be addressed in this paragraph.

When discussing turn taking, it is important to know what is considered 'a turn'. According to Sacks et al. (1974), a turn is a sequence with meaning: a unit-type. A unit-type may be a sentence, a clause, a phrase or a lexical construction, which indicates that a turn can be of any length. Sacks et al. (1974) state that a speaker is entitled to utter one unit-type when he gets a turn. The end of a turn is indicated with a Transition Relevant Place (TRP): a place where an utterance is potentially complete and where another participant might opt for the next turn. Non-verbal behaviour is said to be important in recognizing a TRP.

1.1.1. Rules for turn taking

Sacks et al. (1974) state that turn taking is based on a basic set of rules to govern turn construction, allocate the turn to another participant or to coordinate the transfer to minimize the gap and overlap:

1. If the turn-so-far is organized in such a way that the current speaker selects explicitly the next speaker, than the selected participant must take the next turn to speak, and no other speaker has the right (or obligation) to take the next turn.
2. If the turn-so-far is organized without the current speaker selecting another person, then he may (but need not) self-select for the next turn.
3. If the turn-so-far is organized without the current speaker selecting another person, then he may (but need not) continue, unless someone else self-selects.

According to Sacks et al. (1974), these stages take place at every TRP until a transfer takes place, thus causing the shift of speaker roles (e.g. from speaker to listener). These theoretical rules eliminate gap and overlap, because turn-transfers only happen at TRP's, when the speaker has finished his unit-type.

1.1.2. Turn Allocation

The allocation (e.g. switching) of turns is governed by the rules stated above. However, in everyday normal conversation there is no 'chairman of a conversation'; participants manage the conversation by themselves at the very moment they are interacting. Sacks et al. (1974) state that the one-at-a-time model is in the most optimal setting a system that is locally managed, party administered and interactionally controlled. The first characteristic refers to the fact that in conversation only the present turn, the turn transition and the next turn are dealt with, and "[…] all the operations are local." (Sacks et al., 1974: 725). Also the sequencing of turns (e.g. deciding how long a turn may take) is locally managed, allowing turn size and turn order to vary. The variability depends on the participants (by deciding when to get, keep or give the floor), referring to the second characteristic of the turn taking system of Sacks et al. (1974): the system is party administered. The last characteristic, the system being interactionally controlled, refers to the fact that

> "[…] it deals with the way in which the turn taking system, in its local-management, participant administered form, fits to conversational interaction, and is a specific adaptation of turn taking for it." (Sacks et al., 1974: 725)

This means that the turn as a unit is 'interactively determined'. Because of these characteristics, Sacks et al. (1974) state that the system is context-independent, thus independent of, for example, topics, settings, number of parties, etc. The techniques used in conversation to manage the turn taking are discussed in the following sub sections, respectively giving a turn/yielding the floor, keeping a turn/the floor and getting a turn/bid for the floor.

1.1.2.1. Giving a turn

In order to follow the rules stated above, Sacks et al. (1974) suggest that there are techniques to allocate turns. Concerning the first rule, one obvious way of selecting the next speaker is through uttering the first part of 'adjacency pairs 'or 'type of sequence' parts. By uttering such a 'first pair-part', the current speaker already imposes what should be done in the next turn. Examples of such pairs are question-answer pairs or a greeting-greeting design. However, it is not necessary for S_2 to react to the first-pair, he also may initiate another topic for example, neglecting the first pair-part, but still getting the next turn.

A way of getting re-selected is when a listener asks one-word questions to the current speaker. In example 1, Speaker 1 (Ben) makes a statement, speaker 2 (Lori) self-selects and asks a question, thus selecting speaker 1 (Ben) again. This is also referred to as a 'request for clarification'.

Example 1. Re-selection of S_1 by S_2 by asking a question.

Ben: They gotta- a garage sale.
Lori: Where.
Ben: On Third Avenue

(Schenkein: II:38, in: Sacks et al., 1974: 717, example 22)

Another way of selecting another person, but more importantly a way of de-selecting by the speaker himself, is by using a tag-question, like 'You know?', 'Don't you agree?', etc. Sacks et al. (1974) indicate tag-questions as 'exit techniques' for a turn. They state that this selecting-technique is only used when rule 2 is not applied, meaning no other speaker self-selects and the speaker did not have the intention at the beginning of his turn to select another speaker and thus did not form his utterance to select another speaker. This is radically different from turns that are constructed from the beginning to select another speaker (rule 1). Duncan (1972) refers to these 'exit techniques' as 'turn-yielding signals' and distinguishes six signals (which are often combined):

- Higher or lower pitch. Any other pitch than neutral/intermediate may be qualified as a regular turn yielding cue according to Duncan (1972).

  For Dutch Caspers (2000) found that only a drop of pitch caused a turn yielding effect, a high pitch is a turn keeping signal (see next paragraph).
- A drawl on the final syllable or final stressed syllable of a final clause.
- The termination of hand gestures. For example "the relaxation of a tensed hand position (e.g. a fist) during a turn." (Duncan, 1972: 287)
- The use of stereotyped expressions such as *you know, or something* and *but uh*, often following a substantive statement. Duncan (1972) refers to this phenomenon as 'trailing off'. He follows the definition of Bernstein (1962, in: Duncan 1972) that these expressions do not add information to the content of the conversation.
- A drop in loudness.
- Completion of a grammatical clause.

1.1.2.2. Keeping a turn

It may also be the case that a current speaker does not want to yield the floor, but to keep the turn he already has. Duncan (1972) states that if one or both hands of the active speaker (S_1) are engaged in gesticulation, the other participant did not attempt to take the floor. Self- and object adaptors (i.e. movements in which the hands come into contact with the speaker's own body (e.g. rubbing the chin, smoothing the hair, brushing off the pants leg, etc.) or action with the hands that does not have to with the conversation (e.g. maintaining a pipe), Ducan, 1972) are not part of turn keeping devices. Duncan remarks that not in all conversations gestures are involved and thus that this yielding signal is not applicable to all conversations.

For Dutch, turn keeping may be signalled by ending a turn with a high pitch intonation, which has the same physical features as a question but is not interpreted by the addressee as a question (Geluykens & Swerts, 1994; Caspers, 2000). Thus by ending a turn in a high pitch a speaker may keep his turn or at least signals that he wants to keep his turn.

Another device to prevent being interrupted is for a speaker to look away (break eye contact), even when he is silent. Cook (1977, in: Carroll, 2008) found that speakers were seldom interrupted if they looked away in conversation.

1.1.2.3. Getting a turn

With regard to the second rule (i.e. self-selecting) of Sacks et al. (1974), the way to select oneself is to simply start first. A listener will try to start as early as possible at the first upcoming TRP, while the current speaker (anticipating on this notion) tries to construct his turn in such a way that it is formed intact. To begin an utterance, often 'appositional beginnings' are used (e.g. well, but, and, so, etc). These 'turn-entry devices' can shift turns even though the speaker applying for the turn does not know yet how he wants to construct his utterance (e.g. whether he wants to select another speaker or whether he wants to start to tell a story, for example). Another feature of these devices is that, in overlap, they have no influence on the constructional development of the sentence the speaker starts to utter (Sacks et al., 1974). In short, one party talks at a time, at least…in the most optimal conversation setting. In the next paragraph instances of simultaneous speech will be accounted for.

1.1.3. Simultaneous speech

Often one person speaks at a time according to Sacks et al. (1974). However, also instances of two participants talking at the same moment occur. At the one side, Sacks and his colleagues (1974) state that overlapping talk in general is an error and needs to be repaired. On the other hand, they provide examples of natural speech that are not considered overlap or interruption. In the next paragraph this issue will be addressed.

1.1.3.1. Interruption or not?

It may occur that two speakers speak simultaneously. Sacks et al. (1974) provide a few possible explanations for the occurrence of this phenomenon. Firstly, people may simply start or react at the same time (at a TRP) (example 2).

Example 2. Simultaneous start.

Mike: I know who d' guy is.=
Vic: =[He's ba::d.
James: =[You know the gu:y?

(Frankel:67, in: Sacks et al., 1974: 707, example 3)

According to Roelofs-Borgers (1998), this overlap is quickly resolved because one of the speakers will cede his turn to the other speaker, resulting in a continuation of the conversation by one speaker who gets the floor. Secondly, people may project the possible

completion of the TRP, i.e. they are anticipating where a unit-type will end and start just before (within a syllable from the TRP) (example 3). Roelofs-Borgers (1998: 29) mentions that this phenomenon is known as 'quick uptake'.

Example 3. Quick uptake.

A: Well if you knew my argument why did you bother to a:[sk
B: [Because I'd like to defend my argument.

(Crandall:2-15-68:93, in: Sacks et al., 1974: 707, example 4)

Finally, speakers may add optional elements, for example terms of address and etiquette (example 4). Because of the positioning of the simultaneous speech at a TRP or at least within a syllable away form the TRP, these are not considered overlaps and thus are not regarded as errors in need of repair.

Example 4. Simultaneous speech because of address terms.

A: What's yer name again please [sir,
B: [F.T. Galloway.

(FD:IV:35, in: Sacks et al., 1974: 708, example 11)

All *other* instances of simultaneous speech are considered as 'interruption' and are in need of repair according to Sacks et al. (1974). Zimmerman & West (1975) agree on this definition, but provide a more concise definition:

> "An interruption in this context, then, is seen as penetrating the boundaries of a unit-type *prior* to the last lexical constituent that could define a possible terminal boundary of a unit-type." (p. 114, their italics)

Overlaps, in their view, are errors and occur when a speaker other than the current speaker starts to speak around a possible TRP (thus within the boundaries of the last word of a unit-type of the current speaker). Interruptions are seen as violation of the turn taking rules according to Sacks et al. (1974) and Zimmerman & West (1975).

1.1.3.2. Minimal responses

Instances of simultaneous speech that are not considered to be 'turns' or 'interruptions', are minimal responses (also referred to as, for example, 'interjections' (Abercrombie, 1968), 'backchannel signals' (Yngve, 1970, in: Fellegy, 1995 and in: Schriffin et al., 2001), 'response cries' (Goffman, 1978), 'continuers' (Schegloff, 1981; 2000); 'assent terms' (Woods, 1989)).

These are short utterances of non-active speaker(s) (thus non- S_1, i.e. S_2, S_3, etc.) with little or no meaning, uttered throughout streams of talk (often when the current speaker takes a breath) or at a TRP (Fishman, 1993). More specifically, minimal responses (MR's) occur overwhelmingly at phrase boundaries in predicates (94.6%) in a study on MR's done in American English conversations by Fellegy (1995). This indicates that MR's play an important role in the organisation of the conversation and thus in turn taking processes. They are seen as conversational support provided by listeners, to show their involvement in the conversation and to motivate the current speaker to continue speaking (Fishman, 1973; Zimmerman & West, 1975; Van Alphen, 1999; Ward & Tsukahara, 2000; Mesthrie et al., 2000). The provision of MR's is an important notion accounted for in this study later on.

Often in literature concerning MR's, nonverbal MR's like head nods, eyebrow raise, and changes of posture, are not taken into account, even though some scholars consider them MR's (Ward & Tsukahara, 2000). In this study, these nonverbal signals will be taken into account. Baker (2007) described cultural differences concerning turn taking, focussing on the fact that visual cues may influence turn taking. She provides insights from blind people, showing that in blind people (in her presentation: Dutch and Swedish people) turns in interaction are longer and fewer, which may be explained by the fact that blind people miss visual cues and thus continue their turn longer. This provides evidence that visual cues (head nods, eyebrow raise, etc.) do influence turn taking patterns executed in interaction. Kendon (1967) looked into such visual signals and found that the current speaker looks away when he starts a long utterance (in Kendon's study: an utterance longer than five seconds) and he looks at the addressee before he actually finishes speaking.

1.1.4 Pauses

Traditionally in linguistics, silence in conversation was regarded as the absence of speech. Other research areas (e.g. Anthropology) started investigating speech and silences: when is it deemed appropriate to speak and when should one be silent (Carroll, 2008). Tannen (1984) suggests that the tolerance towards silent sequences depends on (sub)culture (ways of speaking in groups) and on conversational styles (individual ways of speaking); she states that, for example, New Yorkers are very intolerant to silences and are more likely to start a conversation even with total strangers than other Americans would intend to do. Compared to Fins, however, also other Americans are intolerant to silences (Lehtonen & Sajavaara,

1985). In other words: 'slow' speakers (i.e. longer pauses) are considered 'slow' because they speak slower than the other speaker would expect. As Tannen (1984: 109) puts it:

> "[…] the most significant differences are those reflecting how much pause is deemed appropriate for a given function and in a given context. A pause becomes a silence, and a silence is negatively valued, when it is too long or appears at what seems like the wrong time and the wrong place."

In a later study, Tannen (2000) asserts a more general statement, saying that if two people in conversation have different assumptions about the proper length of a pause (i.e. what is a 'natural' pause between one speaker turn and the next), the conversation may become unbalanced. This means that participants may feel that it is hard to get a turn in conversation with this particular person, or the other participant may think that the length of the pause is too long, starting to talk in order to save the conversation.

Sacks et al. (1974) state that in conversation there are no gaps and there occurs no overlap (if it does happen, they state that participants need to repair the utterance(s) in order to let the conversation flow smoothly again). Heldner & Edlund (2010) provide evidence against the view of 'no-gap-no-overlap' and distinguish different types of silences in conversation: 'pauses' occur within the speech of one speaker and 'gap' and 'overlap' occur between speakers or at speaker change (i.e. turn allocation). For Dutch it has been found that pauses longer than 1 second between turns are rare and are considered unpleasant (Jansen, 1993, in: Roelofs-Borgers, 1998).

To sum up, the 'one-at-a-time' model of Sacks, Schegloff & Jefferson (1974) assumes that in optimal interaction one participant speaks at a time. Furthermore, they state that the participants manage the conversation and interaction on the spot with each other. Several devices used in spoken language concerning turn taking were discussed as well as instances of simultaneous speech. A model that is in many ways the counterpart of the model of Sacks et al. (1974), is the turn taking model of Coates (1997), which will be described in the next section.

1.2. Collaborative-floor model

A model that is proposed and investigated by Coates (1997) is called the collaborative-floor model. She states that turns are constructed between speakers (in her study this only occurs in all-women's conversations) and that they cooperate to form one whole turn, especially in

informal conversation. The main characteristic of this model is that 'overlap' does not exist, because all interlocutors share the floor. In fact, overlapping speech is a symbol of active participation of the interlocutors at the shared floor (Coates, 1997; Coates & Sutton-Spence, 2001). According to Coates (1997), it shows intimacy because of the jointly constructed turns based on shared knowledge (example 5)

Example 5. Collaborative floor: shared knowledge. [Two friends discuss a local political crisis]

J: and apparently [Jane Bull ((xx))
R: [well in fact it. felt very

J: she had this
R: threatened because [didʒə] did you hear she had this

J: grammar school meeting =
R: grammar school = that's right

(Coates, 1997: 188, example 17)

Where minimal responses in an one-at-the-time model are ways of supporting the current speaker, in a collaborative-floor model minimal responses (and small utterances) are means to show that all participants still are part of the conversation/floor, as can be seen in example 6.

Example 6. Collaborative floor: minimal responses [Three friends talk about Oxford student murder]

R: it was the boyfriend, yeah, she was under the
T: has he

R: floorboards = yeah
T: been charged? =
S: = mhm

(Coates, 1997: 182, example 9)

According to Coates (1997) an interruption is only an interruption when the current speaker stops talking because of another interlocutor starting to speak. All other instances of overlap cannot be regarded as interruptions (contra to Sacks et al. (1974) and Zimmerman & West (1975)).

Tannen (1984) analysed a thanksgiving dinner involving six people in order to designate the conversational style of all participants. She also described turn taking patterns and she concludes that overlap and interruption (according to the definition of Sacks et al. (1974)) happened frequently and that the participants were not hindered by this fact at all (although this feeling of hindrance would be expected if the one-at-a-time model would be

adopted by the participants). This suggests that there is more evidence for the collaborative-floor model, even though this model had not yet been proposed in 1984.

1.3. Is there a preferred model?

With two opposing models like the previously mentioned models, one may be inclined to have a preference for one model over the other. This may have to do with a personal preference, depending on one's own conversational style (Tannen, 1984) but more importantly, it has to do with the formality of the setting in which people interact. Most often, in informal settings, the conversation can be analysed according to the collaborative floor model (Coates, 1997). Sacks et al. (1974) suggest that conversations may be arrayed in a linear way, meaning that in some situations the turns are clear before the conversation starts, for example in a debate:

> "The linear array is one in which one polar type (exemplified by conversation) involves 'one-turn-at-a-time' allocation, i.e. the use of local allocational means; the other pole (exemplified by debate) involves pre-allocation of all turns; and medial types (exemplified by meetings) involve various mixes of pre-allocational and local-allocational means." (Sacks et al. I974: p. 729)

Sacks et al. (1974) do not refer to informational conversations and the examples they provide are fairly formal.

Common sense leads us to the image of a continuum with on the one side the model of Sacks et al. (1974) and on the other side the model of Coates (1997). Interlocutors negotiate the way in which they allocate turns with each other, depending on how well they know each other, the topic they are discussing, their social status, etc. Even within a certain setting, one can imagine that the turn taking patterns may shift from one-at-a-time to more collaborative and vice versa. An example of such a setting may be a business meeting, starting in a clear one-at-a-time mode with some pre-allocated turns (regarding the chairman) (Sacks et al. 1974), shifting to a more collaborative mode if for example the annual company party (and the memories of the last party) are discussed; shifting back again to a one-at-a-time mode when the meeting is to be closed by the chairman. Thus there seems to be no 'better' model, there are simply two different models to construct and analyse conversations.

The two models previously discussed account for different spoken languages all over the world. In the next chapter it will be addressed whether these models also are applicable

to signed languages and whether there are specific patterns or devices found in signed languages.

1.4. Turn taking in signed interaction

Some studies have addressed discourse features in signed languages, mostly in American Sign Language (ASL). Only one of them, the study of Coates & Sutton-Spence (2001), applies the model of Sacks et al. (1974) described above and the model of Coates (1997), the collaborative floor-model, to a sign language, namely British Sign Language (BSL). Most academics in sign language research assume that turn taking mechanisms are constructed according to the one-at-a-time model of Sacks et al. (1974). Coates & Sutton-Spence (2001) clarify this by stating that prior to their research, academics had mainly investigated turn taking in signed interaction in formal situations or classroom settings. The very nature of these settings requires a structured speech situation (e.g. the teacher allocating the turns, no self-selecting, interruptions being considered as inappropriate). Coates & Sutton-Spence claim that there has been no research conducted concerning informal signed language conversation prior to their study. Some important characteristics of turn taking in signed languages are discussed in the following paragraphs.

1.4.1. Turn allocation

Obviously, Deaf people in interaction cannot opt for the same devices to exchange turns with one another as hearing people can. For example, a drop of pitch is not a useful device to mark the end of a turn. In this paragraph, the turn taking devices found in signed languages will be discussed.

1.4.1.1. Giving a turn

Early work on turn taking in ASL interaction by Baker (1976; 1977), first made clear that turn-exchanges need to start with eye-contact ('GAZE'), since one cannot initiate a turn if the utterance is not 'heard'. This is not only true at the beginning of a conversation, but also when two (or more) people are already involved in a conversation. Thus it is assumed that a signer would not start signing until someone looks at him.

According to Baker (1976; 1977), the signer (i.e. current speaker) spends most of the time while he is signing *not* looking at the addressee (keeping the floor), but near the end of

his turn, he shifts to +GAZE$_s$ [1], thus giving the opportunity for others to take the floor (to self-select) and to make sure the exchange of turns happens smoothly (if it is happening).

Kendon (1967) found the same behaviour in spoken language: the current speaker looks away when he starts a long utterance (in Kendon's study: an utterance longer than five seconds) and he looks at the addressee before he actually finishes speaking. The gaze behaviour of the addressee is, however, much more variable than in signed language, for the obvious reason that for sign language one needs to look at the interlocutor to get the message.

In her study on Filipino Sign Language, Martinez (1995) found that participants had a strong tendency to +GAZE$_a$ when they were addressed in conversation, similar to Baker's studies (1976; 1977). This means that the 'listener' had a strong preference to look at the signer (current speaker), which seems obvious because of the fact that if the addressee is not looking at the signer, he would miss the utterance that is done. However, the addressee showing +GAZE$_a$ may be a signal to encourage the signer to continue, perhaps comparable to a minimal response in spoken interaction.

1.4.1.2. Keeping a turn

While signing, most of the participants in Martinez' (1995) study (eight out of twelve) showed +GAZE$_s$ or a small difference between +GAZE$_s$ and -GAZE$_s$, thus keeping the floor. This is opposed to Baker's (1976; 1977) findings mentioned before, where there seemed to be a clear preference for -GAZE$_s$ during signing to keeping the floor.

In case the active signers showed -GAZE$_s$, they strikingly preferred to look literally away from the interlocutor: if the signer was seated in the situation on the right, during -GAZE$_s$, he looked to the right; if the signer was seated on the left, he looked to the left (Martinez, 1995).

1.4.1.3. Getting a turn

Baker (1976) found that addressees look at the signer when he's signing (+GAZE$_a$), but once eye-contact is established between signer and addressee near the end of a unit-type or utterance, the addressee looks away (-GAZE$_a$) and starts signing (i.e. self-selecting).

The results for -GAZE$_s$ at the beginning of an utterance varied in Martinez' (1995) data, which also does not match the results of Baker. From Martinez' (1995) study, it does

[1] Since both participants show GAZE-behaviour, in this study the distinction will be made between GAZE$_s$ (GAZE-behaviour by the signer/S$_1$) and GAZE$_a$ (GAZE-behaviour by the addressee/S$_2$).

not become clear whether the conversations she discusses are analysed according to the one-at-a-time model or to the collaborative floor model. This may have an influence on the GAZE in conversations.

To get the attention of other participants when they are showing -$GAZE_a$, some specific techniques are used in signed interaction. Examples are waving in the visual field of another signer, tapping on his arm, shoulder or knee, or tapping on the table (if there is one present) (Baker, 1976, 1977; Coates, 1997; Coates & Sutton-Spence, 2001; Van Herreweghe, 2002; Mindess, 2006).

1.4.2. Turns in signed interaction

In this paragraph, the characteristics and, more importantly, the differences between signed and spoken language turn taking devices were discussed. Apparently, in both language types (modalities) the one-at-a-time model and the collaborative floor model are useful in analysing conversations. These models focus on conversations that take place in one-language situations, e.g. where all participants communicating in the same language. However, not *all* conversations happen between users of the same languages. When people who do not know each other's language communicate, an interpreter may be asked to translate for both participants. This may have influence (positive and/or negative) on the turn taking pattern of the conversation. In the next section, a brief overview will be given on interpreting in general, followed by a section concerning sign language interpretation.

1.5. Interpreting - A brief introduction

There are several interpreting styles: consecutive, simultaneous, chuchotage and liaison interpreting. In *consecutive interpretation*, the speaker delivers a sequence of utterances, which can range from a few sentences to a monologue of fifteen minutes. The interpreter listens to the meaning of the utterances, possibly takes notes and then recites the meaning or the utterance in the context the speaker intended into another language (Seleskovitch, 1978; Paneth, 2002).

In *simultaneous interpretation,* the receiver(s) can hear a (non-stop) translation while the original utterances are being delivered. The interpreter does not translate word for word, but listens to the meaning of the messages and translates that into another language (Seleskovitch, 1978; Alexieva, 2002; Paneth, 2002). In simultaneous interpreting, lag time (i.e. the time to translate the meaning of one language into the other) is very short

compared to consecutive interpretation and causes the interpreter to lag behind the original utterance of the speaker, where the lag time seems to vary between two to four seconds (Paneth, 2002).

Chuchotage or 'whispered interpreting' is only used in small settings and is a 'peripheral type' of simultaneous interpreting (Alexieva, 2002). The interpreter is seated very closely to the receiver(s) and there is not much interaction between the receiver of the translation and the other participants in the situation (Alexieva, 2002; Paneth, 2002). There is no literature that specifically addresses chuchotage (Bureau Beëdigde Tolken en Vertalers (Bureau for Sworn Interpreters and Translators), personal communication), and it is not clear whether this way of interpreting is frequently used or not.

Liaison interpreting, too, applies in small settings, but is a subtype of consecutive interpreting (where in chuchotage the translation happens simultaneously). Settings where liaison interpreting is provided are more 'personal' than for example large business meetings or conferences, and typically all participants are involved, causing much more interaction than in other instances of consecutive interpretation. Non-verbal interaction is very important in these situations (Alexieva, 2002). Due to the focus of this thesis, attention will be paid to literature on liaison interpreting since there, too, turn taking is involved in the interpreted situation (opposed to consecutive and simultaneous interpretation in major events like conferences). In the literature, the terms 'community-interpreting' or 'dialogue-interpreting' are also used to refer to liaison interpreting.

In short: there are two main types of interpreting, namely simultaneous and consecutive interpretation. In small community settings, two subtypes can be distinguished: chuchotage is a subtype of simultaneous interpretation whereas liaison interpreting is a subtype of consecutive interpretation.

In interpreting between spoken languages, a further division is made between conference interpreting and community interpreting. In *conference interpreting*, interpreters work from one language (or several) into their mother tongue (AIIC, 2012), usually interpreting in a simultaneous mode in an interpreter-booth with headsets to reach a large audience. There is usually no interaction between the receivers of the translation and the interpreter. Often, there is even a great distance between the interpreter and the receiver(s) and they cannot see each other; e.g. non-verbal behaviour will not be incorporated in the translation, or only barely (in case real time video monitors are provided for the

interpreters) (Alexieva, 2002). According to AIIC (2012), interpreters work into their mother tongue because this is the language in which the interpreter has perfect command, in which he/she was formally educated and in which he/she "feels completely at ease" (AIIC, 2012: 'How we work'). AIIC (2012) distinguishes two types of language in interpreting: active languages and passive languages. Active languages may include an 'A-language', which is the mother tongue of the interpreter, and a 'B-language', which is a language that is acquired as a second language and reaches a certain satisfactory standard. A B-language is:

> "[…] more suited to interpretation of technical discussions where lexical accuracy is more important than style or very discrete shades of meaning. It is customary only to work into the second active language out of the mother tongue." (AIIC, 2012: 'How we work')

Community interpreting is characterized by bi-directionality, thus the interpreter has to work from one language into another and vice versa. Most often the translation mode is consecutive (i.e. liaison interpreting) and takes place between officials and laypeople (Wadensjö, 1998, in: Apfelbaum, 2004).

These interpreting styles and settings are applicable to spoken interpretation as well as to sign language interpretation. In the next section, turn taking in interpretation between two spoken languages will be addressed. Finally, the focus will shift to interpreted conversations between a spoken and a signed language, to the characteristics of the turn taking patterns that are known until now.

1.6. Turn taking in interpreted spoken conversation

An interpreter has a central role when interpreting dialogues: she does not only translate the utterances of the participants who do not (want to) speak the same language, she also coordinates the flow of the talk between them (Wadensjö, 2002). The coordinating aspect has to do with the fact that the interpreter is given/takes every second turn in consecutive interpreting (Wadensjö, 2002). If the first speaker (S_1) finishes his turn, the interpreter (I) starts translating, in order to give S_2 (the other speaker) the opportunity to react. In a scheme, it would look like this:

S_1: Utterance 1
I: Utterance 1'
S_2: Utterance 2
I: Utterance 2'

Depending on the next selected speaker (S_1 or S_2) this scheme continues. In the most optimal working conditions, this sequence clearly agrees with the model of Sacks et al. (1974). The turns of the interpreter are mostly not independent, but are linked to the participants (Bot, 1994): the interpreter gets (or takes?) the turn after S has finished his utterance.

At times, one of the participants may not be involved in interaction, for example, when the interpreter asks for clarification. Then the participant and the interpreter interact for a number of turns, while the other participant is completely disregarded (Wadensjö, 2002; Gavioli & Baraldi, 2011), as illustrated in the following sequence:

S_1: Utterance 1
I: Utterance 2 -> to S_1
S_1: Utterance 3
I: Utterance ..' -> may be a summary of 1 and 3, or just a translation of 3

It does not become clear from the article of Wadensjö whether the interaction between the interpreter and S_1 will be translated or summarized for S_2. Bot (1994: 114) asserts that the interaction between I and S_1 "obviously" does not get translated. Besides the fact that one participant is left out of the conversation, also the topic-development between the participants stops because of the turn the interpreter takes.

Another example of influence on turn taking, besides always having the second turn, is if the interpreter encourages S_2 to elaborate his speech by providing minimal responses and short questions that S_1 is not giving (Wadensjö, 2002; Gavioli & Baraldi, 2011). In that case, she postulates herself as listener, which causes S_2 to produce a long turn: without the minimal responses or questions, S_2 may have taken a shorter turn, giving S_1 sooner the chance to react. It is because of I that S_2 continues talking, thus influencing the turn taking.

Another major influence on the turn taking pattern in interpreted spoken interaction is that one participant never understands what the other is saying (Bot, 1994). Therefore, it is not possible for a participant to self-select or to interrupt without being rude. For participants involved in interpreted interaction, it is hard to locally manage the turn taking process, because one does not know whether or when the other participant is finishing his turn (Bot, 1994). In such situations, the interpreter governs the turn taking, because she is

the only party that is able to administer the process. This phenomenon is clearly the case in consecutive interpretation, but also applies to some extent to simultaneous interpretation.

Wadensjö (2002) mentions that translations in spoken interaction tend to be more formal than the original (spoken) utterances; they seem to be more of a written-language style (even though the original utterance is not in such 'correct' language). She does not relate this to turn taking processes, but these 'hyper-correct' utterances, made by the interpreter, may not only have consequences on how the participants are perceived by each other, but also on the turn taking patterns, since more formal language use may induce the one-at-a-time model opposed to the collaborative-floor model. Consequently, the manner of translating may influence the turn taking, even though the participants may not opt for the one-at-a-time model.

In the interpreting literature, often the problem of 'different people talking at once' is addressed (Napier et al., 2010). With regard to the turn taking models, this may be an instance of collaborative floor as Coates (1997) suggests. This is impossible, or at least a huge challenge, for the interpreter to translate and often she interrupts to ask people to talk one-at-a-time, thus strongly claiming the model of Sacks et al. (1974). Thus the very presence of the interpreter (and as such the nature of the conversation) heavily advocates the one-at-a-time model. Besides that, the interpreter in this situation is taking a turn for herself, i.e. not on behalf of one of the participants.

Lastly, the interpreter may have an influence on the turn taking process by choosing who to translate. In case of a power imbalance, for example, when a doctor and a patient are interacting, the interpreter may choose to yield turns to the doctor as opposed to the patient's turns. This may happen, for example, if they start talking at the same time (Bot, 1994).

The aforementioned characteristics of turn taking in interpreted situations will be completed in the next section with phenomena and characteristics that are specifically present in sign language interpretation.

1.7. Turn taking in interpreted signed conversation

Interpretation in sign language basically has the same styles of interpreting and the same situations as mentioned in the introduction about interpreting. However, a striking difference is that in sign language interpreting, most interpretation is performed simultaneously and for the most part, takes place in the community sphere and not that

much in conference settings. So whereas in spoken interpreted settings, translation takes place on a consecutive basis in community settings and on a simultaneous basis in conference settings, in sign language interpreting in all settings simultaneous interpretation is the common denominator.

In this chapter, the focus lies on a study done by Roy (2000), since this study also relies on the turn taking model of Sacks et al. (1974) and is up till now one of the most extended investigations into turn taking processes in sign language interpreting. Roy (2000) shows that interpreting is a complex discourse process, whereby the interpreter plays an important role in the smoothness of the turn allocation between the participants (which also will be discussed later). The smoothness of the exchange of turns (or lack thereof) can be of great influence on how the participants perceive each other and what information gets interpreted (Sanheim, 2003). In her data, Sanheim assumes that the turn taking only takes place between the interpreter and one of the participants. She states:

> "[…] all the participants are taking turns based on both signals within the language and based on their own sense of rights and obligations when talking" (2003: 36).

Also Roy (2000) states that interpreters are participants in discourse processes, because an interpreter is the only one who can "logically maintain, adjust, and if necessary, repair differences in structure and use [between the used languages]" (Roy, 2000: 6). She summarizes that an interpreter is "[…] an integral part of the exchange process" (p. 99), because speakers do not know where TRP's are in the other used language, or how turns end in a certain language. Roy (2000: 36) claims:

> "Turn taking in interpreting has unique and complex features that actively involve the interpreter in organizing, managing, constraining and directing the flow of talk."

However, it is not only the interpreter who is responsible for the success (or failure) of an interpreted event. Rather, all participants jointly produce such an event.

Roy (2000) acknowledges several turn types, which corresponds to some extent with the turn taking model of Sacks et al. (1974). In the next paragraph, these turn types will be discussed, followed by some typical features that are applicable to sign language interpreting.

1.7.1. Types of turns

In her study, Roy (2000) distinguishes four types of turns in her analysis on a signed interpreted meeting: regular turns (1.7.1.1.), turns around pauses and lag (1.7.1.2.), overlapping turns (1.7.1.3.) and turns initiated by the interpreter (1.7.1.4.). These types will also be relevant for the present study.

1.7.1.1. Regular turns

Regular turns are defined like Sacks et al. (1974) proposed, that is, they are basically 'smooth transitions'. In these cases, the relevant participant reacts smoothly to the translation of the interpreter, i.e. as in a normal same-language interaction-pattern as described before. So the hearing participant reacts after a voiced translation (e.g. from sign language to spoken language) (example 7) and the deaf participant reacts after a signed translation (example 8), following Sanheim's (2003) claim that participants solely react to utterances in their own language, thus exchanging turns with the interpreter instead of exchanging turns with the other participant.

Example 7. Smooth transition (regular turn) between interpreter and hearing interlocutor

P: Yeah. Ok, great, uhm
I: […]or not
S:

(Roy, 2001: 70)

Example 8. Smooth transition (regular turn) between interpreter and Deaf interlocutor

P: […]I don't know if these exist or if there are others
I: BUT PRO3 WHAT? NOT SURE HAVE #CUES?
S: YES

P:
I: I-ask-you] #WHAT Yeah I'm pretty sure they […]
S: HAVE THINK SO

(Roy, 2001: 71)

1.7.1.2. Turns around pauses and lag

Turns around pauses and lag refer to the initiation of a turn after a moment of silence. This can be a natural silence, e.g. when one of the participants is thinking, or an unnatural silence that is due to the interpretation processes, e.g. lag time. Lag time is the time the interpreter needs to provide the translation.

It is remarkable that Roy emphasizes the silences in a conversation, meaning 'no sound' from the perspective of the hearing participant. She does not mention the fact that also the Deaf participant sometimes has to wait for a translation (when the interpreter

needs to wait for a concept that can be translated if the hearing participant is speaking) and thus experiences a sequence of no signing while the hearing participant is speaking (i.e. 'silence').

1.7.1.3. Overlapping turns

When participants start talking or signing at the same time (i.e. overlapping turns), the interpreter has to decide what to do. She has several options, namely: stop one (or both) of the participants and decide who may be the next speaker (or let the participants decide who will take the next turn); remember the overlapping utterance and translate the overlapping sequence later to one of the participants (thus the interpreter decides who she yields in turn taking); decide who to translate and neglect the overlap (thus neglecting one of the participants); or neglect the overlap for a brief period of time and after translating one of the participants, giving the floor to the other participant (Roy, 2000).

Except for the first option, all options seem to be specific to sign language interpreting: where in typical spoken interaction and in typical signed interaction, simultaneous starts often occur, in signed interpreted situations, it is (at least to the participants) not always as clear that this happens. This is especially true for the hearing interlocutor, because signing does not create interference (noise) in monitoring his own speech, whereas spoken language does and may be regarded as an interruption when simultaneous speech occurs (Coates & Sutton-Spence, 2001). It is up to the interpreter to create a simultaneous start that will be received the same by all participants. Alternatively, she can indeed choose one of aforementioned options.

1.7.1.4. Interpreter initiated turns

An interpreter may also initiate a turn, according to Roy (2000), meaning that she might prompt a participant to react by making gestures. In order to make the gesture, she needs to take a turn herself. Roy does not emphasize that the hearing person will be left out of this turn-switching moment, but she does state that this may be appropriate in case the interpreter translates "[…] the "spirit and intent" of a message." (Roy, 2000: 98). Van Herreweghe (2002) proposes another way of dealing with overlap: an interpreter might take a turn herself (speaking on her own behalf) and explain that she cannot do her job if more than one person speaks at a time. According to Van Herreweghe, in such a case the interpreter wants the participants to resolve the problem of overlap. However, the

interpreter already influenced the turn taking pattern by taking a turn herself and being able to reach every participant by supporting spoken language with signs (manually coded English), which allows all participants to understand what the interpreter is saying. This is different from interpretation in spoken languages, because one cannot utter two spoken languages at the same time. Roy (2000) does not address this phenomenon as an interpreter initiated turn, but she discusses it as a part of overlapping turns (section 1.7.1.3: stop one (or both) of the participants and decide who may be the next speaker). Roy does not concentrate on the fact that the interpreter actually speaks for herself and thus takes a turn.

The terminology that Roy (2000) advanced is possibly somewhat unclear, since in her description of 'turn types' she does not discuss the turns participants have, but she instead focuses on the turn *exchanges* that take place. This indicates that, for example, with 'regular turns' she does not refer to the way a turn is built, but to the way a turn shifts from one speaker to the other. In this thesis, the term 'turn transition' will be used to refer to what Roy (2000) designates as turns. In the next paragraph, specific features of sign language interpreting will be reviewed that to some extend may have an influence on turn taking patterns in interpreted conversations.

1.7.2 Characteristics specific to sign language interpreting

1.7.2.1. Minimal responses

Encouraging a signer by minimal responses (as done by spoken language interpreters) may happen while voicing. Voicing means translating from sign language into spoken language, in this study: NGT-NL (Nederlandse Gebarentaal (Dutch Sign Language) – Nederlands (Dutch)). The aforementioned encouragement the interpreter may provide, is nodding with her head while voicing. It is not clear whether these nods are meant to signal that the interpreter understands the signed utterance (e.g. showing that she follows and translates what is said) or whether they function as MR's like the ones produced in signed interaction, showing involvement in the interaction. It is thus not clear whether these head nods influence turn taking. On the other hand, while translating into sign language, it is not clear whether the interpreter provides MR's for the hearing participant. Of course the hearing participant may see that the Deaf participant is nodding (or is providing other visual cues, for example, frowning), but it is not clear whether the hearing participant receives verbal MR's. This point will be addressed in the current study.

1.7.2.2. Eye contact

In interpreted interaction the hearing interlocutor is often not aware that the Deaf participant needs to have eye contact with the interpreter before he starts talking, which may cause the Deaf participant to miss some information if the Deaf participant is looking at something else than the interpreter. Communication problems may occur because of this fact (Van Herreweghe, 2002; Baker & Van den Bogaerde, 2008). In addition, Johnston & Schembri (2007) wonder whether hearing interlocutors are aware of the fact that if a Deaf participant raises his hands from rest position, he wants to start a turn, and they also state that it is somewhat vague to what extent interpreters in general make this clear to the hearing participants (for example by starting with some discourse markers like 'But…', 'Well…' or 'Euhm…').

A very important notion that Van Herreweghe (2002) touches on, is the fact that Deaf participants have no control over the organization of turn taking and the allocation of the next turn in meetings where more than two interlocutors are present, because the Deaf participants are restricted to look at the interpreter and thus cannot make eye contact with the current speaker to opt for the next turn without missing information. She found that "[s]elf-selecting hardly ever occurred across a Deaf-hearing scenario, and if it did, it was problematic." (Van Herreweghe, 2002; 95). It is possible that the same happens in dialogic conversations, which will be touched upon in this thesis.

In sum, the turn taking processes that take place in interpreted conversations are at the very least complicated.

1.8. Summary

Two turn taking models (the one-at-a-time model and the collaborative floor model) were discussed in this chapter, whereby the devices that are used by participants to exchange turns where a point of interest. Next, the turn taking processes in sign languages were addressed, showing that in signed interaction both models are applicable. Also in this section, devices to exchange turns that are specific for signed conversation were considered. Subsequently, an introduction on interpreting was provided, followed by a description of turn taking processes in both spoken language interpretation and signed language interpretation. In the next chapter, the aforementioned devices will be classified and the methodology of this thesis will be advanced.

2. Methodology

2.1. Data collection

In order to answer the research question, natural interpreted conversations between a Deaf and a hearing participant had to be recorded. Considering the fact that the study of Roy (2000) was roughly the model for this study, the most perfect setting to be recorded was a student-professor interaction. The interpreter had to have been working with the Deaf student before and had to be rather experienced/skill full. In the most ideal situation, also the hearing participant was familiar with a Deaf interlocutor and an interpreter present.

Advancing the most optimal recording conditions, two cameras should be used, in order to record the hearing participant and the interpreter on the one hand (because they are most often seated next to each other), and the Deaf participant on the other hand. However, using two cameras on tripods would heavily influence the setting, which may cause the participants to act differently than they would have done if there were no camera. This already may happen if one camera is present. Labov (1972) referred to this phenomenon as the 'observer's paradox'.

Since natural dialogic interaction is fairly private in character, the intrusion of a camera being present should be avoided as much as possible. Because of this fact, in two of the three recorded conversations, the interpreter used her own iPhone to record the conversation. By using only the iPhone, no observer/researcher had to be present, thus minimizing the observer's paradox. Despite the use of the iPhone being less intrusive, the participants were still aware of the presence of it. This becomes apparent from the utterance by the hearing participant at the end of the Assessment conversation (paragraph 2.1.2): "Nou, dat is 'm" ("Well, that's it."), looking at the interpreter and smiling, indicating that the *recorded* conversation comes to an end. In the third conversation, a fellow-student of the interpreter who cooperated with her, handled the camera.

Finding participants was not easy, because, as stated before, many dialogic conversations are private, hence, to get consent of both participants *and* the interpreter was a challenge. Additionally, many Deaf people indicated they do not need the service of an interpreter in face-to-face interactions; they understandably prefer to communicate directly with another person if possible (without interference of an interpreter).

Both Deaf people and sign language interpreters were invited personally by the researcher to participate in this study either by asking them or by a written and signed

invitation that was distributed on Facebook in various 'groups' (e.g. Nederlandse Dove Jongeren (Dutch Deaf Youngsters), Doof Centraal (Deaf Central), Nederlandse Beroepsvereniging voor Tolken Gebarentaal (Dutch Association of Sign Language Interpreters)) and on the wall of the researcher. This way, many (young) Deaf people and many interpreters were expected to read the text or see the YouTube film with the invitation. In total, the YouTube film was watched 87 times (April 2012), but no response was received. Subsequently, another call was written and provided in sign language, which was considerably shorter and more straightforward. This film was watched 24 times (May 2012) and the first film was watched another 17 times (May 2012). The characteristics of the 'perfect setting', as described before, were already suspended; any conversation that could be recorded was welcome. Eventually, a sign language interpreter offered two conversations that matched most of the aforementioned characteristics. Additionally, a Deaf student provided a third conversation, also matching most of the characteristics. In the next paragraphs, the specifics of the recorded conversations are described.

2.1.1. Police Conversation (PC)

The conversation takes place at the local Deaf Club, where a police officer[2] and a Deaf adult man are exploring how they can cooperate in providing information to each other and their grassroots. They never met before. The interpreter works on a regular basis with the Deaf participant. The officer did not have any experience with a sign language interpreter prior to this meeting. The interpreter and the officer were seated next to each other, the Deaf man sitting at the other side of the table in front of the officer (figure 1).

The participants introduce themselves to each other with a short summary of their service record. The goal of this meeting is to find out if there are opportunities to exchange information; both in this particular setting as with their grassroots. The conversation lasted approximately 30 minutes, of which a total of almost 11 minutes were transcribed and analysed. The recording was done with an iPhone 4S. Unfortunately, due to technical issues, the complete conversation of 30 minutes could not be downloaded from the iPhone and had

[2] The police officer (male) is between 30 – 40 and lives in Groningen (the northern part of The Netherlands). The Deaf participant (male) is between 30 – 40, also lives in Groningen and is an active member of the Dutch Deaf Community. The interpreter (female) is between 30 – 40, lives in Utrecht (center of The Netherlands) and is an experienced interpreter, working full-time.

to be divided into several fragments. Accordingly, a passage of unknown length is missing. The scope of the camera was able to capture the hearing participant and the interpreter.

Figure 1. Arrangement Police Conversation. Green: Deaf participant, blue: hearing participant, purple: sign language interpreter, black: iPhone.

2.1.2. Assessment Conversation (AC)

The conversation takes place in a University of Applied Sciences (hogeschool), where the Deaf student[3] is enrolled in an educational program. The student's work was assessed by the teacher. Both the student and the teacher often work with a sign language interpreter and are used to this kind of conversations. The Deaf participant and the interpreter work on a regular basis with each other. The participants and the interpreter were standing next to a table; the participants standing at the long side of the table, each at a corner and the interpreter standing on the short side of the table opposed to the hearing participant (figure 2). The iPhone lay on a cabinet.

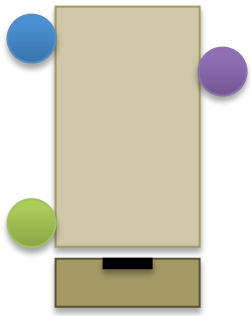


Figure 2. Arrangement Assessment Conversation. Green: Deaf participant, blue: hearing participant, purple: sign language interpreter, black: iPhone.

First, the participants discussed some former assignments. Next, they focussed on the work the student presented on the table in front of them. The conversation lasted almost 11 minutes. The recording was done with an iPhone 4S; the total conversation could be

[3] The Deaf student (female) is between 20-30 and lives in Amsterdam (capital of The Netherlands). The teacher (male) is between 35-45 and also lives in Amsterdam. The interpreter (female) is between 30 – 40, lives in Utrecht (center of The Netherlands) and is an experienced interpreter, working full-time and is the same interpreter as in the police conversation.

downloaded. The scope of the camera was able to capture the hearing participant and the interpreter.

2.1.3. Evaluation Conversation (EC)

In this conversation, test results from the Deaf student were discussed with the teacher[4]. Both the student and the teacher are used to working with an interpreter. However, it is not clear how often the teacher has worked with a sign language interpreter in one-on-one interactions. The interpreter (female) has not yet graduated interpreter education, but works often with the Deaf student. Both are content with their cooperation. A fellow student of the interpreter, team interpreting with the interpreter, was also present, and she handled the camera. This fellow student would have been present also if the conversation would not have been recorded, thus minimizing the observer's paradox. The scope of the camera was able to capture all participants (figure 3).

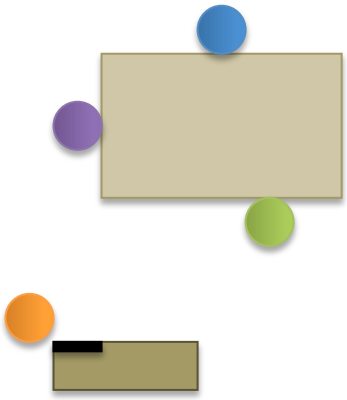


Figure 3. Arrangement Evaluation Conversation. Green: Deaf participant, blue: hearing participant, purple: sign language interpreter, orange: team interpreter, black: camera.

2.1.4. Scope of the study

The influence of the interpreter on the turn taking processes that take place in interpreted conversation is the main topic of this thesis. To narrow the subject down and to structure the topic and the outline of this thesis unambiguously, a quantitative approach was preferred. This was the optimal method in order to answer the research question and is congruent with the available theoretical models and literature. Furthermore, a qualitative

[4] The Deaf student (female), is currently enrolled in a Bachelor programme at a university, is between 25-30 and lives in Amsterdam (capital of The Netherlands). The teacher (male) is assistant professor at the university where the student is enrolled, is between 50-60 and lives in the west of the Netherlands. The interpreter (female) is a student-interpreter (last year of the Interpreting-Bachelor) and has been working on a weekly basis with the Deaf participant to both their consent. She is between 20 - 30 and lives near Amsterdam.

analysis would be intensive and time-consuming, since there is not much relevant theoretical background.

2.2. Classification system

The way turns are executed and organised in an interpreted event is of relevance to this study, since one may assume that an interpreter (whether she is a sign language interpreter or a spoken language interpreter) is the only one in the setting who completely understands all utterances and thus is the only one who can manage the turn taking processes. The distribution of turns by all participants and the interpreter may provide information with respect to the role of the interpreter in the conversation. A classification system was designed to analyse the data, which is summarized in table 1, at the end of this chapter.

2.2.1. Turns and turn transitions

Firstly, it is interesting to know how many turns each participant takes. A turn is, according to Sacks et al. (1974), a sequence with meaning: a unit-type. A unit-type may be a sentence, a clause, a phrase or a lexical construction. However, since in this thesis turn *transitions* are the focal point and not the turns themelves, a turn is considered a sequence with a meaning that has one interactional function, following Van Alphen (1999). Thus, a turn may be one sentence or a succession of sentences. The first uttered sentences will be coded as B ('beurt', turn), all subsequent sentences that carry the same interactional function will be coded as moves (BM, beurt moves). Also the notion of 'conversational contributions' that Van Alphen (1999) uses in her study will be adopted in this study. These are all contributions (linguistic and paralinguistic) that are uttered in the conversation, i.e. turns (B), minimal repsonses (MR), laughter (L) and various contributions/varia (VAR). This last category includes sequences that do not fall within the scope of the other three categories such as for example thinking signals like '…ehm…' and false starts: incomplete sentences to get the floor. Of all of the contributions the style will be designated, meaning that a contribution is initiated by a speaker himself or that a speaker reacts to the other participant (REA).

All the conversational contributions done by the interpreter in different roles are examined in the various interactions. This means that for each contribution of the interpreter, it will be stated whether it is a translation (S_t), an utterance concerning the interpreting process (S_i) or an utterance on her own behalf (S_3). Of particular interest are MR's that may be perceived by the participants as delayed MR's, because of the lag time of

the interpreter (i.e. because the interpreter needs to translate, she may not be able to provide MR's at the expected place (at TRP's), causing a (small) delay in MR's). Delayed MR's may be perceived as "feigned involvement" or "at least call attention to some difficulty in the course of talk" (Zimmerman & West, 1975: 122). These results will be compared to the data found in the literature concerning turn taking in a single language conversation.

Subsequently, the turn exchanges that arise after one or more turns, will be specified according to the turn exchange types that are described by Roy (2000), since her typology is applied to sign language interpreting and elaborates on the turn taking model of Sacks et al. (1974). The definitions of turn exchanges in the typology of Roy (2000) include:

- *Regular turn transition*. These are smooth transitions or, as Sacks et al. (1974) state: the optimal turn exchange. The exchanges occur between a single language, thus a spoken utterance of the hearing participant follows naturally on the spoken translation of the interpreter (and vice versa) and a signed utterance of the Deaf participant follows smoothly on the signed translation (and vice versa) (figure 4).

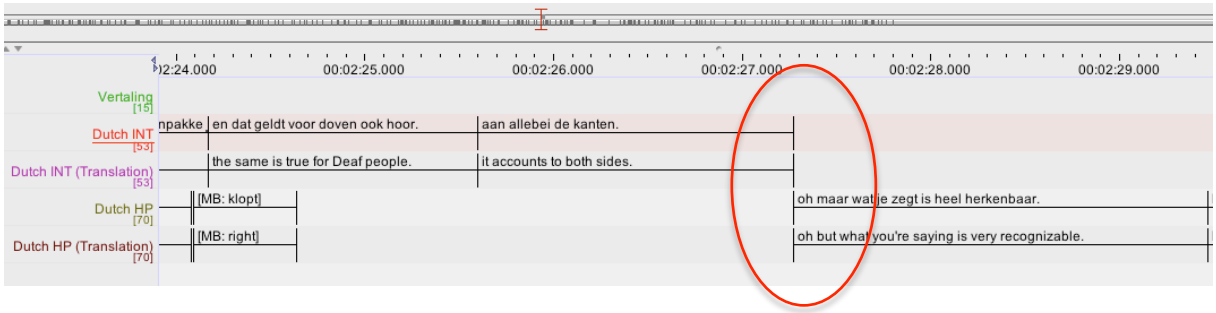


Figure 4. Regular (smooth) transition from interpreter to hearing participant (at 02:27.3).

- *Turn transitions around pause and lag time* (i.e. turns after a sequence of no spoken or signed utterance). This may be around a natural pause (a speaker thinking for himself) or a pause caused by lag time. These turn taking patterns have to do with tolerance to silence, which means that a participant may feel he needs to take the floor because a silence took too long. A delicate phenomenon in sign language interpreting is that when the interpreter is translating, the hearing participant may feel that there is a silence, since a translation from spoken language to sign language is silent, and may take the floor (because his toleration level of the length of a silent sequence is reached). Since the interpreter was still translating, she can continue translating right away if the hearing participant starts talking again after a silence by

himself, resulting in a constant stream of utterances that are perceived by the Deaf participant (he does not perceive a silence). In this case there is a lack of opportunity for the Deaf participant to react (to take the floor), because in the translation that is provided by the interpreter there was no pause (figure 5). It is remarkable that in the typology of Roy only silences perceived by the hearing participant are mentioned, a silence perceived by the Deaf participant is not considered. In this study this phenomenon *is* taken into account: the moment that the interpreter is not signing while the hearing participant is speaking because she is waiting for a meaningful concept results in a silence for the Deaf participant.

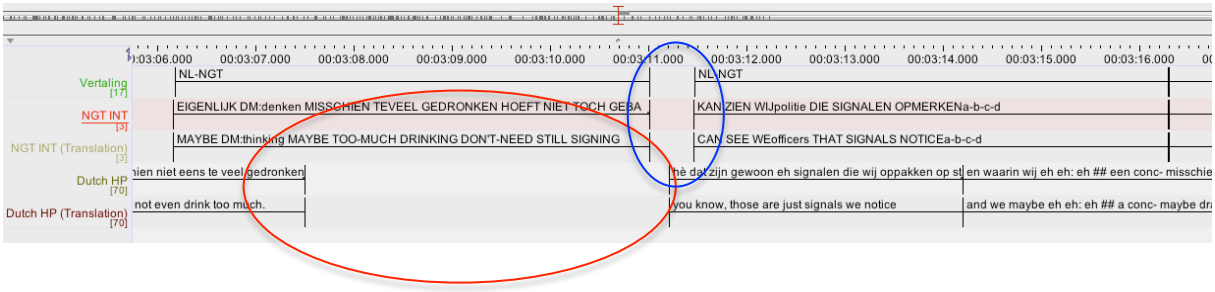


Figure 5. Pause in the speech of the hearing participant (HP, red circle), but no pause in the translation of the interpreter (NGT INT, blue circle).

- *Overlapping turns*. Participants speaking or signing at the same time. This occurrence of simultaneous speech indicates a problem for the interpreter, since she cannot listen, process and translate two languages at the same time. Therefore, the behaviour (reaction) of the interpreter is of particular interest; what does the interpreter *do*? According to Roy (2000), the possible alternatives for an interpreter are:
    - *Stop participants*. She may take a turn (see below: Turns initiated by the interpreter) to ask the participants to stop talking/signing at the same time. After that, she may give the floor to one of the participants or she may let the participants decide who gets/takes the floor next.
    - *Remember utterance, translate later*. She may remember what is uttered by S_2, while continuing translating S_1. If S_1 is finished, she may translate what has been said previously by S_2. This implies that the bid for the floor by S_2 is neglected by the interpreter (and S_1 is maybe not even aware of the fact that a bid for the floor took place).

- *Neglect one participant*. The interpreter continues translating S_1 even though S_2 is talking/signing at the same time.
- *Neglect shortly, than yield floor*. The interpreter continues translating S_1, but when S_1 has finished his utterance, she yields the floor to S_2 (i.e. prompting S_2) to give S_2 the opportunity to utter again what he was saying/signing before. The prompting may happen, for example, by a gesture or by looking at S_2.

- *Turns initiated by the interpreter*. This part of the typology of Roy (2000) already became clear in the results of all the conversational contributions, as stated earlier in this section.

The typology proposed by Roy (2000) will be the basis for the analysis in this study and also new observations that are not applicable to this typology will be taken into account in the results chapter. The devices to allocate turns that will be investigated are addressed in the next section.

2.2.2. Turn taking devices

Several scholars (e.g. Duncan, 1972; Sacks et al., 1974; Caspers, 2000) described devices that influence turn taking. These devices were used as implicit indicators in order to be able to designate the conversational contributions and turn transitions of the hearing participant and the interpreter in the data.

- *Turn exit devices (yielding the floor).*

  Devices for a S_1 to give the other participant the floor that are reprted in the literature are uttering a first pair part, uttering a tag question, dropping the intonation pitch, terminating gestures, using stereotyped expressions (e.g. '[…] you know' and uttering the end of a grammatical clause (Duncan, 1972; Sacks et al., 1974; Caspers, 2000).

- *Turn keeping devices (keeping the floor).*

  Devices for a S_1 to keep the floor that are mentioned in the literature are ending a clause in a high pitch or S_1 breaking eye-contact (-$GAZE_s$) (Duncan, 1972).

- *Turn entry devices (bids for the floor).*

  Devices for a S_2 to attempt to get the floor (and do not always succeed) that are mentioned in the literature are starting at first or starting with appositional beginnings (e.g. 'well', 'but', 'so') (Duncan, 1972).

- *Devices to support the turn of S_1 by S_2 (or S_3).*

  Devices for a S_1 to give the other participant the floor that are reported in the literature are Minimal Responses (MR's) and Delayed MR's (Duncan, 1972; Sacks et al., 1974).

Besides the strict turn taking devices that are discussed before, also some interactional devices are used to designate conversational contributions, which are communication checks, requests for clarifications and discourse markers.

2.2.3. Classification system - overview

In table 1, presented on the next page, a summary of the classification system can be found. In addition to this scheme, the analysis will also concentrate more in depth on the different turns the interpreter takes. The influence of the different types (if any) on the conversation will be analysed. Each conversational contribution will be denominated INI (initiated contribution) or REA (reactive contribution).

2.3. Data analysis

The conversations were transcribed in a computer program called ELAN (EUDICO Linguistic Annotator, ELAN, 2011), a program in which complex annotations of video and audio sources can be made. In this program, also the turn sequences are particularly clear, providing a clear overview of, for example, occurrences of simultaneous speech. After the transcription, the data was coded and analysed according to the classification system as provided in paragraph 2.2. The analysis was focussed primarily on the turn taking patterns between the interpreter and the hearing participant. This is because more literature on spoken interaction is available, and to investigate both the Deaf participant and the hearing participant was beyond the scope of this study. Given the explorative character of the study, no statistical analysis has been done. In the next chapter, the results will be presented.

Table 1. Classification system

a) Conversational Contributions	
Turns (B)	A turn is a sequence with a meaning that has one interactional function, which may consist of one or more sentences. The start of a turn (i.e. first sentence) will be coded as B, the subsequent sentences will be coded as BM.
Initiated turns by the interpreter	
Prompting one participant	Interpreter signals one participant to start (or continue) talking/signing by a gesture (S_t).
Interpreter-utterance	Interpreter takes a turn (S_i) to make a job-related remark.
S3-utterance	Interpreter takes a turn (S_3) to make an utterance on her own behalf.
Minimal Response (MR) *(Given and received)*	Short utterances of non-active speaker(s) (thus non- S_1, i.e. S_2, S_3etc.) with little or no meaning, uttered throughout streams of talk, such as 'hmm-mm', 'yeah', 'yes', 'right', etc.
Delayed MR	MR's that are uttered later than the expected place (at a TRP); MR after pause.
Laughter (L)	A participant laughing.
Various contributions (VAR)	Contributions that cannot be placed in one of the other categories, often short sentences that are not complete or thinking signals ('…ehm…').
b) Turn transitions	
Regular turn transitions	Smooth transitions in the same language; no gap, no overlap.
Turn transitions around pause and lag	Turns taken after a moment of silence (i.e. non-speech or non-sign).
Overlapping turns	Participants talking or signing at the same time.
If turns overlap, the interpreter can:	
1. *Stop participants*	Interpreter takes a turn (S_i) to stop the participants continue talking.
2. Remember utterance, translate later	Interpreter remembers the overlapping utterance and translates the overlapping sequence later to one of the participants.
3. *Neglect one participant*	Interpreter decides who to translate and neglect the overlap (and thus the other speaker).
4. Neglect shortly, than yield floor	Interpreter neglects the overlap for a brief period of time and after translating one of the participants, giving the floor to the other participant.

3. Results

In this chapter, the results of the study will be discussed. As described in the previous chapter, the results will be divided into two main sections: a quantitative approach to turns (3.1) and turn transitions (3.2).

3.1. Conversational Contributions

Regarding the fact that the main topic of this thesis is 'turn taking', it is relevant to look into the contributions to the conversation (turns) by all participants and the interpreter which will be done in this paragraph. Conversational contributions are divided into turns (B), moves (BM), minimal responses (MR), laughter (L) and various contributions (VAR). In section 3.1.2 the turn transitions between participants will be analysed.

If referred to 'all contributions', the contributions *in total* of the conversations are implied, i.e. all contributions of the hearing participant and the interpreter, since the Deaf participant was not recorded. In discussions about 'all contributions', in the EC the Deaf participant utterances are not taken into account in order to be able to compare the data. For the interpreter *all* contributions are counted (i.e. all the roles the interpreter may encounter, being S_t, S_i and S_3).

3.1.1. Global Conversational Contribution

In this section, a general overview is provided for all conversational contributions made by the hearing participant and the interpreter. A division is made between initiated contributions (INI) and reactive contributions (REA).

Table 2. Total amount of conversational contributions (CC), initiated contributions (INI) and reactive contributions (REA) in all conversations of hearing participant (HP) and interpreter (INT). INI and REA are related to the total contributions of the speaker self (%S).

	CC		INI		REA	
	N	% TOTAL	N	% S	N	% S
HP	630	63%	396	63%	234	37%
INT	367	37%	245	67%	122	33%
TOTAL	997	100%	641		260	

All conversational contributions (CC's) of all conversations are shown in table 2, which indicates that the hearing participant contributes 63% of all CC's, while the interpreter contributes 37%. It is remarkable that this is the case, because one would expect the

interpreter to make far more contributions, since she is translating both the hearing participant and the Deaf participant, i.e. adding up the contributions of the hearing participant with the contributions of the Deaf participant, at least if all utterances of both participants are translated.

With regard to the amount of initiated CC's within the total number of contributions of the hearing participant and interpreter herself, the percentage is fairly balanced: 63% and 67% respectively. This indicates that the interpreter produces almost as much initiated CC's as the hearing participant, compared to their own total of CC's in a conversation.

3.1.2. Global overview initiated and reactive contributions for each conversation

Now the over-all distribution of initiated and reactive contributions is clear, these contributions are analysed more thoroughly for each conversation in this section.

Table 3. Total of Conversational Contributions, initiated CC's (INI) and reactive CC's (REA) of the hearing participant (HP) and the interpreter (INT) for the Police Conversation (PC), the Assessment Conversation (AC) and the Evaluation Conversation (EC). INI and REA are related to the total contributions of the speaker self (%S).

	CC		INI		REA	
	N	% CONV	N	% S	N	% S
PC	331		194		137	
HP	200	60%	86	43%	114	57%
INT	131	40%	108	82%	23	18%
AC	350		227		123	
HP	214	61%	153	71%	61	29%
INT	136	39%	74	54%	62	46%
EC	316		220		96	
HP	216	68%	157	73%	59	27%
INT	100	32%	63	63%	37	37%

Concentrating on the diverse conversations, displayed in table 3, we observe that in the distinct conversations the hearing participant provides more CC's than the interpreter (as was also the result in table 2). In the PC the hearing participant takes account of 60% of the CC's in this conversation (200) and the interpreter of 40% (131) of the CC's. In the AC, the hearing participant provides 214 (61%) of all contributions done in that conversation (350),

while the interpreter provides 39% (136). In the EC this is 68% (216) and 32% (100), respectively, thus the hearing participant provides twice as much CC's compared to the interpreter in this conversation.

Table 3 also shows that the hearing participant utters more initiated CC's than reactive CC's related to his own total of contributions, except in the PC. In this conversation, the hearing participant initiates 86 CC's (43%), while in the other conversations the percentage initiated contributions by the hearing participant lies higher: in the AC 71% and in the EC 73%. The interpreter, on the other hand, utters always more initiated CC's than reactive CC's: in the PC she initiates 82%, in the AC 54% and in the EC 63%.

3.1.3. Specification Conversational Contributions

In the previous sections it has been discussed that the interpreter has less initiated CC's than the hearing participant. In this section a closer look will be taken at the distribution of all the contributions of the hearing participant and the interpreter. The results can be found in table 4.

Table 4. Total amount of B (turns), BM (moves), L (laughter), VAR (various contributions) and MR (Minimal responses) of the hearing participant (HP) and the interpreter (INT) for all conversations.

	B	BM	L	VAR	TOTAL INI
HP	70 (18%)	208 (52%)	3 (1%)	120 (29%)	396 (100%)
INT	74 (30%)	133 (54%)	1 (1%)	37 (15%)	245 (100%)

The difference in amount of initiated CC's may be explained by the fact that the hearing participant makes more VAR contributions (unfinished sentences, thinking signals, etc.) than the interpreter: 29% of the initiated contributions of the hearing participant are VAR's, while in the contributions of the interpreter 15% VAR's occur. It is remarkable that the interpreter has more turns (B's) than the hearing participant compared to their total amount of contributions: 18% of the contributions of the hearing participant are B's, while the interpreter contributes 30% of turns (B's). This indicates that the interpreter more often starts an utterance with a different interactional function than the HP.

Now that all contributions have been discussed, the contributions of the interpreter will be analysed in the next section.

3.1.4. Conversational Contributions by the interpreter

As mentioned before, an interpreter has several 'roles' in which she can take the floor. The three roles an interpreter may adopt and the distribution of the different roles in the three conversations is revealed in table 5.

Table 5. Conversational contributions in all conversations by the interpreter: S_t (translation), S_i (interpreter utterance) and S_3 (Speaker 3), related to own contribution total (% S) and to the total of contributions (TOTAL INT-S).

	PC	AC	EC	TOTAL INT-S	
				N	%
Total S_t					
N	119	112	78	309	91%
% S	94%	93%	83%		
Total S_i					
N	5	5	5	15	4%
% S	4%	4%	5%		
Total S_3					
N	3	3	11	17	5%
% S	0,9%	0,9%	3,2%		
TOTAL	127	120	94	341	100%

One would expect that of all conversational contributions made by an interpreter, the vast majority are translations. This appears to be true in this study: 309 out of 341 interpreter contributions (91%) is a translation. However, still 9% of the utterances made by the interpreter are utterances other than translations: these are either turns that the interpreter takes in order to be able to do her job (S_i, 15 instances, 4%) or turns taken by the interpreter herself (S_3, 17 instances, 5%). Especially with regard to the S_3-turns, it is worthwhile to compare them to the total amount of CC's done by the interpreter in each conversation: in both the PC and the AC the interpreter takes 2% and 3%, respectively, of the total amount of her CC's, as an S_3 (each conversation 3 S_3-utterances). In the EC, the interpreter takes in 12% of all her CC's a turn for herself (11 CC's). Also with regard to the total amount of S_t-utterances (related to the total amount of CC's in each conversation), there is a difference between the experienced interpreter and the student interpreter: where in the PC and the AC the interpreter has 94% and 93% S_t-utterances respectively, in the EC the student

interpreter utters 83% S_t-utterances (i.e. 83% (78) of all (94) CC's in this conversation were S_t-CC's).

Until now, only turns (B), moves (BM) and varia (VAR) are discussed. Another important type of conversational contributions are minimal responses. These CC-types will be discussed in the next paragraph.

3.1.5. Minimal Responses

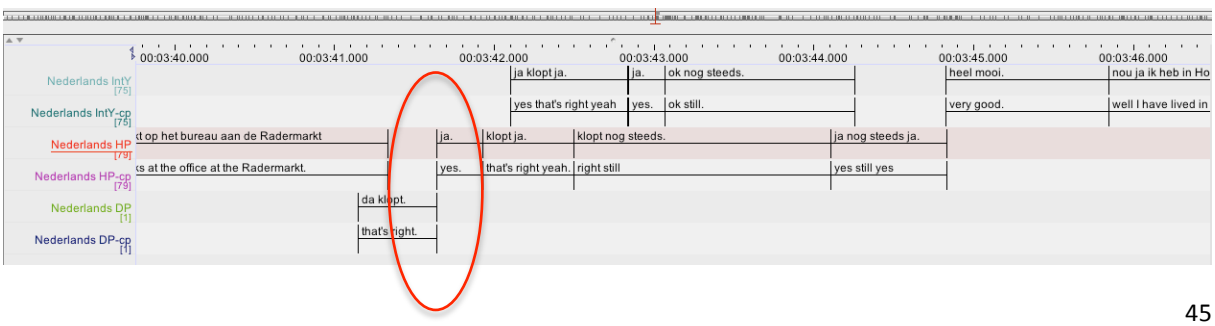
In this paragraph, the minimal responses that are given and received by the hearing participant and the interpreter are discussed.

Table 6. Minimal responses; given (by the hearing participant (HP) and the interpreter (INT)) and received (by the Deaf participant (DP), the hearing participant (HP) and the interpreter (INT)), exclusive non-verbal MR's.

	Receiver							
	DP		HP		INT		TOTAL given	
	N	%	N	%	N	%	N	%
Giver								
HP	5	3%	-	-	167	97%	172	100%
INT	12	19%	51	81%	-	-	63	100%
TOTAL								
	17		51		167		235	

Table 6 shows that the hearing participant first and foremost provides MR's in anticipation to the utterances of the interpreter (167 MR's on a total of 172 by the hearing participant given MR's, 97%). The MR's of the hearing participant were all located near the TRP of an utterance of the interpreter, which is why there is a distinction made between the Deaf participant and the hearing participant. This is because sometimes the hearing participant reacts directly to the Deaf participant, without interference of the interpreter, as shown in figure 6.

Figure 6. Hearing participant reacts directly to the Deaf participant.



Of all the utterances by the interpreter, 81% are a minimal response in reaction to the hearing participant. This table shows that the hearing participant is mainly focussed on the interpreter and barely on the Deaf participant. The distribution of given and received MR's can be found in tables 7 and 8 respectively.

Table 7. Types of given minimal responses by the hearing participant (HP) and the interpreter (INT).

	Verbal		Non-verbal		Delayed		TOTAL		TOTAL	
	N	%	N	%	N	%	N	%	N	%
HP	72	42%	95	55%	5	3%	172	100%	630	27%
INT	5	8%	9	14%	49	78%	63	100%	367	17%
TOTAL										
N	77		104		54		235		997	
%	33%		44%		23%					

In table 7 the finding that the hearing participant provides far more verbal (42%) and non-verbal (55%) MR's than the interpreter (8% and 14% respectively) stands out (related to their total amount of MR's). On the other hand, the interpreter provides mainly delayed MR's (78%). Table 7 shows that of all provided MR's, the majority are non-verbal (44%).

Table 8. Distribution of received minimal responses by all participants and the interpreter.

	Verbal		Non-verbal		Delayed		TOTAL	
	N	%	N	%	N	%	N	%
HP	1	2%	1	2%	49	96%	51	100%
INT	72	43%	90	54%	5	3%	167	100%
DP	4	24%	13	76%	0	0%	17	100%

In table 8 it is shown that the interpreter, in absolute numbers, receives most of the minimal responses (167) compared to the hearing participant (51) and the Deaf participant (17). The Deaf participant receives the least amount of MR's (and as shown in table 6, mainly from the interpreter: 13 MR's of all 17 received MR's by the Deaf participant). Despite this fact, the Deaf participant might feel supported nonetheless, because the hearing participant often combines verbal MR's with non-verbal cues; either simultaneously or as a head nod adjacent to a verbal MR.

With regard to the total received MR's of the participants and the interpreter themselves, it becomes apparent that the interpreter mostly receives verbal (72; 43%) and

non-verbal (90; 54%) MR's, while the hearing participant predominantly receives delayed MR's. A remark has to be made concerning the role of the Deaf participant, because he was not recorded and thus the total amount of MR's would have been more for the hearing participant (most likely) and the interpreter.

Now the conversational contributions are investigated and are clear, the actual turn taking patterns will be investigated in the next section.

3.2. Turn transitions

In this section, the turn transitions that occur in all conversations will be analysed, roughly following the typology of Roy (2000). However, the definition of 'turn' of Roy will not be adopted, while the term 'turn' will be used, following the common terminology. In this and subsequent sections, with 'turn' is meant conversational contribution, unless specified otherwise.

3.2.1. Regular turn transitions

In table 9 regular turn transitions can be found. Minimal responses and laughter are not taken into account, since these are not considered B's (turns) and are not intended by the S_2 as a bid for the floor. Moves and various contributions (VAR) are counted as transitional elements and are thus taken into account in this table.

Table 9. Regular (smooth) turn transitions (minimal responses and laughter excluded) from Speaker 1 (active speaker) to Speaker 2 (addressee).

	Speaker 2			TOTAL	
	HP	DP	INT	N	%
Speaker 1					
HP	-	2	10	12	24%
DP	0	-	1	1	2%
INT	35	2	-	37	74%
TOTAL					
N	35	4	11	50	
%	70%	8%	22%		

In this table t is shown of all smooth transitions, 35 (70%) out of 50 smooth transitions are from an interpreter-turn to a hearing participant-turn, meaning that the hearing participant reacts smoothly to the interpreter. The other way around, from hearing participant to interpreter the number of smooth transitions is far less: only 10 smooth reactions are

provided by the interpreter in reaction to the hearing participant (which is 20% of all smooth transitions; this percentage is not shown in the table). Of all smooth transitions, 74% are in reaction to the utterance of the interpreter. In this table, the transitions from or to the Deaf participant are found because the Deaf participant uses his voice (thus is audible) or can be deducted from the obvious reaction of the hearing participant or interpreter. However, only in one conversation the Deaf participant was clearly visible and was thus excluded from the data in order to be able to generalize the data found in all conversations. This has to be taken into account, because if the smooth reactions of the Deaf participant to the interpreter had been analysed, too, the total amount of smooth transitions in reaction to the interpreter might have resulted in a rather higher number of smooth transitions.

Often, scholars in sign language interpreting have the assumption that participants exchange turns with the interpreter, meaning switching back and forth between a participant and the interpreter. However, in this table it becomes clear that the participant may react smoothly to the interpreter, but that the interpreter does not provide many smooth transitions (22%) to the other participants. Consequently, the participants do not exchange turns with an interpreter, they only react to the interpreter and have to wait for a reaction. This will be investigated further in the next section.

3.2.2. Turn transitions around pause and lag time

In this section, the turn uptake after a moment of silence will be investigated.

Table 10. Turn uptake by the hearing participant (HP) and the interpreter (INT) after several types of silence.

			TOTAL	
	HP	INT	N	%
Type of silence				
Natural silence	2	6	8	6%
Pause between turns	5	2	7	5%
Pause made by HP	4	0	4	3%
Pause in own speech of HP	40	0	40	28%
Lag	26	59	85	59%
TOTAL				
N	77	67	144	100%
%	53%	47%	100%	

Table 10 illustrates that the distribution of turn uptakes after a moment of silences is fairly balanced: the hearing participant accounts for 53% of the uptakes, the interpreter for 47%.

More than half of all the uptakes after silence take place after a lag (i.e. because of the translation time the interpreter needs): 59% (85 out of 144 uptakes after silence). In the table below, the arrangement of types of silences can be found.

Table 11. Occurrence types of silences.

	TOTAL	
	N	%
Types of silence		
Natural silence	8	6%
Pause between turns		
HP – INT	2	1%
INT – HP	5	3%
Pause made by HP	4	3%
Lengthy lag	1	1%
Pause in own speech of HP	40	28%
Lag + lag	13	9%
Lag		
In INT-speech (voiced translation)	40	28%
After HP-speech	6	4%
Before HP-speech	25	17%
TOTAL lag	71	49%
TOTAL	144	

In table 11 reveals that especially intra-speech pauses occur often, in the hearing participant-speech (40 instances, 28%) as well as in the voiced interpretation (40 instances, 28%). This means that the hearing participant experiences a moment of 'no sound' while the interpreter continues translating. In 8 occasions the hearing participant was waiting until the Deaf participant reacted (either by a head nod or a signed utterance that was voiced by the interpreter), before continuing his speech. Also lag for the Deaf participant was taken into account (i.e. non-signing by the interpreter), coded in the table as 'before speech of hearing participant'. In 25 (17%) instances there was a silence experienced for the Deaf participant.

As the interpreter needs time to translate the message S_1 is uttering, a lag is created which influences the timing of answers to questions. In table 12 shows the answering to questions by the interpreter (in fact, by the Deaf participant), divided in delayed answers and seemingly smooth answers.

Table 12. Answers provided by the interpreter (in fact: Deaf participant) to questions of the hearing participant in the three conversations (PC, AC and EC).

	Delayed answer		Smooth answer		TOTAL	
	N	%	N	%	N	%
PC	1	50%	1	50%	2	7%
AC	10	45%	12	55%	22	76%
EC	3	60%	2	40%	5	17%
TOTAL						
N	14		15		29	

This table reveals that in the Assessment Conversation (AC) the interpreter (Deaf participant) provides most answers (76%). This has to do with the fact that it was an educational setting, whereby the teacher was exploring the process of the assignment (how the student came to this result). The presence of the interpreter is of great influence to the delayed answers as well as the smooth answers. The table shows that of all answers that are provided, approximately half seem to be smooth reactions to the question of the hearing participant. Closer observation of the data indicates that smooth reactions occur in the following instances:

- *Greeting-greeting pair*

  Both the Deaf participant and interpreter do not have to think about an answer to a greeting and the answer is often very short, making a quick translation possible
- *Head nod by interpreter*

  A head nod can be incorporated in the translation by the interpreter, followed by the hearing participant asking a tag-question. Something that may have been meant by the Deaf participant as a MR, now becomes an adequate answer related to the tag question
- *Tailing off by hearing participant*

  The hearing participant lengthens his turn with 'fillers' while the interpreter is still translating, causing the translation to start at the right time because the fillers are not (or swiftly) translated by the interpreter
- *Several options given by hearing participant*

  The hearing participant gives two options ("Did you do A or B") and the Deaf participant already responds to the first option, causing the translation to be well timed (after hearing participant says "…B", the interpreter can translate "Did A, yes")

- *Short translation*

  The translation to sign language is shorter than the utterance in spoken language

- *No translation*

  The interpreter does not translate the question of the hearing participant, because the Deaf participant is already saying something that is exactly the answer. By not translating the question, for the hearing participant the conversation runs smoothly (but the Deaf participant misses a question…)

Besides the influence of lag time on silences in the conversation, lag time may also cause simultaneous contributions of the participant(s) and/or the interpreter. This will be discussed in the next section.

3.2.3. Simultaneous contributions

When the participants start speaking/signing at the same time, an interpreter has the following options: stop participants, remember the utterance and translate later, neglect one participant, and lastly neglect shortly, than yield floor. In this study only the neglecting of one participant occurred, which basically means that the interpreter interrupts a participant (table 13).

Table 13. Interruptions between the hearing participant (HP) and the interpreter (INT) in the three conversations (PC, AC, EC).

	PC		AC		EC		TOTAL	
	N	%	N	%	N	%	N	%
HP -> INT	0	0%	3	23%	4	31%	7	35%
INT -> HP	0	0%	4	20%	9	45%	13	65%

From this table it becomes clear that the interpreter interrupts the hearing participant frequently (65% of all conversations). This has to do with lag time: the Deaf participant reacts to the utterance of the interpreter, which is finished later than the original utterance of the hearing participant, causing an interruption if the interpreter starts translating the Deaf participant while the hearing participant already continued speaking. Basically, the interpreter neglects the hearing participant if she interrupts him by virtue of the translation of the Deaf participant. It has to be remarked that this high number of interruptions by the

interpreter is influenced by the interpreter of the Evaluation Conversation, i.e. the non-graduated interpreter: of all interruptions, she takes account of 45% (9 out of 20).

While this representation of interruptions may seem abundant, when compared to the total amount of conversational contributions (876 CC's, see table 2), the number of interruptions is trivial (20 interruptions in 876 conversational contributions: 2%). Moreover, not only the presence of the interpreter but also the conversational styles of all participants (and the interpreter), power differences and maybe even gender differences may influence interruption processes in general in interpreted situations.

Table 14. Simultaneous starts between: the hearing participant (HP) and the interpreter (INT), the hearing participant (HP) and the Deaf participant (DP).

	Simultaneous start		TOTAL
	HP – INT	HP – DP	
PC	2	0	2
AC	0	0	0
EC	1	4	5
TOTAL	3	4	7

In table 14 makes clear that simultaneous starts do not occur often; only 3 occurrences of simultaneous contributions are found in the complete data set between the hearing participant and the interpreter. In the EC conversation also simultaneous starts between the Deaf participant and the hearing participant are investigated, but also here a relative small amount of simultaneous starts occurred.

4. Discussion & Conclusion

The goal of this study was to explore whether a sign language interpreter influences the conversation that she is translating with regard to the turn taking processes. Put differently: does the presence of an interpreter (positively or negatively) affect a conversation? What does an interpreter *do* to manage the flow of conversation as she is the only one in the situation who understands all that is being uttered? Furthermore, the interpreter may also participate in the turn taking process, uttering something on her own behalf. These utterances may be as an S_i (speaker in the role of interpreter), thus in order to smoothen the interpretation process and as an S_3 (a turn as a third speaker), in case she for example makes a request for clarification. By investigating interpreted conversations, insights were gained that will allow us to answer the research question.

Findings

In the results section, conversational contributions of the hearing person and the interpreter were addressed as found in three conversations, as well as the turn transitions between them. Looking at the conversational contributions, results[5] indicate that in general the interpreter makes fewer contributions (37%) to the conversation than the hearing participant does (63%). This is remarkable, because one would expect the interpreter to have more contributions, since the utterances translated from the Deaf participant and the utterances made by the interpreter herself are included in the total contributions of the interpreter. The number of initiated contributions are similar between the interpreter and the hearing participant compared to their own total of conversational contributions; the hearing participant utters 63% initiative turns and the interpreter 37%. Additionally, results show that the hearing participant utters more various contributions (e.g. false starts, thinking signals) compared to his total of conversational contributions (29%), whereas in conversational contributions of the interpreter 15% are various contributions. Striking however, is the difference in turn starts: the hearing participant has 18% of turn starters and the interpreter made 30% of such contributions. This indicates that the interpreter more often starts an utterance with a different interactional function than the hearing participant does.

[5] Since this is an explorative study, no statistical analysis has been done.

Most of the turns taken by the interpreter, are turns in which she translates one of the participants (91%). Turns she takes in order to smoothly perform her job (interpreter turns: S_i, 4%) or turns she takes for herself (Speaker 3-turns: S_3, 5%) are equally distributed. However, the more experienced interpreter takes less S_i or S_3 turns (in one conversation 6%, in the other 7%) than the interpreter who has not yet graduated (16%). This was the only difference between the two interpreters; concerning other results, the interpreters act more or less the same.

The hearing participant provides the most of his minimal responses in reaction to the interpreter (97%). Presumably, the minimal responses are meant as support terms for the Deaf participant. However, almost all minimal responses are well-timed reactions to the utterances of the interpreter; e.g. the hearing participant encourages *the interpreter* to continue talking. This was observed for both verbal and non-verbal minimal responses. The interpreter on the other hand, provides predominantly delayed minimal responses to the hearing participant (78%). Even so, the hearing participant barely gets support to continue speaking (he receives very few minimal responses (51) and of the responses he receives, 96% are delayed), while the interpreter gets well supported: she receives 167 minimal responses, of which 97% are accurately timed (i.e. 3% is delayed).

In addition to the conversational contributions, turn transitions were observed in this study. Turn transitions happen only smoothly in the same language and in reaction to the interpreter by the hearing participant (and most likely also by the Deaf participant) (37 out of 50 smooth transitions are in reaction to the interpreter, 74%). Vice versa, the interpreter reacting smoothly to the hearing participant happens far less often (12 instances, 24%). Consequently, the participants do not *exchange* turns with the interpreter, as often proposed by scholars, they only react to the interpreter and have to wait for a reaction.

After a moment of silence the turns taken by the interpreter and the hearing participant are fairly balanced (47% and 53% respectively). However, almost half of all the silences (49%) are due to the lag time of the interpreter (the time it takes for the interpreter to translate). This is also apparent in delayed answers that are provided by the interpreter to the hearing participant. Moreover, answers that seem smooth reactions to the hearing participant are a result of effective translations by the interpreter and of the construction of the conversation by the hearing participant: he gives for example two options (“Did you do A or B?”) and the Deaf participant already responds to the first option, causing the translation

to be well timed; after the hearing participant says "[…] or B", the interpreter can translate "Did A, yes". Furthermore, simultaneous utterances may occur. This was mainly observed when the interpreter interrupts the hearing participant, due to lag time or a request for clarification, or simply when the interpreter and the hearing participant start talking at the same time.

Conclusions

Based on the findings, several conclusions can be drawn with regard to the influence of the interpreter to the turn taking processes. It can be said that the presence of the interpreter *does* influence the conversation. Obviously, her primary role is to translate the utterances made by all participants and this study shows that most of the interpreter contributions are indeed translations (91%). Nevertheless, the total of utterances made by the hearing participant has no one-on-one relationship with the amount of utterances translated by the interpreter, indicating that she does not translate all that is said by all participants, thus influencing the conversation. Several factors may explain the difference in total amount of utterances between the hearing participant and the interpreter.

Firstly, the hearing participant often utters false starts, thinking signals, etc. that are taken into account as utterances or turn initiators in the turn taking analysis. The interpreter may choose not to translate these relatively 'empty' utterances (at least with regard to the content of a conversation), causing less *translated* bids for the floor, turn continuers, etc. by the hearing participant as will be perceived by the Deaf participant. Thus the Deaf participant perceives less *interactional* information concerning the hearing participant and also concerning the flow of the turn taking and the turn taking process. Most likely, the same is true for the hearing participant concerning the contributions of the Deaf participant, but this was beyond the scope of this study.

Secondly, the hearing participant may utter more moves in a turn than the interpreter would 'need' in her translation, since some utterances in sign language can be translated shorter than a hearing participant would utter them (and, again, vice versa, which has not been studied here). Hence, this study provides more evidence that an interpreter does not translate literally from one language into the other, which is widely known in (sign language) interpreting studies (e.g. Fishberg, 1990, Metzger, 1999; Roy, 2000; Napier, 2002; Wadensjö, 2002; Mindness, 2006). Consequently, this implies that an interpreter needs to

be conscious of the amount of contributions she makes in order to provide equal turn opportunities to both participants.

The third factor provided by this study concerns the difference in amount of contributions between a hearing participant and the interpreter. That is, the interpreter may also take turns as an interpreter or even can take a turn as an S_3. Thus it would be expected that an interpreter provides the most conversational contributions: namely the translations for the hearing participant, for the Deaf participant and the turns she takes as an S_i or S_3. Therefore the role of the interpreter is to be conscious about the contributions all participants (including herself) make and what the roles and effects/influences of the contributions are. Even though some false starts do not carry content with regard to the topic development of the conversation, they may have a function on a discourse level (for example a bid for the floor) that may not be disregarded because of the interpretation.

Focussing on the turns the interpreter takes in order to be able to do her job (interpreter-turns) or turns the interpreter takes for herself (speaker-turns), we found that the experienced interpreter takes less turns on her own behalf compared to the student interpreter; this was the only difference between the two interpreters. It would be interesting to look more deeply into the topic development in interpreted situations, since the conversation of the two participants will most certainly be disturbed by the turn(s) taken by the interpreter. So with every turn the interpreter takes that is not a translation, she affects the conversation.

Of considerable influence on the conversation is the time the interpreter needs to translate. This lag time causes, for example, minimal responses to be delayed in reaction to the participants, answers to the hearing participant are often delayed (and thus the hearing participant has to wait for a reaction before he is able to continue his turn or is barely supported to continue talking), and lag time also causes simultaneous contributions and interruptions. Specifically, since the participants react to the *translation* of the interpreter and not to each other, they simply start speaking/signing while the other participant has already started a new contribution. Therefore it is important for the interpreter to be conscious about the time she needs to translate, in order to limit the lag time as much as possible since it influences the flow of the conversation heavily.

In the field of interpreting, the silence of the hearing participant when he has finished his utterance, is regularly utilized to provide an extended translation by the interpreter, i.e.

she provides a more elaborated translation than she would have provided in case the hearing participant would have been continuing his turn. This may imply that if the Deaf participant does not react in time, the hearing participant will continue his turn, which may be one of the reasons why the number of pauses in the speech of the hearing participant is rather high in this study. In some instances, the hearing participant was waiting for the interpreter to finish her translation in order to get a reaction. It would be interesting to also investigate the conversational style of the hearing participant in conversation without the presence of an interpreter: is his conversational style different from the style he uses in interpreted encounters? If a playback interview had been held with all participants, more information would have been generated on this and other issues, for example, whether the hearing participants were bothered by the pauses in the conversations. Also the Deaf participants should be asked whether he felt this way; until now no attention has been paid to the hinder of lag time for Deaf participants.

Besides all results found in this study, it is obvious that interpreters have a problem whenever people start talking/signing at the same time, since an interpreter can only translate one person (e.g. Wadensjö, 1998; Napier et al., 2010). This indicates that interpreters by nature of the job will opt for the one-at-a-time model, asking of participants to talk one by one. This can heavily influence the turn taking pattern of the conversation, especially when in a certain situation people are used to a more collaborative floor-conversation style. In the next section, recommendations for future research are addressed.

Future research

One of the major limitations of this study is the lack of investigation into the interaction between the interpreter and the Deaf participant. Since the Deaf participant only was in scope of the camera in one conversation, detailed analysis was not possible and is recommended to be incorporated in future studies. This may provide more knowledge into the interpreting process and, more importantly, into the distribution of turns and turn transitions in the complete conversation. In fact, by looking into the spoken part of the conversation, at least half of the conversation is omitted. Even though two cameras (in order to be able to record all participants properly, instead of one, as used in this study) may have a substantial influence on the conversation, such a set-up would provide more insights into the influence of the interpreter.

Regarding turn taking devices, it would be interesting to investigate the devices the hearing participant, the Deaf participant as well as the interpreter use in conversation. For example, it would be interesting to look into the influence of gestures the hearing participant makes to the turn taking behaviour of the Deaf participant. Also the devices of the interpreter would be interesting to investigate more thoroughly. In one of the recorded conversations the interpreter for example translated a wondering utterance of the hearing participant ("I am curious if you discuss this […]") to a rather direct question ("Do you discuss this […]?"). This is probably an interpreting strategy, which should be investigated alongside other devices used by the interpreter.

More research into the influence of lag time on the conversation and the interactional patterns is needed. Of particular interest is research into simultaneous speech, since the difference in modality (signed versus spoken language) may cause that the Deaf and hearing participant to not notice whether simultaneous speech even occurs (where in spoken language interpreting this immediately becomes clear as two people 'make noise' the moment they start talking). Furthermore it would be interesting to investigate whether Deaf and hearing participants experience the same amount of pauses/silences in a conversation.

A practical limitation to this study is the non-presence of the researcher during the set-up of the setting (installing the camera and the participants) and thus the lack of opportunity to stimulate the participants to behave as normally as possible. In one of the conversations, the interpreter was not situated in a place where she normally would place herself, since she was rather distant from the hearing participant. This may have influence the hearing participant to look at the interpreter more often (i.e. neglecting the Deaf participant more often).

Lastly, it would have been interesting to analyse more situations, for example situations with experienced and less experienced interpreters and conversations with participants who are very used to working with each other (both participants and the interpreter). With a greater data set, more general conclusions can be drawn. If statistic analysis were implemented in this study, the results would have been more profound.

To conclude: the influence of a sign language interpreter on the interaction is a topic that needs further research and until then, one of the interpreter's primary tasks is to 'look who's talking'.

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