

“This is what it looks like” –

Showing sequences in an ARNE & CARLOS YouTube live stream

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Abstract

The aim of this thesis is to describe multimodal showing sequences in a YouTube live stream. The study is situated in the field of multimodal communication research. The method of this study is conversation analysis. The data studied is a live stream hosted by textile designers Arne Nerjordet and Carlos Zachrisson from 2019 where they discuss their creative goals and interact with their audience through comments. In the live stream, Arne and Carlos show objects that the viewers request to see or that are otherwise connected to the theme of the live stream.

The analysis of the study is divided into three sections, which are 1) initiation of showing sequences, 2) showing sequences and 3) endings of showing sequences. In each section, the special features of the communication were identified and considered against the findings of previous research. Features that were considered in the analysis include the use of read-aloud and respond (RAR) practice, motivation of showings, whether the showing sequence is evocative or informative and whether it has low or high embeddedness, among others.

It was found that the showing sequences in the live stream are mostly informative and have low embeddedness to previous talk. Deictic devices are also often connected to the showings. The initiations of the showings were mostly carried out by the viewers through their comments and the streamers used RAR to set the context for the showings. The endings of the showings concluded more often only the showing than both the showing and the topic. Concluding verbal cues were not commonly used to accompany the ending. The findings of this study support those of previous research and bring new light to showing sequences in the context of live streams.

Tiivistelmä

Tämä tutkielma kuvailee multimodaalisia näyttämissekvenssejä YouTube-suoratoistossa. Tutkielma edustaa multimodaalista vuorovaikutuksen tutkimusta. Tutkimuksen metodi on keskusteluanalyysi. Tutkimuksen aineisto on tekstiilisuunnittelijaduo Arne Nerjordetin ja Carlos Zachrisonin YouTube-lähetys vuodelta 2019, jolla he keskustelevat heidän käsityöprojekteistaan. Yleisö on vuorovaikutuksessa lähetyksen sisällöntuottajien kanssa kommenttien kautta. Arne ja Carlos esittelevät lähetyksessä projektejaan, joita yleisö haluaa nähdä tai jotka sopivat muuten lähetyksen teemaan.

Tutkimuksen analyysi on jaettu kolmeen osioon, jotka ovat 1) näyttämissekvenssien aloittaminen, 2) varsinaiset näyttämissekvenssit ja 3) näyttämissekvenssien lopettaminen. Jokaisessa osiossa tunnistettiin vuorovaikutuksen piirteitä ja tarkasteltiin niitä alan aiempien tutkimustuloksien valossa. Piirteitä, joita tarkasteltiin, olivat mm. mikä motivoi näyttämistä, miten niin kutsuttua lue ääneen ja vastaa -käytäntöä sovellettiin, oliko sekvenssi evokatiivinen vai informatiivinen ja oliko sekvenssi yhteydessä edeltävään puheeseen ja aiheeseen.

Aineistossa näyttämissekvenssit ovat enimmäkseen informatiivisia eivätkä ne ole yhteydessä edeltävään puheeseen. Deiktisiä ilmauksia käytetään myös usein näyttämisten yhteydessä. Näyttämissekvenssien aloitukset alkoivat enimmäkseen katsojien kommenteista, joita sisällöntuottajat lukivat yleisölle ääneen antaakseen kontekstia näyttämisille. Näyttämisten lopetukset päättivät yleensä vain näyttämisen eivätkä sekä näyttämistä että aihetta. Näyttämisen lopetusta ei alustettu päättävillä suullisilla indikaattoreilla. Tutkielman tulokset tukevat aiempien tutkimusten tuloksia ja tuovat esiin uutta tietoa näyttämissekvensseistä suoratoistolähetyksissä.

Table of contents

1 Introduction	2
2 Multimodal showing sequences in live streams	4
2.1 Interaction in video-mediated communication and live streams	4
2.2 Showing sequences in live streams and video-mediated communication	8
3 Methodology and data	13
3.1 Conversation analysis	13
3.1.1 Conversation analysis in computer-mediated communication	14
3.1.2 Transcription in conversation analysis	15
3.2 Live stream by Arne and Carlos	18
3.3 Research process	19
4 Analysis	22
4.1 Initiations of showing sequences	23
4.2 Showing sequences	33
4.3 Ending the showing sequences	44
5 Discussion and conclusion	51
References	54

1 Introduction

Technologies mediate communication and interpersonal relations in a diversifying and ever-growing set of ways (Hutchby, 2014, p. 86). Today, instant messaging and content sharing on social media are a common form of communication. Relatively new communication forms, such as video calls and live streams, allow for face-to-face real-time communication without being physically co-present. Live streams are also a convenient way for content creators and celebrities to communicate with their fans and followers. On live stream platforms, such as YouTube, Periscope and Twitch, the viewers can communicate with the streamer through written comments that can be seen on the screen by both the streamer and the audience. Such live streams often revolve around a common interest, crafts for example, that the streamer and their viewers have. In the recent years, crafts have become increasingly popular and there are multiple content creators on YouTube who post videos and host live streams involving the topic.

This thesis examines the multimodal actions of showing sequences within an interactive live stream video by ARNE & CARLOS. Arne Nerjordet and Carlos Zachrisson are a designer duo who actively publish videos and host live streams on YouTube. In addition, they are published authors whose work has been translated to several languages. In the live stream, the two men discuss creative goals for the new year of 2019 and respond to their viewers' written comments and questions about crafts and objects they see on the set of the live stream. When answering to the viewers' comments, the duo often shows the object which is the topic of discussion to the audience. These showing sequences are the focus of the study.

This study contributes to research on multimodal social interaction in online settings. The aim of this thesis is to describe the carrying out of showing sequences in a live stream environment. The focus of the analysis is on the streamers' embodiments connected to showings. In a showing, a previously poorly visible object is made visible for the other participant to view and assess (Licoppe & Tuncer, 2019, p. 546). In showing sequences there is usually one person who performs the showing, whereas the other participant acts as the recipient to the showing (Licoppe & Tuncer, 2019, p. 567). In the field of multimodal online interaction research, showing sequences in video meetings in personal contexts have been studied (see Licoppe et al., 2017; Licoppe, 2017) as well as communication between a streamer and their audience (see Licoppe & Morel, 2018), but combining these two aspects has not been extensively examined.

There is growing interest for multimodality in communication research (Bezemer & Mavers, 2011, p. 192).

The method of the study is conversation analysis (CA). The data of this thesis consists of an audio-visual recording, which was retrieved online. The selected excerpts of the data were transcribed and analyzed to achieve the aim of the study.

The following structure of the thesis enables to reach the aim of describing showing sequences in a live stream. In section 2, relevant previous research on the topic will be discussed to create a basis for the analysis. Next, the methodology of the study is introduced in section 3 before the introduction of the live stream data of this thesis. Selected data excerpts of the live stream will be presented in section 4, where the showing sequences will also be analyzed. The analysis will examine separately the initiation, the carrying out, and the ending of showing sequences to thoroughly investigate the phenomenon. The findings of the thesis will be discussed and concluded in the final section along with suggestions for future research.

2 Multimodal showing sequences in live streams

In this section, relevant previous research will be discussed. The section will introduce the concepts of showing sequences, video- and computer-mediated communication as well as describe interaction in live streams. First, interactions in video-mediated communication and live streams will be discussed through previous research. The focus of the final subsection will be on showing sequences in both video-mediated communication and in live stream environments.

2.1 Interaction in video-mediated communication and live streams

Video-mediated communication (VMC) is characterized by the physical distance of co-participants as well as by the technology and platform that mediate the interaction. These characteristics hinder certain aspects of communication such as eye gaze and touch. The key characteristics of VMC are discussed in this section, followed by a review of research on communication in live streams.

The type of technology used and the number of users, among other factors, affect interaction (Tudini & Liddicoat, 2016, p. 5). According to Tudini and Liddicoat (2016, p. 2), computer-mediated communication (CMC) allows co-presence without being physically near, but it also constrains some key interactional resources, such as eye gaze, gestures, and body movements, which may be altered or unavailable in mediated contexts. They further suggest that physical distance also alters turn-taking, repair, and conversational openings in communication. Licoppe and Tuncer (2019, p. 547) add that, in VMC, the domain of mutual visibility for co-participants is significantly reduced by technology. Dynel (2014) notes that on YouTube, for example, the communication is characterized by “‘speakers’ and ‘hearers’ spatial and temporal separation” (p. 37) as well as by the unknown number of potential unfamiliar recipients.

Since VMC differs from face-to-face communication in several aspects, such as the multimodality of communication, researchers have been interested to study its features. According to Grazia Sindoni (2019, p. 2), multimodal studies overall have originated from the aim to study the balance of language and other semiotic resources, for example body movements, gaze, and social distance. In her study, Grazia Sindoni (2019) studied mode-switching in VMC. More specifically, her article discusses how linguistic phenomena can be

integrated into multimodal transcripts and how transcription can have a pedagogical function. The findings of the study, that used recorded one-on-one communication in Skype as its data, suggest that, in VMC, the spoken and written communication do not seem to be balanced. Although some interspersed written comments contribute to the interaction, the main modality of the interaction is speech.

Studies on VMC often focus on one specific platform at a time and how the communication is mediated on that platform. Examples of such mediums are Skype and Periscope. Since every platform has their unique features, Tudini and Liddicoat (2016) state that “the findings of online talk investigation cannot be generalized across platforms and contexts, despite identified interactional commonalities” (p. 5). Giles et al. (2015, p. 48) agree by claiming that online data is inextricably linked to the web location or the type of software where it was posted and the context of it cannot be abstracted. They continue to explain that the characteristics of the data cannot be generalized to all talk nor to all online interaction.

New media reshapes set communication constructs, which may apply to face-to-face communication but not to mediated communication. Menzies and Johnson (2016, p. 4) note that there is no clear agreement on the definition of ‘new media’. Some researchers have, however, defined the concept in their work. For example, Menzies and Johnson (2016) define the term as “many-to-many online communication services and digital multimedia objects” (p. 1), whereas Ebren (2016) explains that the concept of new media includes “emerging communication technologies and applications, while simultaneously acknowledging the fact that all media formats at various points in time have been considered new” (p. 4). Grazia Sindoni (2019, p. 9) reminds that as new interactional patterns are emerging and evolving, the research boundaries related to VMC need to be redefined constantly.

Dynel (2014) addresses the differences of face-to-face and video-mediated communication that arise in new media in her study. She states that the dyadic classical models of interaction, which include only the speaker and the hearer, are not amenable to the various forms of communication in the new media, although production end and reception end are still referred to as ‘speaker’ and ‘hearer’, respectively, in technical terms. Dynel suggests, however that in cases where the first turn of communication is a video ‘sender’ seems preferable to ‘speaker’ because of the multimodal nature of the video. Goffman (1995, p. 129) agrees with the former

and suggests that terms ‘speaker’ and ‘hearer’, which imply only to sound, are problematic since sight, and at times touch, is organizationally significant in communication.

The findings of the studies discussed above set the framework for understanding the unique features of VMC, which are also present in the data of this study. In the data, the main modality is speech, as was in Grazia Sindoni’s (2019) study. Dynel (2014) notes that the number of recipients is unknown on YouTube, which is where the live stream of this data was originally aired. Licoppe and Tuncer (2019) state that technology limits the mutual visibility of what participants are able to perceive of each other’s environments. This is relevant to the analysis of this study since the set of the live stream is framed to show only a part of the room where the live stream is being recorded.

Whereas VMC often includes one-on-one communication, live streams consist of one-to-many communication. There is a streamer who hosts the live stream and the audience who can join in on the interaction via written comments that can be posted on the chat during the live stream. Live streams are usually hosted by public figures, such as celebrities or experts of their field, and they often have a set theme. Recktenwald (2017, p. 68) describes that in a live stream there is usually a broadcaster or a host, an activity, and an audience.

In live streams, the engagement between the video streamers and their audience is highly asymmetric as the audience’s involvement is mostly mediated through text (Licoppe & Morel, 2018, p. 638; Recktenwald, 2017, p. 68). Dynel (2014) defines comments as “written computer-mediated utterances posted by individual speakers, who direct them to multiple unidentified -- hearers” (p. 49). In her study, Dynel examined communication on YouTube and noted that the turns of communication may be verbal or non-verbal as well as written or spoken. In live streams, the mode of communication for the streamer is speech, whereas for the audience it is written comments. Herring (2010) states that “text-based CMC is conversation-like” (p. 1) rather than a conversation. Since live stream interaction is partly text-based, it should not be referred to as a conversation but rather as communication or interaction. Dynel (2014) agrees and states that the distinct type of computer mass-mediated communication on, for example, YouTube should be referred to as interaction rather than as conversation since the former encompasses more communicative forms than the latter. She further explains that

communication on YouTube can be classified as multi-party interaction since there are multiple recipients to the communication.

In addition to the communication being asymmetric, it can also be asynchronous or quasi-synchronous, depending on how the researcher defines it. In asynchronous communication, the reception of a written turn will be delayed in time, like in emails or online chats (Dynel, 2014, p. 46; Herring, 1999, p. 2). According to Hutchby (2014, p. 88), communication that experiences a temporal lag, which is caused by technology, between turn production and reception should rather be characterized as quasi-synchronous than asynchronous. Considering these definitions, the communication in live streams is quasi-synchronous because there is a temporal lag between the production and the reception of a turn that is solely caused by technology, whereas in asynchronous communication the lag can be caused by technology but additionally by the fact that the other person is not online.

Licoppe and Morel (2018, p. 655) found that sequential junctures in the streamer's speech are recognized by the audience and they may trigger more messages from the viewers. An issue that they noticed is that the viewers cannot control when the messages are posted and, thus, the sequential juncture may pass before the messages reach the streamer. In other words, the streamer may have already moved on to another topic before the comments appear on screen and are read. This thesis does not focus on sequential junctures and the timing of comments, but it is worth noting that, in the data, comments are often received once the sequential juncture has already passed. For example, a commenter that the streamers know personally continues to comment on a topic that was discussed earlier, and the streamers answer her in between the new topic. This does not happen with other commenters.

Licoppe and Morel (2018) have studied the systematic organization of interactions in live streams on Periscope, focusing on talking heads orientation, audience's expectation that the streamer attend to messages constantly, and organization of viewers' responses to streamer's talk. In their study, they identified a common practice of communication in live streams. They call the practice read-aloud and respond (RAR) (Licoppe & Morel, 2018, p. 639). According to Licoppe and Morel (2018, p. 652), RAR consists of two components: First, the streamer reads aloud the message and, second, they respond to its contents. They suggest that maximal cohesiveness and parallelism between the streamer's treatment of the message and the message itself is achieved with this practice. Recktenwald (2017) notes a similar practice in his study on

live streaming on Twitch. He describes in his article that the streamer chooses a message to topicalize and, thus, creates a point of reference for the audience before arguing further on the topic.

Licoppe and Morel (2018, p. 650) note in their study on Periscope live streams that the streamer is pressured to some extent to maintain visual access to the screen to read the comments before they fade away. As for the data of this thesis that was collected from YouTube, the comments do not fade away but are saved on the chat during the live stream, where the streamers may scroll through them, and they form the comment section on the saved video. Licoppe and Morel (2018, pp. 639–640) also explain in their study that the viewers may watch the live video feed as they would in VMC, but the only mode of interaction available to them is written messages, while streamers communicate by talking and gesturing but not writing. The data of Licoppe and Morel’s study was collected on Periscope, so the findings may not be applicable to all live streaming platforms.

In the data of this thesis, the communication is quasi-synchronous since the lag in communication is mostly affected by technology. However, the communication carries some features of asynchronous communication as well because the streamers are not constantly reading the messages. Instead, they choose one comment to discuss and once they have finished the topic, they pick a new comment to respond to. In their article, Licoppe and Morel (2018) describe the RAR practice they noticed in their data. The same practice is applied in the data of this thesis to respond to viewers’ comments. Likewise, the same modes of interaction apply: The streamer communicates by talking and gesturing, whereas viewers can only write comments. Although Licoppe and Morel’s data was collected on Periscope, the same practice and modes of interaction were found in the YouTube data of this thesis as well.

2.2 Showing sequences in live streams and video-mediated communication

According to McNeill (as cited in Licoppe, 2017, p. 63), *showings* share a generic organization of the showing gesture. First, the previously invisible or poorly visible object is brought into view. Second, the object is held in the ‘showing position’ to be viewed and, finally, the object is withdrawn from the showing position. Licoppe and Tuncer (2019, p. 546) describe *showing sequences* in VMC as a practice where a previously poorly visible object or material feature of

the environment is brought into view so that the co-participant can view and assess it, making the visual event the point of joint focus. According to them, the sequence consists of a preface sequence, manipulation of the showable object into showing position and appreciative talk on how the recipient of the showing has 'seen' the showable. Licoppe and Tuncer (2019, p. 548) explain that the distinctive and typical organization of showing sequences make showing sequences a clear instance of object-centered sequences.

Licoppe and Tuncer (2019, p. 548) define a *showable* as an object “a) that can be displayed and visually appreciated; b) that is not currently visible or visually available but can be viewed as 'ready-to-hand' with respect to manipulating it into visibility; and c) which can be understood and constituted so that sharing it visually may be a relevant joint project 'for us'” (p. 560). Licoppe et al. (2017, p. 5304) explain that their data suggests that the objects need to be 'topicalized' and maneuvered into a position where they can be jointly viewed and assessed for them to become relevant showables. Otherwise they are not immediately accessible. Fasulo and Monzoni (2009, p. 363) remind, however, that the referent in showing sequences is not always necessarily a physical object, but it can be anything about which an assessment can be made. Assessment of the present object can involve a variety of movements that are related to observation, indication, exposure, or modification (Fasulo & Monzoni, 2009, p. 363).

Licoppe et al. (2017) have examined showing objects in video-mediated collaborative settings and how the showings were carried out in the setting. They found that, in many cases, the showings in their data were relatively brief and the object was held in the frame for only a short moment. However, the showings were often a part of an extended discussion about the objects and their qualities. A common practice that they noted in their data was that, during the showings, the show-er positioned the object between themselves and the viewer, peering around or over the object to see the other participant and their reactions. This is unique to collaborative video-mediated communication, since in a live stream the streamers are unable to see their recipients and monitor their reactions.

Showing sequences in the data of this thesis occur quite similarly as described above: A readily available but poorly visible object is brought into view to be assessed and then withdrawn from the showing position. The showables are most often returned back into their original place. The showables in the data are physical objects, but the showable may only be a specific feature of an object rather than the whole object. In the analysis section, the showing sequences are

divided into three parts, which are initiation of showing sequences, showing sequences, and ending of showing sequences. Similarly as Licoppe et al. (2017) found in their study, the showings in the data of this thesis are often a part of lengthy discussions about the object or its features, but the showings may also act as an introduction into a broader topic that is then continued after the showing sequence is ended. Unlike in collaborative video-mediated communication, the streamer is not able to see their recipients and, thus, seeing their reactions on screen is not possible.

Talking and looking at objects is a common feature in face-to-face communication in a variety of settings as well as in mediated contexts of remote interactions (Licoppe et al., 2017, p. 5295). Licoppe and Tuncer (2019, p. 568) claim, however, that co-present situations offer less opportunities to display this visual version of the ‘orientation towards the co-participant’ than VMC does even if one might assume that such general showing sequences would also operate in co-present interaction. This is because the *shared domain of visibility* is much greater in co-present interaction. Licoppe et al. (2017, p. 5295) explain that, in mediated communication, the objects need to be configured and revealed in a particular way to achieve the aim of the showing. The objects can be shown by turning the camera view or bringing the objects manually into a viewable position (Licoppe, 2017, p. 64). Licoppe et al. (2017, p. 5300) found in their study that the camera or device is usually kept in a fixed position in a fixed location, which enables the show-er to handle and manipulate objects with both hands in front of the camera.

Although topics in live streams may be initiated by both the streamer and the viewers, the *initiation* is more commonly carried out by the viewers (Licoppe & Morel, 2018, pp. 659–661). Licoppe (2017, p. 71) observed in his study that, in video calls, initiations of showing sequences are often carried out at sequential positions where topical shifts may be relevant. Showing sequences, which are inherently multimodal in nature and coupled to their environment, can act as an alternative to introduction to a new topic at topical boundaries in interaction (Licoppe & Tuncer, 2019, p. 548). Licoppe and Morel (2018, p. 659) claim that when strangers with no prior mutual history encounter each other, the communication depends on local resources to be used to initiate interaction. In live streams, the topic initiation may, for example, arise from a viewer noticing a local resource and requesting the streamer to show it (Licoppe, 2017, p. 72). This can also be seen in the data of this thesis. Licoppe and Tuncer (2019) state that “[t]opic boundaries provide a slot for initiation of a showing sequence, as a new and different line of

talk and embodied conduct is relevant” (p. 552). They also explain that, through showings, the co-participants can *demonstrate sensitivity* to what the other can or cannot see during the ongoing interaction.

According to Licoppe and Tuncer (2019), “sudden visibility projects specific responses in talk and embodied conduct, in relation to the way the recipient suddenly ‘sees’ the relevant ‘showable’” (p. 547). In showing sequences, one participant acts as the active show-er, whereas others are usually relatively passive recipients (Licoppe & Tuncer, 2019, p. 567). Licoppe and Tuncer (2019, p. 567) suggest, however, that the recipients get more involved by initiating the showing or requesting to change how the showable object is shown. Showings can be divided into two categories: *gestural showing* (talking-and-showing), where the object is recognizably relevant to the interaction, and *showing sequences* (showing-and-talking), where the object is the central focus of the interaction (Licoppe, 2017, p. 64). Licoppe and Tuncer (2019, p. 567) describe the same categorization in terms of *embeddedness* to previous topical talk: When the object receives the central focus of the interaction it has *low embeddedness*, whereas when the sequence latches onto previous talk it has *high embeddedness*. Further, the showing sequences can be categorized as *evocative* when the recipient is assumed to be knowledgeable about the show-worthiness and relevancy of the object, or as *informative* when it is presupposed that the recipient has deficit knowledge about the showable object (Licoppe 2017, p. 72; Licoppe & Tuncer, 2019, p. 567). Licoppe and Tuncer (2019) state that “the less the recipient is expected to know about the showable, the more preparatory work may have to be done to introduce the showing” (pp. 561–562).

The data of this thesis indicates that showing sequences may include pointings as a gestural attention grabber within the sequence. According to Licoppe (2017, p. 64), showing differs from pointing in terms of visual access: Showing highlights previously limitedly accessed targets, whereas *pointing* uses targets already accessible to all participants. Mondada (2014, p. 121) states that pointing is a resource in interaction that is finely tuned within the temporality of the participants’ conduct in the interaction. One may use other referential resources to enhance the pointing action, such as a spatial deictic ‘here’ or ‘there’, which also works as an attention-getting device (Mondada, 2014, p. 121). She continues to explain that the interaction can progress onward from the pointing once the progressivity of the action is secured by the participants responding both verbally and bodily to the action, after which the topic can be further elaborated on. Stukenbrock (2018, p. 53) observes that the pointing participant who has

summoned the other recipient's gaze with a deictic device will gaze back at the recipient to check that they are looking where they are asked to. In the data of this thesis, it was found that pointings may occur within a showing sequence: Once the showable is in showing position, it is accessible to all participants. Since the object has already been made accessible to the participants, features on it can be pointed at.

The previous research cited and discussed here create the framework for the current study. The current study adds to the previous research by combining the showing sequences in VMC with that of interaction in live streams. In the previous research, these topics have been studied separately. One fundamental difference considering the showings in VMC and live streams is that the show-ers in live streams cannot monitor and see their recipients' reactions to showings like they can in VMC. Otherwise, the showings progress in a similar fashion. In live streams, the recipients can react to the showing via comments, but the comments may not be read before the topic has already been concluded. In VMC, the participants may initiate or ask for the other to initiate a showing at a sequential juncture. In live streams, the streamer themselves may decide when the juncture occurs, and they can either begin a new topic on their own or read comments to choose a new topic from.

3 Methodology and data

The method of this qualitative study is conversation analysis (CA). The first subsection will discuss CA as a method and its applicability to examining online interaction and communication. CA and how it is applied in CMC is further discussed in section 3.1.1. Transcription, which is tightly connected to CA, is discussed in section 3.1.2, focusing also on handling multimodality in transcription and transcripts. The subsection 3.2 will introduce the YouTube live stream data studied in this thesis. The final subsection 3.3 introduces the research process, including the data processing that was performed on the data to prepare for the analysis, as well as explains how the analysis was conducted.

3.1 Conversation analysis

The method used in this thesis is CA. The method of CA was originally developed in sociology in the 1960s, but since then the method has been applied to various institutional and social contexts (Tudini & Liddicoat, 2016, p. 1). Today, CA is practiced also by linguists, anthropologists, and communication scientists, in addition to sociologists (ten Have, 2007, p. 8). Pallotti (2007, p. 37) states that CA is a way to describe human behavior based on observation of everyday interactional practices. He continues to explain that CA is an action-oriented approach, where linguistic productions are seen foremost as actions within social exchanges. Ten Have (2007, p. 9) states that CA's perspective on human interaction is procedural and organizational, where the analytic purpose is to explain how people act and not why. According to Drew (2004, p. 75), CA aims to discover the practices through which participants produce and understand conduct in conversation. He explains that these practices are uncovered by identifying patterns in talk. He adds that CA can be applied to all forms of talk-in-interaction (2004, p. 73). Sidnell (2010, p. 17) summarizes that CA is about the close observation of the world and that the actual practice of CA involves methods for collecting, organizing, and analyzing patterns across varying instances.

Conversation analysis research is based on naturally occurring data, which can be recorded audio-visually for research and transcribed in detail as the data is processed (Drew, 2004, p. 78). Ten Have (2007, p. 9) claims that the data of CA is thus less 'artificial' than the data of interviews or other research-provoked methods, which are products of personal intentions. According to ten Have (2007, p. 8), the emergence of CA was enabled by the availability of

audio recording. Additionally, he claims that the participants' verbal production forms the baseline of interaction. However, according to Tudini and Liddicoat (2016, p. 2) it has been acknowledged in CA that its main focus, 'talk', should be more broadly understood to also include other forms of communication in addition to oral language. In communication, participants use multimodality to shape the content and structure of their talk (Kamunen, 2020, p. 31), making multimodal conduct and embodiments a fundamental part of communication that should not be disregarded.

3.1.1 Conversation analysis in computer-mediated communication

Already in the 1980s when CMC was only emerging, it piqued the interest of many researchers who were working on analyzing talk-in-interaction (Giles et al., 2015, p. 46). Grazia Sindoni (2019, p. 9) states that research boundaries in VMC should constantly be redefined because new interactional patterns are evolving and emerging. Giles et al. (2015, p. 46) state that it is difficult to define whether completely new forms of analysis should be created or if the existing methods can be applied to online data. They continue that it is likely that new research methods will arise when new mediums of communication are born and evolved. New research methods should be evolved when the data cannot be analyzed using the existing methods. It is possible, however, to apply the existing methods in the analysis as long as the applications are explained thoroughly, and they produce trustworthy research findings. It is worth considering when a method is still an application of an existing method and when the application has evolved enough to become its own method rather than an application of the previous one.

Tudini and Liddicoat (2016, p. 7) remind that CA as a method is not completely applicable to studies on CMC because the method was developed for spoken interaction and, thus, written and multimodal communication pose some problems for the use of CA concepts and methods. The same issue is also mentioned by Giles et al. (2015, p. 48): Since CA centers on spoken interaction, it is assumed that the communication is linear, which the asynchronous online communication problematizes. They add that many openings of online discussion threads may go unanswered, making them only conversation-like, rather than conversational. Another aspect noted by Tudini and Liddicoat (2016, p. 7) is that the technology frames and affects how the interaction is conducted and understood. For example, the participants share only a part of their contexts with each other through the technology, but the rest of the context is also pertinent to understanding the interaction. Giles et al. (2015, p. 49) suggest, however, that the extent to

which the application of traditional CA to online data causes issues depends largely on the researcher's interests and research questions.

Giles et al. (2015, p. 50) suggest that the starting point for digital CA should be in collecting naturally occurring online data. Such online data can be found on chat forums, personal VMC or live streams. Collecting naturally occurring data online can be challenging. Although chat forums are available online, it requires ethical consideration whether they can be used as research materials. Recording people's personal VMC requires collecting informed consent from the participants and allowing them to withdraw from the study at any point. Another challenge can arise in the technological skills of the participants: They have to be instructed to start the recording prior to the communication, which requires knowledge on softwares and their functions. Live streams are a public form of naturally occurring online data. The topic of the live stream may have been planned in advance, but otherwise it is next to impossible to plan the interaction. Of course, the streamers can themselves decide which comments to respond to. The responses cannot be scripted, however, unless the questions were sent in prior to the live stream, but that would somewhat bypass the purposes of a live stream.

The researchers' concerns on the applications of CA to CMC are discussed here in the light of the current study. In this study, the applications of CA are still relatively small: The focus is on spoken interactions and embodiments of naturally occurring communication that has been recorded. Although the viewers are communicating through written comments, this study examines the spoken interactions of the streamers, who are involved in a conversation with each other. Live streams are a form of mediated communication that occurs online, which makes the data different from what may be considered more traditional data for CA. However, the method of this study remains very similar to traditional CA, so it is justified to call the method CA.

3.1.2 Transcription in conversation analysis

Transcription is the process by which speech is turned into writing (Bezemer & Mavers, 2011, p. 191; Ayaß, 2015, p. 507). Recktenwald (2017) describes transcripts as “significant transformations of the original interaction into a textual representation” (p. 72). According to Ayaß (2015, p. 506), many current processes and techniques of transcribing originated in CA and, thus, CA is the method that made transcription a central methodical element in research.

Bucholtz (2007) notes that “transcription has become a central tool for the analysis and representation of spoken language” (p. 784) in human sciences. Mondada (2007, p. 810) agrees that transcription is embedded within various research practices. Ten Have (2007, p. 32) states that the objective of CA transcription is to make ‘how’ and ‘what’ was said available for analytic consideration.

Mondada (2007, p. 810) states that transcripts themselves are not data, but secondary products of representation that cannot be autonomized from their primary data—the recordings. Ten Have (2007) explains that “transcripts function as a kind of mediation between the raw data, the recordings, and the to-be-constructed images” (p. 32). Transcription necessitates audio or audio-visual recordings, relying on technical devices rather than the researcher’s memory (Ayaß, 2015, p. 507). Mondada (2007, p. 811) also notes that technology has become a focal aspect of transcription processes as it intervenes in every step of producing data and data manipulation. She reminds that transcription is an unending process where the transcriber reformats the transcript continuously. It is also stated by ten Have (2007, pp. 31–32) that transcripts are unavoidably incomplete selective renderings of the original recordings. According to Recktenwald (2017, p. 72), transcripts are always selective, and highlight chosen aspects of an interaction while excluding others. Furthermore, he notes that the properties that are excluded from the transcript are not considered in the analysis. Ayaß (2015, p. 510) suggests that transcription is a systematic, rule-governed, and controlled process, where the transcripts always mirror the transcriber’s interpretive efforts. Bucholtz (2000, p. 1440) agrees and states that completely objective transcription is impossible.

Recktenwald (2017, p. 72) explains that transcripts of high fidelity that encode interactional features such as interruptions or overlap enable the reader to imagine how the communication unfolds. According to Ayaß (2015, p. 508), the transcript should reflect the materials as authentically as possible. She continues that exactitude can be treated with some flexibility depending on the materials and the research questions of the study. Bezemer and Mavers (2011, p. 195) suggest that features that are not relevant to the analysis may be excluded from the transcript. They state that the accuracy of a transcript is dependent on the particular professional vision applied in the analysis, rather than on the degree of replication of reality. Mondada (2007, p. 811) agrees and describes transcription as an interpretive activity, where the analytical interests of the transcriber guide the selection of details preserved in the representation of the

interaction. For example, transcripts that do not contain details of speech, such as prosody, pauses or repairs, are commonly used in non-linguistic research where the content rather than the language of the speech is studied (Bucholtz, 2007, pp. 786–787).

Bezemer and Mavers (2011, p. 204) demand transparency from researchers on what has been excluded from the transcripts and how it affects the analysis and reader interpretation. A responsible transcriber is aware of their role as the creator of the text and the ideological implications of the product (Bucholtz, 2000, p. 1440). Ayaß (2015, p. 509) states that the transcripts should be at least partly done by the researcher themselves to enable the analysis.

Since the aim of this study is to describe the showing sequences in the live stream, the focus is on the content rather than on the features of speech. In the transcripts, the certain details of speech have not been included because they are not relevant to the analysis and reaching the aim of the study. Likewise, embodiments that are not connected to the verbal communication or the actions of showing have been excluded from the transcripts to make the transcripts more comprehensible. Such embodiments include, for example, taking a sip of water or readjusting clothing.

The growing interest for multimodality in communication has led to changes towards visualization and variability in transcripts (Bezemer & Mavers, 2011, p. 192). Ayaß (2015, p. 506) states that the new audio-visual data has led to new features, such as people's physical orientation, to become central in CA. Bucholtz (2007, p. 796) claims that variability in transcription, regardless of deliberateness, may alter and limit how the published data is read and interpreted. Transcription of spoken material is highly standardized, whereas that of visual material is more arbitrary by comparison (Ayaß, 2015, p. 517; ten Have 2007, p. 8). Mondada (2007, p. 819) suggests that the standardization of video data transcription is more challenging to achieve because multimodal representation of data always includes a particular analytical accomplishment.

In this thesis, the talk of the participants has been transcribed according to Jefferson's (2004) conventions. The interaction between participants in the live stream is examined by taking into consideration their multimodal conduct. The potential challenges of multimodally transcribing video data have been addressed by following the conventions developed by Mondada (2019).

3.2 Live stream by Arne and Carlos

The data used in this study is a live stream that aired on YouTube in 2019. The data was retrieved by searching for “knitting live stream” on YouTube, and the live stream of Arne Nerjordet and Carlos Zachrison from 2019 was found. The live stream is titled *RERUN - LIVE from ARNE & CARLOS - Creative goals for 2019 - February 16th 2019*, and it is 58 minutes and 53 seconds long. The topic of the whole live stream is creative goals for the coming year, which was a topic suggested by a fan. The main objective of the live stream is to respond to viewers’ comments and discuss the streamers’ and viewers’ goals. The live stream begins with an empty set and the streamers appear after two minutes of airing. There is no specific structure to the live stream. To begin, Arne and Carlos explain how they have been and then how the topic was chosen. The live stream continues by Arne and Carlos picking comments to read aloud and responding to them and also discussing their projects without any prompts. Reading and responding to comments allows the streamers to interact with their viewers in a conversation-like manner. Both the streamers and the audience are able to see the live chat, where the viewers’ comments appear. On the saved video on YouTube, the live comments do not appear on the video, but they can be read in the separate comment section.

Arne and Carlos are Scandinavian textile artists, fashion designers, authors, and YouTubers well-known for their colorful and original designs, which are influenced by their Scandinavian background and rural life in Norway. The duo established their artist name ARNE & CARLOS in 2001. Arne and Carlos have published ten crafts books since 2010 and their work has been translated up to 15 languages. The men have received awards for their work, which have also been showcased in multiple museums. (About us, n.d.) Arne and Carlos have been active on YouTube since 2015. Their channel is described to share tutorials on home, gardening, and lifestyle, especially regarding knitting and crocheting (ARNE & CARLOS, n.d.). Arne and Carlos have organized live streams regularly on their YouTube channel from spring of 2018 until fall of 2020. There seems to be a certain theme for each live stream involving unfinished projects or leftover yarn, for example.

The setting of the live stream is in one of Arne and Carlos’s libraries. The men are sitting in armchairs, Carlos on the left in the green one and Arne on the right in the red. The live stream is filmed with a static camera and a set frame. The focus of the camera is adapted accordingly when needed, which reveals that there is some kind of filming crew on set, although they cannot

be seen nor heard on the recording of the live stream. Another indication of an on-set-crew is that Arne and Carlos are told the viewer count twice during the live stream, Additionally, they sometimes glance to the right edge of the frame for affirmatives or to otherwise receive some communication.

3.3 Research process

This section will explain the research process that underwent during the making of this thesis. Both the technical and the analytical processes are presented here in detail to make the research process transparent to the readers of the study. At the end of the section, the ethical implications of the study are addressed as well.

To begin the data processing, the hour-long live stream video and a separate audio track were downloaded on to a password protected hard drive. The complete live stream was watched from the beginning until the end, and various showing sequences and pointings were marked down from the video. A total of ten showing sequences were found. Next, the five showing sequences suitable for the topic of the thesis were chosen for further analysis. Each showing sequence was then divided into three separate sections. Those sections are the initiation of the showing sequence, the showing sequence, and the ending of the showing sequence. Finally, each of the three sections was transcribed and analyzed separately.

The complete video was clipped using Microsoft Movies and TV and the audio using Audacity to get appropriate clips of the data for transcription. During the transcription process, the video was replayed on VLC media player and the audio listened to on Audacity. Both softwares allow one to manipulate the speed of the player, which eased the transcription process. In addition, Audacity allows to choose which audio track to listen to if there are multiple separate tracks. The data of this thesis had two tracks, one for each streamer. The images included in the transcripts are screen shots of the video that were clipped to the appropriate size by using Paint software.

The transcribing was conducted as follows. First, the speech of the streamers was transcribed by listening to the audio several times at different speeds to catch any underlying meaningful nuances. Transcribing the speech included also noting in and out breaths as well as non-lexical sounds. Additionally, the length of pauses in between units of speech were measured with

Audacity. Second, the multimodal embodiments were added into the transcript by closely examining the streamers' gaze and gestures connected to the occurring showing sequence. The video was played at a slower speed to analyze when exactly the gesture began or gaze shifted in relation to speech. Embodiments and gaze that were not connected to the current interaction and showing in any way were not included in the transcripts. This improves the readability of the finished transcript. Once the multimodal communication had been included, appropriate screen shots of the video were taken and inserted into the transcript to finalize the transcript. Adding the images into the transcript shows the reader concretely what is happening on the set of the live stream at the given moment.

Once the transcripts were finished, the process of analyzing began by replaying the video clips while also reading the transcripts to notice any details of the interaction. When analyzing the initiations of showing sequences, it was examined who initiates the showing sequence, whether it was a viewer or the streamers themselves. Since previous research has noted that RAR practice is widely used in live stream interaction, its use was considered for each initiation. The motivation of the initiation and, thus, the showing were examined as well. The initiations may also include bringing forth the previously poorly visible showable, in other words preparing for the showing sequence.

In the beginning of analyzing the showing sequences, the type of the showing was identified based on the classifications of previous research. The classifications that were considered for each clip were whether the showing was evocative or informative and whether it had high or low embeddedness to previous talk. As for the verbal conduct during the showing, attention was paid to the possible use of deictic or other attention getting devices. Furthermore, the sensitivity that the streamers demonstrated to the viewers' limited view on the surroundings was analyzed.

In the analysis of the endings of showing sequences, it was analyzed whether the ending involved only the ending of the showing while the topic was continued or whether the whole topic was concluded along with the showing. Related speech patterns were also considered, such as concluding utterances or intonations. It was noted during the analysis that the transition from showing to ending the showing is not as clear as the transition from initiation to the showing. The endings seem to take place quite abruptly after the showing.

To address the ethics of the study, the participants filming the live stream did not know at the time of filming that their communication would be studied. There are no ethical issues in using the data, however, because the saved live stream is publicly available online.

4 Analysis

In this section, excerpts of showing sequences will be examined. This study will focus on explicit showing sequences rather than on gestural showings amongst talk. The excerpts analyzed here are not the only showing sequences in the live stream. In the live stream, there are ten showing sequences of which five will be discussed and analyzed in this thesis. These particular excerpts were chosen for closer analysis because they fit the scope of the study and are representative examples of the showing sequences that occur in the live stream. In the excerpts, the participants are performing showing sequences, where they present showable objects to the audience. The focus of the analysis will be on the embodiments that are involved in the action of showing and how they are combined with speech during the showing. In addition, the involvement of gaze and how it is involved in the current interaction will be briefly discussed as well.

In the transcripts, the following symbols indicate the multimodal conduct of the participants, Arne and Carlos:

*	Arne's gaze	~	Carlos's gaze
^	Arne's embodiments	+	Carlos's embodiments

The meaning of other symbols appearing in the transcripts are defined by Jefferson's (2004) and Mondada's (2019) transcription conventions for verbal and multimodal conduct, respectively.

The analysis section has been separated into three subsections. The first one will examine how the showing sequences are typically initiated in the live stream and whether the initiation is carried out through viewers' comments or by the streamers themselves. In section 4.2, the carrying out of showing sequences will be analyzed through five example excerpts that are continuation to the examples of subsection 4.1. Finally, the endings of the showing sequences will be examined in section 4.3 through three examples. The findings of each subsection are summarized in the final paragraph of the section.

4.1 Initiations of showing sequences

In this section, the initiations of showing sequences are examined. An initiation contains either verbal preparation for the showing in the form of information sharing or embodiments that prepare for the showing itself. An initiation sequence can also use a form of showing, but the sequence has been interpreted as an initiation because preparatory talk is involved, and the showable will be better shown and more easily viewed during the actual showing sequence. Showing during the initiation can be considered a type of preview of the showable where it may be shown briefly, but its details will not be discussed further until the actual showing sequence begins.

First, four examples of viewers' initiation are analyzed, after which one excerpt of initiation by the streamers is examined. The four initiations are interpreted to be carried out by the viewers since their comments initiate the showing sequences, although the streamers choose which comments to read aloud during the live stream. The excerpts are organized from the most explicit request for the showing to the most implicit request. An initiation may contain a request for a showing or an assessment of an object that can be interpreted as a request to see the object better. After examining the viewers' initiations, one instance of streamers' initiation is analyzed. The fifth excerpt is the only one where the streamers initiate a showing, although they initiate topics otherwise, during the live stream. To conclude this section, the findings of the analysis on the initiations will be summarized.

The topic of the first excerpt is the sweater that Arne is knitting during the live stream. The sweater has not been knitted by him, but he is remodeling it to improve the fit. A viewer asks Arne to show the sweater by lifting it up. The sweater discussed in this excerpt is mentioned and shown in the live stream multiple times, but this showing sequence discusses the sweater most thoroughly.

Arne is the more active participant in this interaction since he picks up a comment that is directed at him. To set the context for the audience, Arne applies the RAR practice by reading the commenter's name and comment aloud to the audience to set the context. Interestingly, Arne begins to prepare for the showing before he has read the comment aloud (line 04). In other words, he is preparing for the showing sequence even before the audience knows the context

of his embodiments. Since the comment is directed at Arne, Carlos only reacts to help Arne in pronouncing the commenter's name. Otherwise, Carlos knits through the initiation of the topic.

1 Reworked sweater (T 00:22:15)

```
01 CARLOS: [some reason]
    carlos  >>screen-->
    arne    >>screen-->
02 ARNE:   [a:nd]^
    arne    ^points at screen-->
03         (1.1)
04 ARNE:   <L P^ Bi:rdslley?>
    arne    -->^.....-->
05         (0.5)
06 CARLOS: [<Beardsley> >or Birdsley<]
07 ARNE:   [Beardsley] ^she wants me >or he or she<
    arne    -->^lifts sweater-->>
08         wants me ~to hold up the sweater,~*
    carlos  -->~sweater----->~knitwork-->>
    arne    -->*sweater-->>
```

Arne begins to read a new comment while Carlos is still finishing the last topic that was discussed (line 01–02). Arne points at the comment he is beginning to read (line 02). He tries to read the name of the commenter (line 04) but is unsure about the pronunciation, which Carlos then helps him with (line 06). Throughout this they are both looking at the computer screen in front of them to read the name and the comment (line 01–08). Arne states that the commenter wants to see the sweater he is knitting (line 07). He has already begun preparing to lift up the sweater (line 04) before he has read the comment for the audience. At the end, he begins to lift up the sweater as he agrees to the commenter's request (line 07). This initiation sequence includes an explicit request from a viewer for the streamers to show the sweater. Since there is a request, the streamers' motivation for the preparation of the showing is clear: The streamers are agreeing to the request.

The topic of the second excerpt is the sweaters that Arne and Carlos are wearing. They receive a comment from a viewer assessing the sweaters by saying that they love them and stating that they want to make a similar one as well. Arne and Carlos choose to read the comment aloud and respond to it, because they are looking for a comment that would be connected to the theme of the live stream, which they state explicitly.

The topic is initiated by a viewer who is interested in the sweaters Arne and Carlos are wearing. Carlos picks out the comment, reads it out loud for Arne and the audience before answering the viewer's question. Carlos is responding to the comment using the RAR practice, ensuring the cohesiveness between the response and the comment itself (Licoppe & Morel, 2018, p. 652). This initiation does not contain a showing, but a pointing hand gesture (line 05, line 06) by Carlos. Arne acknowledges the gestures with his gaze, which allows the communication to continue.

2 Worn sweaters (T 00:09:20)

01 **CARLOS:** let's see if we can find somebody here with a goal.^ uhh.
 carlos >>screen-->
 carlos >>scrolling with RH-->
 arne >>screen-->
 arne >>knits^

02 ↑oh, here's one,
 03 **Christi:ne Borgatti she says I love +your striped sweaters,**
 carlos -->+RH lap-->
 04 ^that's what I want *to make (.) a sweater from ~leftovers,
 carlos -->~camera-->
 arne -->*knitwork-->
 arne ^adjusts knitwork-->

05 +*↑you* got it↑, it's a sweater ~from* leftover# and
 carlos -->~Arne-->
 carlos -->+points at own sweater-->
 arne -->*cam*Carlos----->*sweater-->
 fig #fig.2.1



2.1

06 +^another sweater from #[leftovers]~+
 carlos -->~camera-->
 carlos -->+open RH Arne's sweater----->+RH on lap-->
 arne -->^
 fig #fig.2.2



2.2

07 **ARNE:** [it's] not quite~ leftovers:
 carlos -->~Arne----->
 08 ~because we had *one ^ball in *each color^
 carlos ~screen-->
 arne -->*camera----->*Carlos-->
 arne ^pointing RH in the air^
 09 **CARLOS:** well okay~ +so the thing is*
 carlos -->~camera-->
 carlos -->+open RH gesture-->>
 arne -->*camera-->
 10 **CARLOS:** [2it's< it's<^ it's actually a project*
 arne -->*knitwork-->
 arne ^adjusts knitwork-->
 11 **ARNE:** [2hehhehe]
 12 **CARLOS:** ~uhh.~ ^we work many of you guys [3know we] work with
 carlos -->~right~camera-->
 arne -->^knits-->>
 13 a brand called* ~Schachenmayr,~* >it's a German brand?<
 carlos -->~Arne----->~camera-->>
 arne -->*camera----->*knitwork-->>
 14 **ARNE:** [3.hh]

The excerpt begins when Carlos looks for a comment that would mention a creative goal that a viewer has (line 01). Both of the streamers are looking at the computer while Carlos is searching for the comment. He finds one which states that the viewer wants to make sweater from leftovers, similar to the ones Arne and Carlos are wearing (line 04). As he finds the comment, they both turn their gaze from the computer screen: Carlos looks at the camera and Arne resumes his knitting (line 04). Carlos initially answers that both of the sweaters are indeed from leftovers while pointing first at his own sweater and then gesturing with an open hand at Arne's (line 05–06, figure 2.1, figure 2.2). Arne disagrees, however, that the yarns they had were not leftovers, but a new project, and he looks at the camera and then at Carlos (line 07–08). Carlos then corrects himself and continues to explain why the sweaters were knit while gesturing in the air with his right hand (line 09–13).

In this initiation, there is no showing since showings involve previously poorly visible objects (Licoppe, 2017, p. 64). During this topic initiation, Carlos identifies the topic of discussion by pointing first at his own sweater and then pointing with an open hand gesture at Arne's sweater. According to Mondada (2014, p. 121), the interaction can progress once participants have responded to the pointing. In this excerpt, Arne responds to Carlos's pointing by looking at what is being pointed at. Although pointing differs from showing, the pointing carried out by Carlos shares some aspects with gestural showing, where the object is relevant to the discussion (Licoppe, 2017, p. 64) but not the central focus of it. Arne responds also verbally by disagreeing with what is being said, which allows for the interaction to progress to Carlos's informative explanation on the sweaters' inspiration.

The streamers choose this specific comment to include in their live stream because it is connected to the theme of the live stream, which is the creative goals of the coming year. The comment also contains an appreciative assessment of the sweaters. Since the atmosphere of the live stream is positive, the comment is appropriate to the live stream. The appreciative assessment may also be interpreted as a request to know more or see the object better.

In the third excerpt, the topic of discussion is a pillow that is on the chair behind Arne. The viewer is asking whether the pillow is self-made. During this initiation, the viewer already receives her answer, but the streamers continue the topic onto a showing sequence that is discussed in excerpt 7 in section 4.2.

This initiation, like the previous one, contains a positive assessment of the object of interest. The streamers carry on from their answer to prepare for a showing since the pillow is barely visible to the audience, although the viewer is not requesting to see the pillow completely. Thus, the motivation for the showing remains unclear. This excerpt has been interpreted to be initiated by a viewer, however, because their comment encourages the streamers to begin the showing sequence even if it was not requested. To begin the initiation, the complete comment is read aloud to the audience to set the context for the discussion.

3 Pillow (T 00:20:59)

```
01 CARLOS:  let's see. Dorinda Contreaz says +I'm always amazed
02          (0.2)
           carlos  >>screen-->
           carlos          >>RH on computer+
03          how a piece of yarn becomes >so many wonderful^ things.<
```

```

arne                                     >>leans forward^adjusts
knitwork-->
04   .hh did you make the your pillow on your chair?
05   *↑yes, ~we did.↑*^ the pillow is, # [uhh<]~
carlos   -->~pillow----->~front corner-->
arne     >>screen*pillow behind-->*pillow left-->
arne     -->^...-->
fig

```

#fig.3.1



3.1

On line 01, Carlos reads a comment out loud while both Arne and Carlos are looking at the screen. Once the comment is read, they both turn to look at the said pillow (line 05). Carlos answers that the pillow is self-made (line 05), and Arne prepares to pull the pillow from behind his back for the showing by turning to his left and starting to grab the pillow, as seen in figure 3.1.

The topic is initiated by a viewer who has noticed a local resource, a pillow, in the background. Similarly Licoppe and Morel (2018, p. 659) found that strangers' interaction may rely on local resources if they do not have any prior mutual history. The RAR practice is applied in the initiation again to set the context. Next, both Carlos and Arne turn to look at the pillow in question to acknowledge the topic of discussion (line 05). At the end of the excerpt, Arne begins to pull the pillow from behind him to a better viewable position, thus demonstrating sensitivity (Licoppe & Tuncer, 2019, p. 547) to the viewer's limited view on the pillow.

Excerpt 4 examines the initiation of a showing sequence of a blanket. There is a blanket on Carlos's lap, and it is receiving attention from the viewers. In the following excerpt, Carlos is answering multiple comments at once regarding the blanket, thus freely applying the RAR practice since a comment is not explicitly read aloud. He does not specify what all the comments are saying as he prepares for the showing, but he states that someone wanted the blanket to be shown. This acts as the motivation for the showing and initiation.

4 Blanket (T 00:24:55)

01 CARLOS: *~people are+ also commenting the blanket*
 carlos >>~computer-->
 carlos +RH on blanket-->
 arne *screen----->*knitwork-->
 02 that I'm sitting*# (.) with.* (.) .hh (.)
 arne -->*to right-->*knitwork-->
 fig #fig.4.1



4.1

03 ~which+ is +*keeping# me* nice~ and toasty,~+
 carlos -->~blanket----->~Arne----->~
 carlos +lifts RH+smooths RH on blanket----->+
 arne -->*blanket--->*knitwork-->
 fig #fig.4.2



4.2

04 ARNE: †nice and [toasty†]
 05 CARLOS: ~[uhh] +and *somebody wanted us to show it* (.) uh+
 carlos ~blanket-->>
 arne -->*screen----->*knitwork-->>
 carlos +places knitwork on floor----->+

Carlos introduces the topic that is going to be discussed next, which is the blanket on his lap (line 01). Arne looks to the right at the blanket on the back of Carlos's chair (figure 4.1). Carlos smooths his hand over the blanket on his lap as he describes it (line 03) and looks at Arne. This is when Arne also looks at the blanket in question (figure 4.2). He repeats what Carlos is saying (line 04) but does not look at Carlos. Finally, Carlos states that viewers want to see the blanket and prepares to show the blanket by placing his knitwork on the floor so that is not in the way (line 05).

Arne first looks at the blanket that is folded on the back of the chair (figure 4.1) before recognizing that the topic is the other blanket (figure 4.2). Carlos's hand movement on the blanket seems to draw Arne's attention to the right blanket, although Carlos also verbally expresses that the blanket in question is on his lap (line 02). Without the movement of Carlos's hand, it may be that the confusion on the topic may have continued longer. Arne acknowledges the new correct topic by repeating the phrase that Carlos is saying. At the end of this initiation, Carlos prepares for the showing of the blanket by reaching forward and placing his knitwork on the floor, which he does only once he clearly states that he is going to show the blanket. In other words, he has already explicitly stated the context of his embodiments before he proceeds with them.

Unlike in the preceding three examples, in this fourth excerpt, the RAR practice is not applied similarly as no specific comment is read aloud. Instead, Carlos is answering a multitude of comments at once. He does apply the RAR practice to a certain extent by stating that viewers are commenting on the blanket. He does acknowledge that someone wants to see the blanket, but we cannot know whether most of the viewers are assessing the blanket or explicitly asking for Carlos to show it. Since at least one of the viewers wants to see the blanket, the motivation for the showing is established: The request acts as the motivation for the showing.

The final excerpt of this section analyzes an initiation where the streamers initiate the showing sequence. The streamers initiate topics by themselves during the live stream, but this is the only occasion where a showing sequence is initiated by them.

In the fifth example of initiation, Carlos suggests that they discuss another creative goal that they have for the year, which acts as the introduction into the topic. The creative goal is a shirt that Arne is going to cover up completely with embroidery. During the initiation, the origin of the shirt is explained as well as why the shirt will be covered up.

The motivation for the showing is to discuss a goal that the streamers have, as appropriate to the theme of the live stream. Although Carlos initiates the topic, Arne speaks more because the discussed project is his. Once Arne recognizes what Carlos is talking about, he turns towards the shirt and lifts it onto his lap. Arne displays sensitivity to the viewers limited view throughout this excerpt by turning and adjusting the shirt, which was previously not visible to the audience.

5 Embroidered shirt (T 00:36:37)

01 CARLOS: umm.^ (0.5) how about ~umm
 carlos >>screen-->~shirt behind-->
 arne >>knits^leans forward-->
 02 showing another ^creative goal that we~ have?*

carlos -->~Arne-->
 arne >>screen*shirt-->
 arne ^leans back-->
 03 (0.4)
 04 ARNE: ^~oh# this one?
 carlos -->~shirt-->
 arne -->^turns back-->
 fig #fig.5.1



5.1

05 CARLOS: ^↑yeah
 arne -->^RH grabs shirt-->
 06 (0.6)
 07 ARNE: this is ^another one because, .h~ (0.8)+
 carlos -->~screen-->
 arne -->^turns, lifts shirt-->
 08 ~I ^like to buy ~all these *western shirts,* (.) or this<
 carlos -->~shirt----->~screen-->
 arne -->*camera----->*shirt-->
 arne -->^adjusts and turns shirt-->
 09 (0.3)
 10 I find them< find them in stores in: in America,#
 fig #fig.5.2



5.2

11 in<* and in Tokyo?*

arne -->*camera----->*shirt-->
 12 (0.5)
 13 because, (0.5)
 14 ~but sometimes I *get so* bored of wearing them
 carlos -->~shirt-->
 arne -->*camera*shirt-->
 15 a:nd somet:mes (0.4) I just need to (0.5)

16 ^do~ #something.*^
carlos -->~screen-->
arne -->*cam-->
arne -->^open hand gesture^adjusts shirt-->
fig #fig.5.3



5.3

17 so* this< this is actually my goal is to ^cover ~the
carlos -->~shirt-->
arne -->*shirt-->
arne ^lifts shirt-->

18 whole<~ (0.7)
carlos -->~screen-->
19 shirt up^ (.)with* embroidery.*
arne -->*camera----->*shirt-->>
arne -->^adjusts shirt in the air-->
20 (1.2)
21 ~that's ^one of my creative goals,^ .hh
carlos -->~shirt-->>
arne -->^lowers shirt on lap----->^

Carlos suggests that they discuss a creative goal, and he turns to look at a shirt on the table behind them (line 01–02). Arne also turns to look at where Carlos is looking (line 02) and realizes that he is talking about the shirt, which he indicates verbally (line 04). When Carlos confirms (line 05), Arne takes the shirt from the table onto his lap (line 05–07). Arne then begins to explain what kind of project the shirt is (line 07). He explains where the shirt is from and why he is embroidering it (line 10–19). While explaining, he keeps turning and adjusting the shirt in front of him. Meanwhile, Carlos glances between the computer screen and the shirt.

This initiation includes a showing sequence in itself since a poorly visible object is brought into view (Licoppe & Tuncer, 2019, p. 546). Arne explains the origin of the shirt and why he is altering it. Thus, this is an informative showing sequence, where the recipients are not expected to have previous knowledge about the showable, which is why much preparatory work has to be done (Licoppe & Tuncer, 2019). Although a showing sequence is already occurring here, this has been interpreted as an initiation since the showable will be better shown and further

discussed later in the live stream. The actual showing sequence is analyzed in excerpt 10 in section 4.2.

In sum, most of the topics that lead to showing sequences are initiated by the viewers. Of the four instances of viewers' initiation examined here, on two occasions, there is an explicit request to show the object of interest, whereas otherwise the initiative comment contains an assessment of an object or a statement that the viewer wants to make a similar one. In the viewers' initiations, the use of RAR practice is quite extensive since it is applied to some extent in all of the four excerpts. Most often the RAR practice in the live stream includes the reading aloud of the commenter's name and the comment itself. Only in excerpt 4, the initiative comment is not specified since there are multiple comments on the same topic. The only instance of the live stream where the showing sequence is self-initiated was discussed in excerpt 5. This initiation differs significantly from the ones initiated by the viewers since the context is created through the streamers' explanations rather than through a viewer's comment. Although we cannot know why the streamers initiate the topic themselves, it may be because they want to discuss the said project and they have planned on it or there were no relevant comments from the viewers to be read aloud. The reason remains unclear, however, because the streamers do not address the motivation behind their self-initiation.

The initiation sequences often seem to include either preparation for the showing sequence or some form of showing in itself. Excerpt 5 consists mostly of a showing where the topic and showing are verbally introduced and, simultaneously, the object is brought into the viewers' view. It is interpreted as an initiation, however, because the showable will be better shown later on. In excerpts 1, 3, 4, and 5, the streamers acknowledge the showable by turning their gaze to it when the other is beginning the initiation. In excerpts 1, 3 and 4, the streamers prepare for the showing sequence by either orientating towards the object, discarding any obstacles in the way, and beginning to move the showable into a viewable position. The second excerpt is an exception as it does not include a showing, but a pointing gesture which draws the viewers' attention to the readily visible objects that are being discussed.

4.2 Showing sequences

The carrying out of showing sequences are analyzed in this section. These excerpts have been clipped to only include the showings since the initiations were already analyzed and the endings

will be examined in the following section. The excerpts are analyzed in the order of complexity, from the simplest to the most complex one. The findings of the analysis are summarized at the end of the section.

In the first excerpt on showings, Carlos has already prepared for the showing by placing his knitwork on the floor during initiation, which was analyzed in excerpt 4. Carlos shows the blanket to the audience by lifting it up in front of him. The showing is relatively brief since it only includes the time that the blanket is in the showing position. This excerpt begins where excerpt 4 left off.

In the beginning, Carlos states that he is going to show the blanket as he lifts the blanket into viewing position. The blanket is held in the position and the deictic *this* draws the audience’s attention to the showable (Mondada, 2014, p. 121). This showing sequence has low embeddedness because it is not latched onto previous talk but receives the central focus of the current interaction (Licoppe & Tuncer, 2019, p. 567). Furthermore, the showing is evocative because the relevance of the showable is not explained.

6 Blanket (T 00:25:04)

```
01 CARLOS: I'm gonna show it~+ (.) .h uhhh~+
           carlos                -->~camera----->~
           carlos                +.....+lifts blanket-->
02          (0.5)
03          *this* is what it looks like.+#
           carlos                -->+holds blanket up-->
           fig                    #fig.6.1
```



6.1

```
arne          -->*blanket*knitwork-->>
```

Carlos takes a hold of the blanket’s edge and lifts it in front of him for the audience to see while stating that he is going to do so (line 01). The blanket is briefly held in the viewing position in front of Carlos, as seen in figure 6.1. While Carlos is carrying out the showing, Arne is knitting (figure 6.1) and, at times, glancing at the showable blanket, but mostly his gaze is on his

knitwork. Arne's knitting has not been transcribed because it is not relevant to the ongoing interaction. The ending of this sequence will be examined in excerpt 11 in section 4.3.

This showing sequence is evocative, meaning that the audience is knowledgeable about the relevancy of the showable (Licoppe, 2017, p. 72). The fact that Arne and Carlos do not explain, for example, the technique that was used to make the blanket further indicates that this is an evocative rather than an informative showing sequence. Furthermore, the audience themselves asked to see the blanket so the relevancy does not need to be extensively explained to them.

The streamers demonstrate sensitivity to the viewers' somewhat limited view on it by lifting it up and showing it as requested. Although the blanket is visible on the set of the live stream, it may be difficult to understand the composition and technique of the blanket since it is draped on Carlos's lap. By lifting the blanket up, the pattern of it is more easily assessed.

The next excerpt introduces a showing sequence where Arne shows the pillow that a viewer asked about. The initiation of the sequence was examined in excerpt 3. During the showing, he explains about the technique that was used to make the pillow while holding the pillow on his lap so that it can be easily viewed. The pair of the first piece of overlapping talk is included in the initiation excerpt.

This showing sequence proceeds similarly as the one in excerpt 6: The poorly visible object is brought into view and held in viewing position, which allows the audience to freely view it. When the pillow is in clear view, Arne points at its surface as he explains that such a pattern is usually woven, demonstrating that once the object is in view, it can be pointed at. When explaining about the pillow, Arne does not use deictic devices to draw the audience's attention but rather gestures with a pointing.

7 Pillow (T 00:21:08)

01 ARNE: ^[this is] *actually a [2very] old,
 arne ^pulls pillow-->
 arne >>*camera-->
02 CARLOS: ~[2((clears throat))]~
 carlos -->~camera----->~
03 (0.3)
04 ARNE: *this is [3(an) *old pattern],
 arne -->*back at pillow*camera-->
05 CARLOS: [3((coughs))]

06 ARNE: fo- *for~ weaving,^
 carlos ~pillow-->
 arne -->*pillow-->
 arne -->^place pillow on lap-->
 07 (0.4)
 08 ARNE: or tapestry.
 09 (1.1)^
 arne -->^smooths hand over pillow-->
 10 we have a lot of these* in # Norway. *they're like^
 arne -->*camera----->*pillow-->>
 arne -->^
 fig

#fig.7.2



7.2

11 ^ancient,^ ~a:nd but they're normally ^*they're # woven,~
 arne ^waves LH^ ^finger point pillow-->>
 arne -->*camera-->>
 carlos -->~screen----->~A-->>
 fig

#fig.7.3



7.3

Arne begins to talk about the pillow (line 01) and, simultaneously, pulls it from behind him and places the pillow in his lap (line 01–06). As he proceeds to explain how the pillow was made, he smooths his hand over the surface (figure 7.2). He then states that such pillows are usually woven and points at the pillow (line 11, figure 7.3). Both Arne and Carlos are glancing at the pillow and the camera in turn. Carlos does not participate in the showing as the pillow is handled and discussed by Arne. The showing continues outside of this excerpt and the ending is analyzed in excerpt 12 in section 4.3.

After the initiation of the sequence, the interaction continues as Arne pulls the pillow from behind him at the beginning of excerpt 7. This is a showing sequence where the object is the central focus of the interaction; the sequence has low embeddedness to previous talk (Licoppe

& Tuncer, 2019, p. 567). In addition to having low embeddedness, this sequence is an informative showing sequence since the viewers are assumed to have deficit knowledge about the showable (Licoppe, 2017, p. 72). That assumption is seen in the fact that Arne gives a lengthy explanation on the technique of the pillow as well as where the audience can find more information on similar pillows.

In excerpt 8, to prepare for the showing sequence Arne and Carlos explain that they are working together with a German yarn brand Schachenmayr whose yarns they have used for the sweaters they are wearing. They proceed to introduce the different yarns that were used to knit the sweaters. Some of the yarns are only mentioned but others are shown on the sweaters. The showing is interpreted to be more complex than the excerpts 6 and 7 because the showable is not a complete object but only a stripe on it. This excerpt continues onto the showing of initiation excerpt 2.

This informative showing combines both showing and pointing. Since the sweaters are readily visible throughout the live stream, it allows the streamers to point at them without changing their position. During the pointings, deictic devices are used to draw attention to each introduced yarn. Since a showing includes a bringing forth a poorly visible object, only one of the stripes are shown during the sequence (lines 09–11). The said stripe is otherwise out of the view because of the knitwork on Arne’s lap and his position.

8 Worn sweaters (T 00:09:46)

```

01 CARLOS:  they released a collection of yarns that they call (.)
02          knit and mix, they're all dk yarns. and they all .hh
03          have +different qualities,~
    carlos          >>~sleeve-->
    carlos          +gestures with open RH-->
04          there's the +*merino~* .hh *extra fine>,*~
    carlos          -->~camera----->~
    carlos          -->+gestures RH-->
    arne            >>knitwork*camera*Carlos*knitwork--->*
05          ~there's a ~merino soft>~,
    carlos          ~down----->~A's sweater-->~camera-->
06          *there's something [with~ alpaca>],~
    carlos          -->~Arne----->~
    arne            *sweater-->
07 ARNE:      [there's, like a] <silky ^[2soft]>^
    arne          ^grab sweater^
08 CARLOS:    ~+[2uhhh]#
    carlos      ~own chest-->

```


carlos
fig

-->+point sweater-->
#fig.8.1



8.1

09 **there's~ one +there ^with< with**
carlos -->~Arne's sweater-->
carlos -->+point Arne's sweater-->
arne ^stretch sweater-->
10 **lurex in it #that is a little bit shiny,+**
carlos -->+
fig #fig.8.2



8.2

11 **ARNE:** yeah^
arne -->^
12 **CARLOS:** ~and: our +brief was to design a collection
carlos -->~camera-->>
carlos +gestures with open RH-->>
13 **using the *knit and mix.^**
arne -->*screen-->>
arne ^knits-->>

The excerpt consists of mostly Carlos listing the yarns that they have used to knit their sweaters. While listing the yarns, Carlos is constantly looking around from the sweater he is wearing to Arne's. He also glances at the camera in between. With his hand gestures he shows examples of the yarns he is talking about. The transitions from yarn to yarn are relatively fast. In figure 8.1, Carlos is looking down at his own sweater, but then in figure 8.2 he has turned to Arne and is pointing at a stripe on his sweater, which Arne has stretched out for the audience to see (line 09–11). The actual showing occurs during lines 09–11. Arne speaks only twice (line 07, line 11) during the interaction, but his gaze is shifting from Carlos to the camera and to his knitwork. When Carlos reaches over to show a stripe on Arne's shirt, Arne helps in the showing by stretching out his sweater (figure 8.2).

In this excerpt, the showable object is not the whole sweater but the specific stripe on it. The showing has high embeddedness since it latches on to previous talk (Licoppe and Tuncer, 2019, p. 567). Additionally, the sequence is informative, which is seen in the way the streamers inform the audience about the relevancy of the showable through their explanations.

The sequence combines the action of both showing and pointing. To begin the sequence, Carlos uses a spatial deictic *there* that draws the participants' attention to what he is gesturing at. The showing continues as, first, the participants bring the showable object that was previously poorly visible to view properly by stretching out the sweater. Then, Carlos points at the assessed stripe that is currently visible for all participants, including the audience. It is possible for Carlos to include a pointing gesture in this showing sequence because the object is already readily available to the viewers. For the duration of the explanation of qualities the yarn has, the object is held in the viewing position and then returned to its original place when Arne lets go of his sweater (line 09–11).

Excerpt 9 examines the showing of the reworked sweater. The sweater is shown by Arne, who lifts the sweater into showing position in front of him. He continues to explain what the finished sweater will be like by showing the sweater again at a different angle. The initiation of the showing was analyzed in excerpt 1.

This showing sequence consists of three different showings: The first showing occurs when Arne lifts the sweater into showing position, the second when the current length of the sweater is shown and the final when the finished length is demonstrated with a hand gesture. A sequence including three different showings instead of one make the sequence more complex than the previous ones. Sensitivity towards the audience's limited view on the showable is demonstrated by lifting the sweater up from its previous draped position on Arne's lap. It is demonstrated further by adjusting the shirt for each showing to give the audience the best view for understanding the explanations. All three showings are accompanied by deictic *this*, which draws attention to the showable object.

9 Reworked sweater (T 00:22:24)

```
01 ARNE:          ^this is the sweater,#
  arne           -->^sweater in showing position-->
  fig                                 #fig.9.1
```



9.1

02 (0.6)
 03 CARLOS: >it's not ^knitted by Arne though,<^
 arne -->^sweater lowered----->^turns sweater-->
 04 ARNE: no it's: (0.3) as I said I found it in ~a (.)
 carlos -->~screen----->~knitwork-->
 05 <thrift* store>~ which is hard to* say
 arne -->*camera----->*sweater-->
 06 CARLOS: >in Melbourne<~
 carlos -->~screen-->
 07 ARNE: in Melbourne,
 08 ARNE: and (.) ^it's (.) #this is^ (.)
 arne -->^shows sweater--->^LH points at sweater-->
 fig #fig.9.2



9.2

09 too* long so* I'm taking this off
 arne -->*cam---->*sweater-->
 10 ^an I'm making a new rib,
 arne -->^adjusts sweater-->
 11 (0.4)
 12 ARNE: so, (0.6) it will be,~ (0.6)
 carlos -->~sweater-->
 13 ^~this will be the new length inclusive.^
 carlos -->~screen-->>
 arne -->^lifts sweater----->^open RH gesture-->>
 14 (0.7)
 15 CARLOS: *so<
 arne -->*camera-->
 16 (0.2)#
 fig #fig.9.3



9.3

17 ARNE: plus rib.*
 arne -->*

After the initiation, Arne proceeds to show the sweater on his lap by lifting it up in front of him and holding the sweater in that upheld position so that the viewers can see the sweater clearly (figure 9.1). Once he has held the sweater up long enough, he lowers it in his lap while explaining, with Carlos together, where the sweater is originally from (lines 03–07). Arne turns and adjusts the sweater for the next showing (lines 03–08). He then again lifts the sweater up by the hem, hanging the sweater upside down (figure 9.2) and explaining that the sweater is currently too long (line 09). Finally, to end the showing sequence, he explains and demonstrates by gesturing with his left hand where the ribbing will approximately end (line 13) as seen in figure 9.3.

These three showings form an informative showing sequence which has low embeddedness to previous talk. In other words, the audience is not expected to be knowledgeable about the showable (Licoppe, 2017, p. 72) and the showable is the center of attention and communication in the interaction (Licoppe and Tuncer, 2019, p. 567). Arne explaining the remodeling of the sweater through three different showings and lengthy explanations show that the audience is expected to know next to nothing about the sweater. Low embeddedness of the showing can be seen in the fact that it is not connected to previous talk on the live stream.

The final excerpt of a showing examines the showing of the embroidered shirt. In this showing sequence, Arne shows the shirt which has been on the table behind them. The actual showing he performs by moving up to the camera. This occurs twice in the data, but only the showing of the embroidered shirt is analyzed in this thesis. This sequence is the only self-initiated showing and the initiation was analyzed in excerpt 5. The ending of the sequence is analyzed in excerpt 13 in section 4.3.

Since Arne is showing details of the shirt, he comes up to the camera so that the audience can see what he is showing. Arne adjusts the shirt in the frame with the help of the camera crew who refocus their camera to help in the showing. By coming up to the camera, Arne demonstrates sensitivity to the viewers' limited view on the details (Licoppe & Tuncer, 2019, p. 547).

10 Embroidered shirt (T 00:37:48)

01 ARNE: ^*could I go closer?*
 arne *camera crew----->*
 arne ^.....-->
 02 (1.2)
 03 ^so you can see<,<^
 arne -->^stands up----->^
 04 (0.6)
 05 there's no plan^ on this one^ (.) just (.) cover it up.
 arne ^move to cam^
 06 (0.5)
 07 so here ^it's like just go .hh
 arne ^point embroidery-->
 08 (1.2)
 09 ^go back# and forth,^
 arne -->^finger circling--->^adjusts showing place-->
 fig #fig.10.1



10.1

10 (3.2)
 11 f- further up?# like< (.) and down,
 fig #fig.10.2



10.2

12 (0.5)
 13 ARNE: heh fgot it? is that a good picture,f .hh#
 fig #fig.10.3



10.3

```

14          (2.0)
15          ^so .h (1.0) so this is like small ^diamond stitche:s an'
arne      -->^pointing----->^
16          (0.6) <petite (0.3) point>?
17          is it called >petite point<? in English,~
carlos    >>screen~Arne-->>
18 CARLOS: ^petite point, yes.^
arne      ^turns shirt----->^

```

In the beginning of the excerpt, Arne asks the camera crew if he could come up to the camera to show the details of the shirt (line 01–03). He stands up and comes closer to the camera with the shirt on his hand (line 05). Once the shirt is in the frame, Arne points at the embroidery to identify a technique he has used (line 07–09, figure 10.1). After the pointing, he adjusts the height and position of the shirt in the frame, presumably according to the instructions of the camera crew (line 11–13), although they cannot be heard nor seen on the live stream. At first, Arne lifts the shirt too high and out of the frame (figure 10.2) before understanding the instructions and correcting the position of the shirt (figure 10.3). He again points at the embroidery and asks Carlos for confirmation on the English name of the technique (line 15–17). The showing sequence continues after the excerpt with a showing of another detail on the shirt.

Arne moving up to the camera to show the details demonstrates sensitivity to the audience’s limited view; the audience would not be able to see the differences of the techniques if Arne were sitting in his chair. The details of the shirt are held in viewing position throughout the showing sequence. As the showable is available to the recipients, the object can be pointed at, which Arne does when he mentions certain techniques. During the third showing (figure 10.3), Arne uses a deictic *this* to accompany the pointing to further emphasize which detailed technique he is referring to.

This showing sequence has low embeddedness to previous talk and the showable is central to the interaction. Furthermore, the showing is informative because the explanations show that the

audience is assumed to not be knowledgeable in the showable details. This showing sequence ends when Arne turns the shirt around to show another detail of the embroidery.

In sum, the showings of this data are mostly informative showing sequences that have low embeddedness. Low embeddedness is indicated by the sequence being independent from prior talk and the showable being central to the interaction. Informative sequences include much preparatory talk, and the audience is not assumed to be knowledgeable of the relevancy of the showable, whereas in evocative sequences the opposite is true. Only excerpt 6 includes an evocative showing sequence, while the other excerpts are examples of informative sequences. In terms of embeddedness, all but excerpt 8 are informative where the relevancy is being explained to the viewers.

Verbal deictic devices are a common feature in the showing sequences of this study. The used deictic expressions are *this* and *there*, which effectively draw the viewers' attention to the showable that is being presented. Only excerpt 7 lacks any verbal deictics. In most excerpts, these deictic words are combined with pointings. Pointings are relatively common in the showing sequences, but they occur only once the showable is in a showing position and the audience has an undisturbed view of it. In the data of this thesis, pointings occur in the showing sequences in excerpts 7, 8 and 10. In excerpt 10, the pointing gesture includes circling of the detail with the pointed finger, whereas in the other two excerpts the detail is briefly pointed at before the finger is withdrawn.

4.3 Ending the showing sequences

In this section, the endings of the showing sequences are examined through three selected excerpts. The ending of a showing sequence was defined to include only the retraction of the showable from its showing position. While other researchers may define the ending of a showing otherwise, such as ending of the topic, this definition is applicable and suitable for the purposes of this study. The last excerpt, however, includes both the ending of showing and of a topic, which occur simultaneously, and, thus, the ending of the topic will be briefly discussed as well. In this study, the topic is interpreted to continue if the streamers continue to talk about a closely related topic after the ending of the showing. For example, in excerpt 12, the streamers end the showing of a specific pillow but continue to discuss pillows in general. Thus, the topic is continued. For each ending it will be considered whether the topic is continued and whether

there is a verbal indication of the ending or if only embodiments are involved. The findings of the analysis are summarized at the end of the section.

Excerpt 11 introduces the ending of showing the blanket on Carlos's lap. This excerpt takes place right after excerpt 6. The ending of the sequence is quite abrupt, which can also be seen in the shortness of the transcript. The ending of the showing sequence is relatively simple in this excerpt. The showable is lowered from its raised showing position and returned to its original position.

11 Blanket (T 00:25:07)

```
01 CARLOS: we ~+showed it ~in# another+ live stream~ uhhh
carlos      ~camera---->~blanket----->~camera-->>
carlos      +lower blanket----->+RH on blanket-->>
fig          #fig.11.1
```



```
02          not very long ago,
```

In the beginning of the excerpt, Carlos has the blanket raised in the showing position from where he lowers the blanket (line 01, figure 11.1). As he lowers the blanket, he looks at it and once the blanket is resting on his lap he looks at the camera again. During the retraction, Carlos explains that the blanket has been discussed on their YouTube channel already. He continues to explain about the previous live stream after this excerpt. Arne's gaze and embodiments have been excluded from the transcript because they are not relevant to the ongoing interaction.

There are no verbal cues to indicate the ending of the showing sequence. The ending of the sequence is abrupt and short because the showable is easily returned to its place after the showing since it was readily accessible to the show-er and moving the showable does not require a lot of effort. While Carlos is lowering the blanket, he tells the viewers where they can learn more about it. Although the showing was evocative and it has ended, Carlos shares additional information about the blanket. Considering that we do not know what the audience commented about the blanket, as was discussed in excerpt 4 in section 4.1, Carlos might be

answering some of the viewers' comments with his explanation. It is also possible that he is sharing additional content for the audience members who did not comment on the blanket and, thus, may not be knowledgeable of the relevancy of the showing.

The retraction of the showable pillow is analyzed in excerpt 12. During the ending, Arne takes the pillow from his lap and places it behind his back where the pillow originally was. Although the showable is still in the showing position in the beginning of the excerpt, the topic of the discussion shifts from the specific showable pillow to pillows in general. Since the showable is no longer the topic of discussion and thus relevant anymore, Arne moves the pillow away from the showing position back to its original place on the set. This is continuation to excerpt 7 where the showing was discussed.

12 Pillow (T 00:21:25)

01 **CARLOS:** I don't know if you ~+remember+~ Arne,
 carlos >>screen----->~pillow--->~Arne-->
 carlos +.....+RH on pillow-->

02 **but we actually did a video on**
 03 **(.) [on these ~pillows]**
 carlos -->~screen-->

04 **ARNE:** [↑oh we ^did* yeah↑^ but we *^made^]
 arne >>pillow*camera----->*pillow-->
 arne ^adjust pillow^ ^pat LH^

05 **CARLOS:** **very +recently.+**
 carlos -->+,,,,,,,,,+

06 **ARNE:** ***^we made (.) like (.)**
 arne -->*camera----->
 arne ^moves pillow-->>

07 ***big~* #pillows with embroidery~**
 carlos -->~pillow----->~screen-->>
 arne -->*pillow*camera-->
 fig #fig.12.1



12.1

08 **CARLOS:** **so *if you +wanna know more #about the pillow,**
 carlos +RH open in the air-->>
 arne -->*pillow-->>
 fig #fig.12.2



12.2

As the excerpt begins, the showable pillow is in showing position on Arne's lap. The ending sequence begins with Carlos reminding Arne and the audience that there is already a video on the pillow (line 01). He places his hand on the pillow as he talks. Arne then confirms, overlapping his talk with Carlos's, that he remembers (line 04) while patting the pillow and adds that those pillows were slightly different since they were bigger (line 05). While he says this, he begins to put the pillow to its original place behind him (figure 12.1). Arne continues to place the pillow behind him and adjust it while Carlos resumes his explanation on where the audience can watch the video on pillows (line 08). The talk on the pillows continues in the live stream after this excerpt.

Similarly as in excerpt 11, no explicit verbal cue is given to the viewers or the other streamer to indicate that the current showing will end. Instead, Carlos shifts the topic to other pillows, which leads to Arne retracting the pillow from the showing position since it is no longer relevant. The informative showing sequence is thus continued with additional explanation about a closely related topic. In other words, the only the showing is ended but not the topic of pillows.

In excerpt 13, the showable embroidered shirt is retracted from the showing position. Arne has finished the showing sequence and is beginning to back away from the camera when he decides to show another detail of the shirt to the audience. In other words, he has already begun ending the showing when he changes his line of action. The showing in this ending is evocative since the relevancy of the showable does not need to be explained as it has already been established with previous showings and talk. During the ending, Arne returns to his seat and places the shirt back on the table. As the showing and the topic are concluded, a new topic is introduced as well. The showing of this ending is analyzed in excerpt 10.

13 Embroidered shirt (T 00:38:25)

01 ARNE: it's under (0.8) construction.^ or,#
 arne >>adjusts shirt^turn away-->
 fig #fig.13.1



13.1

02 (0.6)
 03 ^it's nice also from the ^inside.#
 arne -->^.....^show shirt-->
 fig #fig.13.2



13.2

04 (2.3)
 05 .h ^so this is one of the creative ^goals.
 arne -->^return to chair----->^sits-->
 06 CARLOS: *so^ Asha: (Erenberg) is commenting
 arne *shirt-->
 arne -->^puts shirt away-->
 07 because we have~ +#all *these creative+ goals,
 carlos >>screen~Arne-->
 carlos +open RH gesture---->+
 arne -->*Carlos-->>
 fig #fig.13.3



13.3

08 an' we have +all^ these~ produc-
 carlos -->~screen-->>
 carlos +open LH gesture-->>
 arne -->^

In the beginning, Arne is explaining that a detail on the shirt is still unfinished (line 01). He is already turning away from the camera while adjusting the shirt in his hands (line 01, figure 13.1), but he decides to turn back towards the camera and show the inside of the shirt (line 03, figure 13.2). Once he finishes the showing, he backs away from the camera to his chair as he concludes that the shirt is one of his creative goals for the year (line 05). Carlos then reads a new comment to initiate a new topic (line 06) while Arne is returning the shirt to its original place on the table behind them (figure 13.3). Once Arne places the shirt back on the table, it is hardly visible in the frame.

Once the inside of the shirt has been sufficiently shown to the viewers, Arne resumes the action of returning to his seat as he simultaneously concludes the showing and the topic. Arne's concluding remark and falling intonation (line 05) signals to the viewers and Carlos that another topic may be initiated. Carlos complies by reading a new viewer's comment aloud. Although Arne is still in the process of placing the shirt on the table, it does not hinder a new topic from being started because the initiation does not require Arne to take part in it.

To conclude, the endings in the data occur without preliminaries after the showing. It is not explicitly stated in any of the excerpts that the showing will end. However, in excerpt 13, Arne's concluding remark and intonation indicates the end of the showing. The endings occur once the showable becomes irrelevant to the discussion, as in excerpts 11 and 12, or it has been showed to the audience for a sufficient time for assessment like in excerpt 13. The current topic or a closely related one is continued during the ending of the showing sequence in excerpts 11 and 12. Only in excerpt 13 the current topic is concluded simultaneously with the showing as well as a new topic is being initiated.

In the example excerpts, the showable is always returned to its original place once the showing sequence ends rather than placed aside. The same was noted for other showings on the data that were not discussed in this thesis. The showables may be returned to their place after the showing sequences because the participants are being filmed and the set may have been designed for the live stream. The embodiments connected to the ending of the showing can be finished quickly or they may be continued for a longer time, depending on how easily the showable is returned to its place on the set. For example, the blanket is easily lowered back onto Carlos's lap (excerpt 11), whereas the pillow has to be tucked back behind Arne (excerpt

12). Thus, the ending of showing the pillow lasts longer. Talk can be connected to the embodiments as in excerpt 13, where the ending is concluded verbally, but it may as well be disconnected from the ending since another related topic may be continued without acknowledging the embodiments. Such happens in excerpts 11 and 12.

5 Discussion and conclusion

Conversation analysis (CA) was used as the method of this thesis. CA aims to explain and uncover the practices behind the interactional actions in communication through which the participants produce and understand the conversation. The research is based on naturally occurring interaction, which can also include multimodal means, as in this study. Live streams are one of the most natural forms of interaction online since the interaction cannot be scripted in advance, although the theme of the live stream may be set. In live streams, the viewers can engage only through text messages or comments, which makes the communication asymmetric. Although the interactivity is a significant part of live stream interactions, the focus of this study was on the streamers' verbal and multimodal conduct. The aim of this thesis was to describe showing sequences in a live stream environment using CA. The specific communicative means that were investigated were the embodiments in the showing sequences. The possible issues of using CA for video-mediated communication research have been addressed in section 2.

The findings of this study support the findings of previous research which have been conducted on other live streaming or video call platforms. In the data of this thesis, the initiations of the showing sequences are more often carried out by the viewers through their comments than by the streamers who initiate a showing only once. This aligns with the findings of previous studies. Similarly, as the previous research has found (see Licoppe & Morel, 2018), the live streamers in the data of this study use the read-aloud and respond (RAR) practice to respond to the viewers' comments, which initiate the interaction using local resources. The RAR practice in this live stream data includes the reading of the commenter's name and then the comment itself. Only once are the viewers' comments summarized to initiate a showing. The comments either explicitly ask the streamers to show specific objects on the set or they include an assessment of an object which the streamers then decide to show to the audience.

The streamers in the data of this thesis follow the same organization of showing that the researchers have found to be common in similar communicational environments. In the showing sequences, the object of interest is brought into view manually from its previously poorly visible position. In the data, the showing position is usually on the streamers' lap, such as the pillow, or in a raised position in front of them, for example the blanket. On two occasions in the data, of which one was analyzed, the showing was conducted by coming up to the camera

to show the details, as was done in excerpt 7. All of the showables are returned to their original place on the set after the showing.

Based on the findings of this study, the showings in a live stream are mostly informative and have low embeddedness. In an informative showing sequence, the showable is central to the interaction and its relevance as a showable has to be explained to the viewers. This can be seen in the fact that the streamers perform preparatory speech before the showing and continue to explain the relevancy of the showable during the showing. A showing that has low embeddedness is not connected to previous talk. In the data, the showings initiate new topics which are not connected to the previous showings or topics.

During the showings, the showable may be pointed at since it is in undisturbed view of the audience. In three of the five showings analyzed in this thesis, the showables are pointed at. Pointing differs significantly from showing: Showing highlights previously poorly visible targets, whereas pointing refers to targets that are readily available to all participants. Like pointing, deictic devices may work as attending-getting devices. In the excerpts, deictics *this* and *there* accompany both open hand gestures as well as pointings.

Once the topic of the interaction shifts from the specific showable to another related topic or a completely new topic, the showable is retracted from the showing position. The ending occurs abruptly, and the showing is not explicitly stated to end. The talk during the retraction of the showable is not related to the embodiments on most occasions in the live stream: The retraction is carried out separately from the talk. Only in excerpt 13, the talk concludes the showing alongside with the embodiments.

The participants in the data are aware of the recording, and they are visibly talking to the camera. The awareness may affect the interaction to some extent: The participants may, for example, change their register for the occasion as well as language. The equipment that was used for filming the live stream is high quality, which enabled altering the speed of the video and choosing audio tracks during the research process. From the participants' actions on screen, one can see that there is a camera crew on set, but they are not visible to the viewers. Thus, one cannot know whether the crew reacts to the conversation in some ways nor whether the possible reactions affect the communication of the participants. Not knowing the details of the filming event were considered throughout the research process, and thus only the events on the video

were analyzed. If one wanted to improve this study, the filming could be conducted by oneself, which could be challenging to execute, or the participants may be contacted to inquire the details.

This study combined examining the communication and showing sequences in live stream. Previous research has focused on researching showing sequences in VMC or communication in live streams. Additionally, the communication of YouTube live stream has not been studied, whereas that of Periscope and video calls on Skype have been. The topic of this study could be expanded on by studying other live streams on YouTube as well or showing sequences on other live stream platforms. Studying the conduct of showing sequences on different platforms would give a more comprehensive understanding of the streamers' practices since, according to researchers, the findings cannot be generalized across platforms.

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