

A cross-cultural study of Serbian and English native speakers' non-verbal actions and identity during a videoconferencing task in New Zealand

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Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university of other institutions of higher learning.

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Ethics Approval

This research obtained ethic approval **17/46** from the Auckland University of Technology Ethics Committee on 16. March 2017.

Abstract

This thesis examines the non-verbal actions and the production of identity of Serbian and English native speakers during a videoconferencing task in New Zealand. This cross-cultural study examines the modes of facial expression, posture, and hand/arm movements to show how these are telling of the identity of the Serbian and English native speakers. Although gesture and language have received significant attention in research, very few studies have addressed the cross-cultural non-verbal actions and no study has compared Serbian native speakers with New Zealand English speakers. This thesis aims to address this gap.

Data for the study was collected and analysed using the theoretical and methodological framework of multimodal (inter) action analysis. Three case studies were analysed showing in case one, a Serbian native speaking dyad; in case two, a Serbian and English mixed native speaking dyad; and finally, in case three, a New Zealand English native speaking dyad. Higher-level action segments of 40 seconds were selected for analysis for each dyad as well as several relevant inserts from the participant interviews which occurred after the tasks were completed.

The study concludes by confirming the researcher's hypothesis that Serbian native speakers are more expressive non-verbally than English native speakers. Further, the thesis shows how we can tell of a person's identity by examining their non-verbal actions.

1. Introduction

This thesis examines the non-verbal actions of Serbian and English native speakers in relation to the production of their identity during a videoconferencing task in New Zealand. Particularly through the analysis of the non-verbal modes of facial expression, posture, and hand/arm movements I show the production of the participants' identity elements during a helping sequence in a videoconferencing task. I then compare the non-verbal actions of the Serbian and New Zealand helpers (participants who are providing help) followed by the Serbian and New Zealand helpees (participants who are receiving help). Finally, I compare the Serbian helpers and helpees with the New Zealand helpers' and helpees' non-verbal actions. I then discuss the link between non-verbal actions and identity within the three dyads.

This thesis hopes to answer the research question:

How does the expression of identity elements through non-verbal actions differ between individuals from a Serbian-English bilingual background compared to individuals from a monolingual New Zealand English background?

While I do not focus my analysis on the mode of spoken language, I do include the spoken language transcripts in this thesis as language is crucial in understanding the participants' non-verbal actions.

1.1. Significance of my thesis

In this section, I address the significance of my study in relation to New Zealand, cross-cultural non-verbal action research, as well as the study of identity.

1.1.1. Significance to New Zealand

Serbian-New Zealanders form a tight-knit community connected through religious as well as cultural activities regularly held around the country. There was a huge influx of Serbian migrants to New Zealand in the early 1990s and according to statistics New Zealand in the 2008 census there were 1,284 Serbians in the country. However, when talking about the Serbian community in New Zealand it is important to note that this community is hard to define, unlike in larger places like Australia with 73,901 Serbs recorded during the 2016 census. As a relatively small group, and because of the history of former Yugoslavia, the community in New Zealand is almost never just Serbian but rather a combination of all or some of the nationalities of the former Yugoslavia. These groups include Bosnians, Croatians, Macedonians and of course Serbians. Despite the conflict in the 1990s that affected the diasporic population around the world, New Zealand remained relatively separate from these issues. Nevertheless, because of the difference in religious practices between Croatia and the rest of the (former Yugoslavian) countries as well as the significant difference in language between Macedonia and all of the other countries, there remains an observable dividing factor. However, all of these communities have to a large part integrated into New Zealand society, language, cultural practices, and behaviours.

Serbians are of the Christian Orthodox religion and follow a different calendar to the widely accepted Catholic calendar. Due to this, all religious and cultural practices fall approximately two weeks behind the standard calendar. So, Serbian families in New Zealand have adopted the practices of the new country, while also maintaining their own. Thus, they tend to celebrate two Christmases, two Easters, and two New Years. But with some significant differences. For example, a Serbian Easter is traditionally

celebrated by boiling and colouring chicken eggs with no mention of rabbits or chocolate eggs.

The Serbian community has quite a rich culture of food, dance, and music. Auckland alone has two different dance groups who regularly practice and perform Serbian cultural dances. The Serbian Orthodox Church organises dance lessons, singing lessons and Sunday school for Serbians only. However, the bigger and more popular group is formed as the Dalmatian cultural Society, which changed its name after the fall of Yugoslavia from the Yugoslavian cultural Society. As the biggest and most active Ex-Yugoslavian cultural society in New Zealand the Dalmatian cultural Society houses all members, teaching all dances, and all music from former Yugoslavia.

New Zealand is a culturally diverse country and how the diasporic communities shape New Zealand communities is of great importance. As one of New Zealand's significant diasporic groups the Serbian community is to some part responsible for shaping the landscape of communication in New Zealand. This study explores some of the differences in communication styles between the Serbian-speaking New Zealanders and English-speaking New Zealanders. Thus, my thesis is relevant for New Zealand.

1.1.2. Significance to cross-cultural non-verbal actions research

In the non-verbal actions research, there is an abundance of studies in the gesture and language field. However, very few studies look at the cross-cultural non-verbal actions and none compare Serbian and New Zealand English speakers. Therefore, my study is relevant to the cross-cultural non-verbal actions research as it analyses non-verbal actions in a cross-cultural setting during a videoconferencing task.

1.1.3. Significance to the study of identity

Cultural identity is visible in the non-verbal actions of individuals and as Scollon (1997) noted, every non-verbal action is telling of the individual's identity. For example, when Norris (2008, p.665) studied a Colombian in North America, she notes:

Some of the gestures that Cesar performs (and especially the extent of the gestures, like loudly hitting the table with his fist) construct the identity element of being Colombian. However, when I observed Cesar in other meetings, he gestured less (more like majority group North Americans) and performed all of the gestures that he performed on a smaller scale, displaying his Hispanic/Latino identity element.

However, apart from the above study and Matelau-Doherty and Norris (2021) that demonstrate how non-verbal actions are telling of identity, there are very few other studies that make this link. Furthermore, there is no study that analyses the production of identity elements through non-verbal communication between Serbians and New Zealanders.

1.2. Structure of the thesis

In Chapter 2, I explain the design and data collection for my study. I discuss how and why I selected the case studies from a larger corpus of data, and I show the data collection tables for each of the three case studies I analyse in this thesis. Then, in Chapter 3 I follow the design of study by discussing the relevant literature available in this field and how it relates to my work. I explain the methodology used, describing the different phases applied to analyse the data. In chapter 4, three dyads are analysed in detail to examine their non-verbal actions. Through the analysis of spoken language (to some extent), but more importantly through the analysis of the non-verbal modes of facial expressions, posture and hand/arm movements, I show how the participants create their identity elements. Case study 1 shows a Serbian native speaker dyad. Case study 2 shows a Serbian and English mixed native speaker dyad. Finally, case

study 3 shows a New Zealand English native speaker dyad. Then, in Chapter 5, I compare the Serbian and the New Zealand dyads. I begin by comparing the non-verbal actions between the Serbian and the New Zealand dyad helpers. I then compare the non-verbal actions between the Serbian and the New Zealand dyad helpees. Finally, I compare the Serbian helpers and helpees with the New Zealand helpers and helpees. In chapter 6, I first discuss the link between non-verbal actions and identity in the three dyads. Then, I conclude my thesis by outlining the findings, shortcomings, and the direction for further research.

1.3. Conclusion

In Chapter 1, I discussed the significance of my study to New Zealand as well as to cross-cultural non-verbal actions research and the study of identity. Here I also discussed the structure of my thesis.

Next, in Chapter 2, I first give a thematic literature review of areas relevant to my study. Then, I review literature regarding the methodology used and finally I discuss the method used for delineating the data, selecting the data pieces, transcribing and analysing the data. Finally, I show the selection process for selecting data pieces for microanalysis.

2. Literature Review

In this chapter, I review relevant literature on migration and identity, non-verbal actions and multimodal (inter)action analysis and identity.

2.1. Migrants and identity

Juul (2014) discusses performance and belonging through an ethnographic study into the public and semi-public celebrations of Serbians living in Denmark through which the Serbian people strengthen their sense of belonging, of kinship and of ethnic roots. She studied three public events held by Danish Serbs to observe the performance of belonging and how the Danish Serbs divide their celebrations between Serbia and Denmark. The Serbs in the study are particularly interesting as they arrived in Denmark as guest workers during the 1970s from what was then Yugoslavia. The particular group of Serbians that immigrated to Denmark mainly come from the eastern Serbian villages and are called Vlachs. This group maintains tight knit social networks amongst the emigres in Denmark as well as strong links with the communities in Serbia. Juul (2014), explores the multi-local practices of identity through observing how migrants struggle to construct their lives and maintain connection with both the homeland and the place they have settled in. She discovered that invisibility in performing of belonging is a cherished quality for Serbs in Denmark probably due to their minority status and satisfaction is often expressed by focusing on the similarities between the Serbians and the Danes. A Serbian Friendship Association is set up in most Danish towns where Serbian Vlachs have settled which is responsible for organising semi-public events to celebrate Serbian culture and maintain unity between Serbs and Danes.

Similarly to Juul (2014), who studied Serbs in Denmark, Lin et al. (2019) conducted a study analysing Chinese immigrants in Australia to better understand how they attach meaning to home and build a sense of home in Australia. The concept of a cultural home refers to an ethnical, racial, or geographical community that provides shared values, beliefs, social norms, and emotional attachments providing a sense of safety and familiarity for its members. They noted that the process of settling in a new country is a complex one, involving negotiation of identity, belonging and home. It is the membership to a cultural group and sharing in their beliefs, values and world views that creates a cultural identity. Connecting with this, Leach (1972) explains, to learn a new language in a foreign country requires learning the culturally correct non-verbal behaviour as well. This non-verbal behaviour is referred to as a particular cultures' non-verbal style.

The children of migrants may not themselves have migrated, and due to most of their formal education being in the country they live in, their strongest language is the majority language. As such they do not expect to be marginalised. Yet research has shown that the children of migrants' struggle to belong in either culture. Linguistically speaking the heritage language usually is lost by second-generation migrants according to Fishman (1999) which will impact their membership of any ethnolinguistic community. (p. 2). Also, the cultural non-verbal style fades away with the second-generation of immigrants.

But other scholars note that second generation migrants often embrace transnationalism. In this vein, Lee (2011) argues to 'fully understand second-generation transnationalism, three forms of transnationalism are needed: intradiasporic, indirect and forced transnationalism. (p. 295). However, for me the notion of intradiasporic and indirect transnationalism are of particular relevance. Intradiasporic transnationalism refers to the connections created across different diasporic populations often involving

transnational space that does not include the homeland. These ties offer an increased sense of belonging and can be stronger and better maintained than the ties to the homeland particularly with the second generation. The second generation can often experience emotional transnationalism, an emotional sense of attachment to the homeland of their parents, without having a direct connection to the homeland themselves. This form of connection with the homeland is referred to as indirect transnationalism. Indirect transnationalism largely occurs through religious and cultural practices, and non-verbal actions are an aspect of cultural practices (Norris, 2007).

2.2. Non-verbal Actions

Out of all non-verbal actions, facial expression has received the most attention. The most systematic and extensive work in this area has been by Ekman and his colleagues (Ekman, 1972; Ekman and Friesen, 1975; Ekman, Friesen, & Ellsworth, 1972).

Prior to 1970s, Ekman (1992) explains, psychologists believed that facial expressions were socially learned and varied across cultures with no relationship between the facial expression and the emotion behind it. In the early 1970s, scholars (Ekman, Sorenson, & Friesen, 1969; Izard, 1971) agreed on the universality of facial expressions and obtained consistent evidence in labelling of the facial expression of enjoyment, anger, fear, sadness, disgust, and surprise. To reconcile earlier findings where facial expressions appeared to be different due to the different levels of exaggeration of an expression, Ekman and Friesen (1969) proposed the notion of 'display rules' to further explain these occurrences. Display rules referred to the management of facial expressions in social context which is socially learnt and differs between cultures.

Ekman (1992) further expands, that the confusion around universality of facial expressions occurred mainly around the smile. Happiness like all other emotions has its own characteristic arrangement of the muscles in the face. As there are different types of smiles and subjects showed some form of smiling to both pleasant and unpleasant stimuli, researchers concluded that facial expressions must be culturally learnt (LaBarre, 1947; Birdwhistell, 1970). However, earlier work of Duchenne (1862/1990) proposed 'that the smile of enjoyment could be distinguished from deliberately produced smiles by considering two facial muscles: zygomaticus major, which pulls the lip corners up obliquely, and orbicularis oculi, which orbits the eye, pulling the skin from the cheeks and forehead toward the eyeball (the Duchenne smile)' (Ekman, 1992).

Ekman and Friesen (1982) adopted this idea and found that a number of studies support this proposal and found three types of evidence. Firstly, Ekman describes several studies that looked at the kinds of smiles participants displayed in which social context. In all of these studies, a positive social context produced the Duchenne smile. Secondly, individuals with severe mental illness, an unhappy circumstance, or in non-genuine interactions with others produced fewer Duchenne smiles. Lastly, when the brain activity of participants was analysed it showed different patterns of regional brain activity where subjects displayed a Duchenne smile in comparison to other smiles.

Thus, facial expressions of emotion, although they form on the face in the same configuration of muscle movements across all cultures, appear to have different cultural rules about social expression. This is also highlighted in a study conducted by Ekman et al. (1972), in which Japanese and American students were videotaped without their knowledge while watching a neutral film as well as a stress inducing film. Both groups of students showed the same facial expressions during both movies. However, once interviewed with members of their own culture, the Japanese students displayed

happier emotions while describing the stress inducing film, while the American students displayed the same emotions as they did during the movie. Ekman (1972) explains that these cultural rules for display of emotion, of what and how much emotion is appropriate to show, are learnt early in life and later become automatic.

Emotional display itself also varies across cultures. For example, the North American 'smug' facial configuration is not recognised in many cultures while similarly the 'wry smile' found in England comprised of one mouth corner being raised while the other one lowered may not be understood elsewhere. LaFrance and Mayo (1978) sum up the notion of emotional display by stating that both cultural and biological influences affect emotional expression. While particular emotions are expressed with a particular configuration of muscles, how, when, and how much they are shown is determined by the environment in which they are expressed.

Hall (1959) also explains that non-verbal behaviour is culturally specific. LaFrance and Mayo (1978) review various studies and demonstrate that non-verbal indicators of friendship include gaze, distance, and touch. In many cultures more intimate relationships are expressed through closer distance and more touch than in interactions with strangers.

Gesture, almost like facial expression, is a topic that has received much attention in the literature over the years. In fact, there is much work on the connection between gesture and speech (for example McNeill, 1998). However, since my focus here is particularly on non-verbal actions, a review of that vast literature is outside of the scope of this thesis. However, some aspect of the gesture literature is certainly within the scope. Efron (1972), for example, provided the first detailed description of what people do when they move their hands during speech and concluded that the style in which these

movements occur is culturally learned. There are gestures that occur slightly before spoken language to realise imagery, gestures that occur on their own, and gestures that coincide with language but do not convey the same meaning (Norris, 2004). There are four different types of gestures. The iconic gestures, describing pictorial content and mimicking what the speaker is saying; the metaphoric gestures, depicting pictorial content and conveying abstract ideas; the deictic gestures, pointing at people or objects in the real world or to ideas and events that may have occurred in the past or the future; and beat gestures, which are short quick up-down or back-forth movements (McNeill, 1998; Norris, 2004). Kendon (1997) defines a gesture as a deliberate movement of the body or a part of the body that expresses a thought or a feeling rather than a spontaneous movement or change of position. Gestures do not always have the same function; the meaning of a certain gesture can have one meaning in one country and a completely different meaning in a different country. For example, Jacobson (1972) discovered that the Bulgarian head movement for a no looks much like the Western head movement for yes. These differences can cause confusion when individuals not from the same culture are interacting with one another. Thus Leach (1972) concludes that it is important to learn the particular non-verbal style of the culture with which one wishes to engage. However overall, not many studies have compared gesture rates or styles in different cultures.

In order to discover points of difference and similarity between native English and native Serbian speakers, Jovanović (2012) conducted a contrastive analysis of non-verbal communication involving gestures of speakers to compare the characteristic non-verbal communications of these two groups. Jovanović (2012) focused on emblems, which are gestures with conventionally established meaning that portray a particular message and are culture dependent. Emblems are at an intermediate position on the various dimensions of contrasting gestures. They are partly like gesticulations, partly like signs. (McNeill, 2000:6). Through his comparative-contrastive analysis of

these emblems, he discovered six outcomes of contrastive relationships that were exhibited by English and Serbian speakers through gesture. These are correspondence, equivalence, partial correspondence, complete correspondence, English only and Serbian only.

Mitrovic & Vujovic (2017) concentrated on non-verbal indications between two different cultures in Serbia, as people of the same culture produce the same non-verbal communication. They focus on gestures that have been culturally passed on and with limited geographic scope that might have no meaning for people not from that culture, called regional signals by Morris (1979). They conducted a survey of 100 participants who answered an eleven-question survey to determine the extent to which the non-verbal communication of a culture causes misunderstanding amongst communicators of different cultural backgrounds.

However, closer to my own study, Efron (1972) found gestural patterns in conversation when observing two immigrant groups of the Lower East side of New York. He found that the Jewish immigrants mainly moved the elbow and wrist joints producing spatially compact gestures using the vertical and frontal planes. The Italian immigrants, on the other hand, moved their entire arms from the shoulder, producing spatially expansive gestures using the lateral plane. Similarly, Mueller (1998), examined the difference in gesturing between German and Spanish speakers. She shows that Spaniards produce more gestures above shoulder level than Germans. Thus, speakers from the Mediterranean region produce large arm movements that are more observable as they are positioned near the speakers face and as such contribute to the perception that Mediterranean speakers gesture more frequently, which however, does not seem to be the case when compared with Germans. Two other very noteworthy studies were conducted by Goldin-Meadow and Saltzman (2000) and Gruber, et al. (2016). Goldin-Meadow and Saltzman (2000) showed that when compared with American mothers,

Taiwanese mothers produced three times as many gestures when interacting with their children. While Gruber, et al. (2016) compared the gestural output of Māori and Pākehā speakers finding that the Māori speakers produced more narrative illustrating head gestures whereas the Pākehā speakers produced almost no gestures. Furthermore, they found that the Māori participants paid more attention to the movements of their hands, resulting in much clearer gesture phases.

Kita (2009) reviews the literature on gestures in cross-cultural communication, summarising that the representation of gestures differs in frequency and pattern as well as position, size, plane and the use of gesture space across cultures due to the different rules of the languages. For example, as Maynard (1993) shows, Japanese speakers nodded three times more than the American English speakers as this gesture in Japanese culture serves to elicit a response from the addressee. Kita (2009, p.30) sums up his review, pointing out that ‘there have been a relatively small number of studies that directly compared gestures in multiple cultures and provided explanations for cross-cultural differences in gesture.’

As mentioned before, many more studies have been conducted in relation to the connection between language and gesture, and Freedman (1977) for example shows that gestures occur with greater frequency during speech perturbations and hesitations. Thus, when a participant is trying to find the word or a grammatical construction they will gesture more. Gestures and syntagmatic units of speech like tone and phrase are in sync with these gestures as they start and finish at the same time.

The studies of non-verbal actions reviewed above were either conducted via survey, through observation, or the analysis of conversations. Next, I will outline the

methodology that I have used to study cross-cultural non-verbal actions, reviewing relevant literature.

2.3 Conclusion

In this chapter, I described the research on migrants and identity followed by how non-verbal actions are telling of identity. I addressed the difference between various cultural identities through analysis of non-verbal actions of facial expressions, posture, and hand/arm movements. I then discussed the literature examining identity by using the methodological framework of multimodal (inter)action analysis.

3. Research Design, Methodology and Method

In this chapter, I discuss the design and data collection for my study. Firstly, I describe how the participants were recruited, the ethics approval and the design of the experiment. I show the equipment used and how it was set-up followed by how the data was collected. I then describe how I selected the three case studies from a larger corpus of data, and I show all the data collected for the case studies. Following the research design, I describe the methods used to delineate the data and to select the data pieces from each dyad for micro analysis. I then discuss transcription and the data analysis process.

The data for this thesis comes from a larger experimental study of dyads working on tasks together via videoconferencing technology (see also Norris, 2019). I was the primary researcher, who collected and processed the data. All data collection, processing and analysis follows the Phases and Steps outlined in Norris (2019).

3.1. Design of the study

I selected a Serbian native speaker dyad, a mixed dyad with one Serbian and one English native speaker, and a New Zealand English native speaker dyad. I chose the language as a point of difference between these dyads as language shows a clear distinction between cultures. However, I chose not to examine the actual spoken language in great detail because there are many studies examining this aspect of communication but very few that address the cross-cultural non-verbal communication. In identifying this gap in research, I chose to focus on the non-verbal communication.

My hypothesis was that the Serbian native speakers displayed emotion and produced identity elements through more expressive and exaggerated (difference in scale and dimension) non-verbal behaviour than the English native speakers.

I thus posed the following research question:

How does the expression of identity elements through non-verbal actions differ between individuals from a Serbian-English bilingual background compared to individuals from a monolingual New Zealand English background?

I now outline how I collected my data.

3.1.1. Phase I: Data collection

The steps that we moved through for the larger study are outlined in detail in Norris (2019, Chapter 3.2) and I will therefore not go into all of the detail here in regard to the larger study. Rather, I will outline how I collected the data that I analyse here from this larger corpus. I was interested in the following task:

The participants were given a particular city in some foreign country (the city/country differed for each dyad) and a name/place of a hotel that the participants were ostensibly staying at. They were asked to find a place to have dinner together.

Further, I was interested in what effect, if any, cultural background had on the performance of the task in an English as lingua franca context. For this I decided to

compare a native English-speaking dyad with a dyad from Serbia for whom English is their second language, as well as an English-Serbian mixed dyad.

3.1.1.1. Recruitment, ethics, experiment

Participants were recruited from my personal networks. They were all adults 18 years and over. This research did not target any specific demographic group. Anyone was able to participate as long as they were over 18 and were able to give consent for participation. However, it is noteworthy that my personal networks mostly consist of Serbians in New Zealand and New Zealanders.

All potential participants were verbally given an explanation about the project. The participants that showed interest in being part of the study were sent an information sheet explaining the study and a consent form. They were given time to read over the information and were able to ask any questions they had before deciding whether to participate. Once the participants had agreed to participate, they were booked into a suitable time for the recording session. Each participant was also informed of their right to participate or withdraw from the project at any time before the data analysis began. The participants were also informed that due to the nature of the study, which uses video and audio data, anonymity could not be guaranteed.

Upon arrival at the Multimodal Research Centre participants were asked to complete a consent form before proceeding (if they had not already done so) and were given the opportunity to ask the researcher any questions. Participants were also told that researchers in this study were not working in an evaluative manner, but rather saw the participants as partners who were helping the researchers understand what was happening in the interaction that was being observed and recorded.

Once participants were happy to proceed, they were asked to take a seat in the area set up for the recording. The researcher then explained the task. Once the participants understood the task and were happy to proceed, they were given the task sheet to refer to if required. They were then asked to start the task.

The participants were told that they would have a maximum of 20 minutes to complete the task and if they did not complete the task in the given time frame, they would be asked to stop at the 20-minute mark. All the participants finished the task within the allocated time.

As mentioned above, they were given a city they would be visiting and a location of the hotel that they would be staying in. With this information, the participants were asked to select a restaurant just as if they were visiting this city in reality. Participants were expected to take into consideration aspects like distance to their location, dietary requirements, dietary preferences, and any other aspects they would normally consider when selecting a restaurant, but these expectations were not communicated to the participants. The participants were able to use the internet to search for the location of the hotel, restaurants in the area and any other information they found useful.

3.1.1.2. Equipment and set-up

Participants were seated at computers in different rooms. As some participants were not familiar with the Mac software, all participants were given a brief explanation and shown where to find the Internet browser. The Skype call was connected for the participants and any connection issues were resolved prior to the commencement of the task. The researcher then clapped three times with both doors open for video synchronization. After this, the participants were instructed to start their tasks. Since

my project task was a part of the larger study, participants were instructed to move onto the next task after the first task was completed. The second task was the requirement of the larger study but outside the scope of my own project. Once the second task was also completed, each participant was interviewed. Many of the questions asked were only relevant for the larger project, but the following four question(s) were of particular interest to me:

1. What do you think the other participant felt at different stages of the tasks?
2. In what ways were you able to tell how the other participant was feeling?
3. Do you think this sort of thing would be more difficult over the phone?
4. Do you think it was harder to tell what the other person was feeling over videoconferencing as opposed to if you had done this face-to-face?

For task-recording, four cameras were used to record each dyad. For each participant one camera was positioned to their left capturing their upper body and the second camera was placed to their right capturing their whole body. The video and screen data were also recorded through a software called Screenflow which captured the video from the video camera at the top of the computer screen as well as what was happening on the screen.

For the tripod-standing cameras, two different types of cameras were used, and the set-up measurements and positioning are demonstrated in Figures 1 and 2 bellow. Figure 1 shows the setup using GoPro cameras with the participants seated at a desk with the computer set up in front of them. To achieve the exact same setup each time, we measured 880 cm from the left side of the table to the middle and from there we measured a 55-degree angle from the edge of the table towards the middle on the left side and 135-degrees on the right side. We then placed the first camera on the left (GoPro 5) at a 55-degree angle 1640 cm away from the middle point on the table on

top of a tripod 1050 cm high using the setting 120fps, pal and narrow view. The second camera on the right (GoPro 4) was placed at a 135-degree angle 1860 cm away from the middle point on the table on top of a tripod 720 cm high using the setting 50fps, pal and medium view.

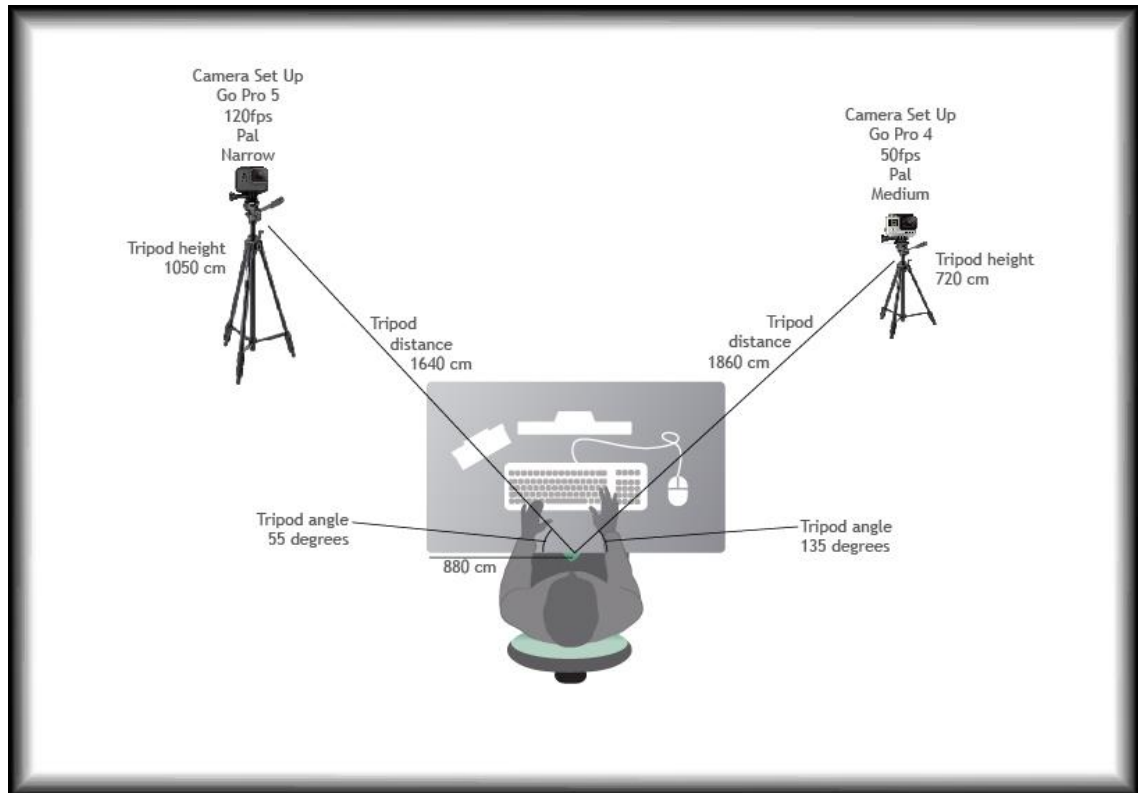


Figure 1: Birdseye view on the table and computer set up 1.

Figure 2 demonstrates the second set up using Panasonic HC-V385 Cameras. For this set up the same angles were used of 55-degrees for the left camera and 135-degrees for the right camera. However, the camera placement was slightly different. The left camera (Panasonic HC-V385) was placed at a distance of 1640 cm from the middle point on the table on top of a 1040 cm high tripod. The right camera (Panasonic HC-V385) was placed at a 2250 cm away from the middle point of the table on top of a 720 cm high tripod. Camera settings MP4/iFrame and 1080/50m were used for both cameras. The Panasonic cameras were placed at a slightly different distances to achieve the same visual field as the GoPro cameras for consistency of the data.

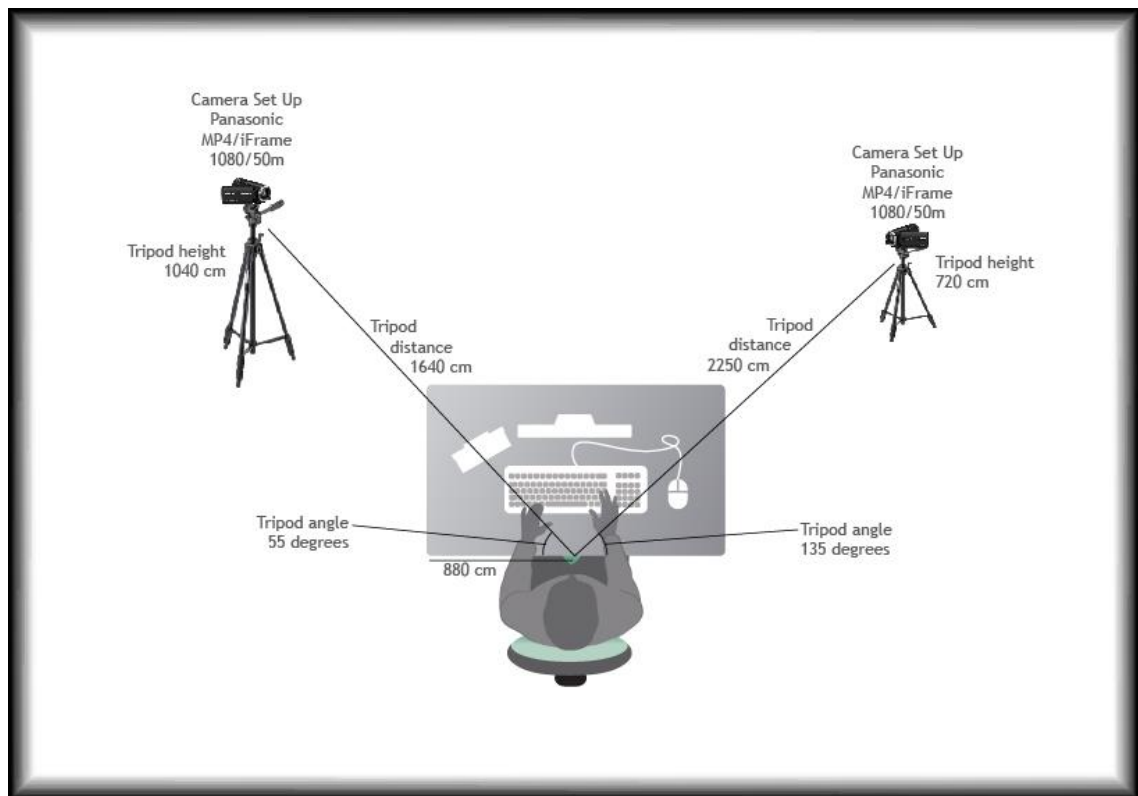


Figure 2: Birdseye view on the table and computer set up 2.

The computer set up in Room A: MRC comprised of an iMac desktop computer, keyboard and mouse while the set up in Room B: WT604 was comprised of a MacBook pro 15-inch laptop.

3.1.1.3. Collating the data

Since I collected multiple video data sources of each dyad, the videos needed to be collated for parts of the analysis as outlined in detail in Norris (2019). All the videos were time stamped, synchronized and processed using Adobe Premier Pro 2017.

For my project, I also used individual camera angles in order to better depict facial expression (Webcam view), posture (full-body view), or gesture (upper body view). Each of these views were also individually timestamped in the above manner.

3.1.2. Selecting data from the larger corpus

As mentioned above, I focused my project on the first task, during which participants were asked to find a restaurant in a given city in a foreign country. I focused on the full and upper body views as well as on the Webcam view only, since I was interested in the non-verbal actions that participants performed. Thus, I did not work with the recorded screen-data.

I selected three case studies for my thesis: Case study 1, a relatively recent migrant-dyad from Serbia (Aleks and Milica), the Paris dyad; case study 2, a mixed Serbian and English native speaking dyad (Ivana and Duane), the Berlin dyad; and case study 3, an English-only dyad from New Zealand (Joel and Danielle), the Madrid dyad.

3.1.2.1. Case study 1: Serbian native speaker dyad

Aleks and Milica, as mentioned above, are bilingual with Serbian being their native language and English is their second language. Aleks arrived in New Zealand 3 years ago and Milica 1 year ago. Both Aleks and Milica have travelled extensively around the world.

The top row of Figure 3 shows Milica sitting in room A: MRC and her full body is shown to the left, her upper body in the middle and her facial expressions to the right.



Figure 3: Collated, synchronised and time stamped: Screenshot of case study 1.

While the bottom row of Figure 3 shows Alek sitting in room B: WT604 and his full body is shown to the left, his upper body in the middle and his facial expressions to the right.

3.1.2.2. Case study 2: Serbian and English mixed native speaker dyad

Ivana is a Serbian-English bilingual speaker who arrived in New Zealand when she was 2 years old and all of her formal education was in New Zealand. Ivana has visited Serbia a few times since arriving in New Zealand. Whereas Duane is of Indian descent and was born in Bahrain. He has only been back to Bahrain a couple of times and has always only spoken English.

In the top row of Figure 4 we see Ivana sitting in room A: MRC. Here we first see her full body on the left of the image, in the middle we see her upper body and her facial expressions on the right.



Figure 4: Collated, synchronised and time stamped: Screenshot of case study 2.

Further, Figure 4 shows Duane in the bottom row sitting in room B: WT604. His full body is shown on the left, his upper body in the middle and his facial expressions on the right.

3.1.2.3. Case study 3: New Zealand English monolingual dyad

Joel and Danielle are monolingual. They were both born and raised in New Zealand with little or no overseas travel.

The top row of Figure 5 shows Joel sitting in room A: MRC. His full body is shown on the left, his upper body in the middle and his facial expressions on the right.

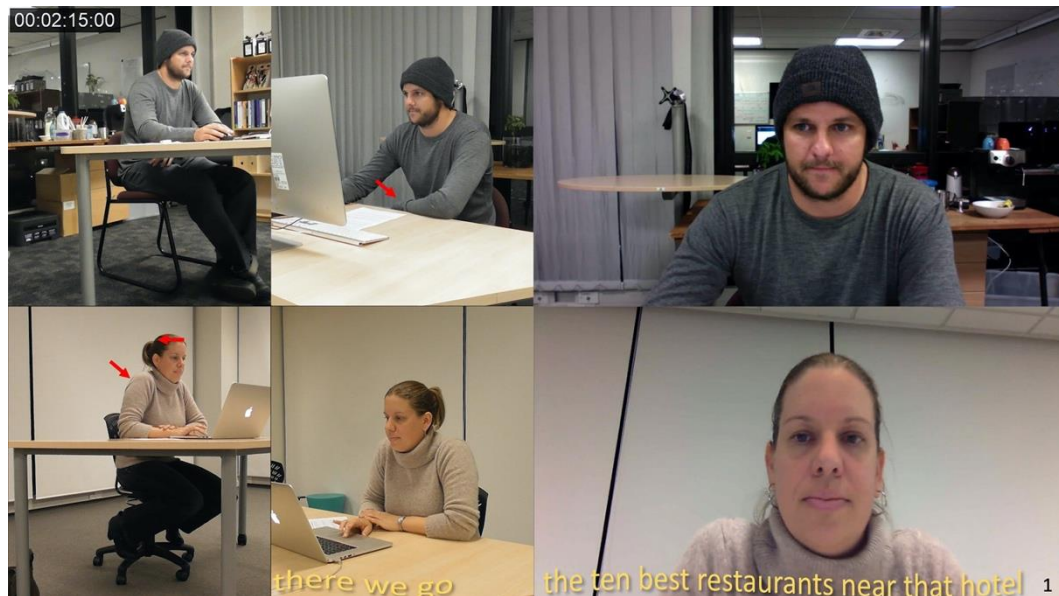


Figure 5: Collated, synchronised and time stamped: Screenshot of case study 3.

The second row of Figure 5 shows Danielle sitting in room B: WT 604. Her whole body is shown on the left, her upper body in the middle and her facial expression on the right.

3.1.3. Data collection table

According to Norris (2019), data collection tables are produced during Phase I of the systematic way of working with multimodal data. The tables show the dyadic team numbers, the dates when the data was collected, the location where the research took place and the participants. The two participants were set up in two different rooms located on the same floor, but far enough apart so that they could not hear each other through the walls. After the Skype call, each participant was interviewed. Prior to the interview, Skype was disconnected, and the participants were interviewed in their own rooms by separate researchers.

3.1.3.1. Data collection table: Serbian native speaker dyad

In Table 1, we can see that the Serbian native speaker dyad was the 12th to be recorded and that the recording session took place in August 2017. Room A: MRC was where participant Milica was located. Room B: WT604 was a classroom next to the MRC, where Aleks was located.

Table 1: Data collection table for Serbian native speaker dyad

Data collected	Date	Place	Participant
Dyadic Teamwork # 12	August 2017	Room A: MRC Room B: WT604	Participant A: Milica Participant B: Aleks
Interview 23	August 2017	Room A: MRC	Participant A: Milica
Interview 24	August 2017	Room B: WT604	Participant B: Aleks

Row two of the above Data Collection Table shows that Milica's interview data piece was called Interview 23, that her interview took place in August 2017 while remaining in room A: MRC. Row three shows Aleks's interview data piece was called Interview 24, which also took place in August 2017, while remaining in room B: WT604 where he conducted his tasks.

3.1.3.2. Data collection table: Mixed Serbian and English native speaker dyad

In Table 2, we can see that the mixed Serbian and English native speaker dyad was the 3rd to be recorded and that the recording session took place in April 2017. In room A, MRC, participant Ivana was located, and in room B, WT604, participant Duane was located.

Table 2: Data collection table mixed Serbian and English native speaker dyad

Data collected	Date	Place	Participant
Dyadic Teamwork # 3	April 2017	Room A: MRC Room B: WT604	Participant A: Ivana Participant B: Duane
Interview 5	April 2017	Room A: MRC	Participant A: Ivana
Interview 6	April 2017	Room B: WT604	Participant B: Duane

Row two of the above Data Collection Table shows that Ivana's interview data piece was called Interview 5, that her interview took place in April 2017 while remaining in room A: MRC. Row three shows Duane's interview data piece was called Interview 6th, which also took place in April 2017, while remaining in room B: WT604 where he conducted his tasks.

3.1.3.3. Data collection table: Native New Zealand English speaker dyad

In Table 3, we can see that the native English speaker dyad was the 6th to be recorded and that the recording session took place in May 2017. Room A: MRC was where participant Joel was located. Room B: WT604 was a classroom next to the centre where Danielle was located.

Table 3: Data collection table English native speaker dyad

Data collected	Date	Place	Participant
Dyadic Teamwork # 6	May 2017	Room A: MRC Room B: WT604	Participant A: Joel Participant B: Danielle
Interview 11	May 2017	Room A: MRC	Participant A: Joel
Interview 12	May 2017	Room B: WT604	Participant B: Danielle

Row two of the above Data Collection Table shows that Joel's interview data piece was called Interview 11, that his interview took place in May 2017 while remaining in room A: MRC. Row three shows Danielle's interview data piece was called Interview 12, which also took place in May 2017, while remaining in room B: WT604 where she had conducted her tasks.

All data was processed in the secure Multimodal Research Centre. The data collected prior to commencement of the task and shortly after the task was cut out to exclude participants' personal discussions.

3.2. Methodology: Multimodal (inter)action analysis and identity

In this section I discuss the relevant literature in the field of multimodal (inter)action analysis as well as multimodal (inter)action analysis and identity.

3.2.1. Multimodal (Inter)action Analysis

Multimodal (inter)action analysis (Norris, 2019, 2020b) studies interaction between social actors and the world around them. This approach combines non-verbal with verbal communication and enables researchers to observe individuals as they communicate with each other, the objects around them, and the environment they are in. The use of cultural tools by all actors is emphasised by this technique. Social actors use cultural tools around them to act. The multimodal approach implies that without the use of cultural tools, social actors cannot act and that cultural tools do not exist without social actors' using them.

According to Norris (2020a: 796), multimodal (inter)action analysis 'grew out of mediated discourse analysis (Scollon, 1998, 2001) in connection with interactional sociolinguistics (Goffman, 1959, 1963, 1974; Gumperz, 1982; Tannen, 1984) and multimodal analysis (Van Leeuwen, 1999; Kress and Van Leeuwen 2001).

Multimodal (inter)action analysis is an integration of all modes of communication used in mediated actions (Norris, 2020a). A mediated action is a unit of analysis looking at a social actor using cultural tools to act. There are three types of mediated action: the lower-level mediated action, the higher-level mediated action, and the frozen mediated action. Lower-level mediated action is the smallest unit of a communicative mode such as an utterance or a postural shift and they allow for micro-analyses. The higher-level mediated action is made up of chains of lower-level mediated actions for example a chain of utterances, postural shifts and gestures forming a conversation. Lastly, frozen actions are actions that are entailed in objects or environments present in an interaction.

Multimodal (inter)action analysis is useful in examining what people do and how they communicate and interact. To demonstrate mediated action as clearly as possible multimodal (inter)action analysis uses transcripts of each mode of communication in a form of snapshot images overlaid with spoken language to show the non-verbal interaction, the physical environments, the objects within the environment and language intonations to demonstrate the relationship between all the modes.

3.2.2. Multimodal (Inter)action Analysis and Identity

Scollon (1997) argues that every action is telling of your identity. However, as people often engage in more than one action at a time, Norris (2011) found that they also can

produce several identities at the same time and called these 'identity elements'. She investigated the multimodal construction of identity elements of two women living in Germany using video ethnography to gather data and multimodal (inter)action analysis to analyse the data. Norris (2011) found, for example, a participant simultaneously displaying her mother and her caterer identity elements. Identity elements are produced through mediated action and by studying these actions, we can show aspects of people's identity. Norris (2011) also shows how, through frozen actions embedded in many of the items in their homes, a German-Italian woman in her study constructed her Italian national identity and the other participant constructed her artist identity.

The term identity element (Norris, 2011) deviates slightly from the more commonly used term identity fragment. The term element connotes a part of a whole which builds a whole in itself; while the term fragment connotes a shattering of a whole that does not build a whole in itself. (2). To construct several identity elements simultaneously the social actor pays attention to simultaneous actions including frozen actions.

Makboon (2015) examined, through video ethnographic data collection, the actions of three Thai vegetarians. In this study she finds the participants produce vegetarian and religious identity elements as well as others. She also finds frozen actions embedded in identity telling items within the participant's homes in form of vegetarian and religious identity elements. In Norris and Makboon (2015), the authors demonstrate four identity elements of a participant called Nimit. First, they observe his organic bean sprout farming identity element through his action of holding up a bag of bean sprouts that he grew and harvested while also instructing workshop attendees how to grow organic bean sprouts using his technique. The second identity element of a sustainable farmer can be seen through the frozen action of hanging up the picture of King Bhumibol of Thailand who is an advocate for sustainable living. Thirdly, Nimit's expert identity

element is demonstrated through his action of speaking into the microphone while conducting a workshop as well as the action of conducting the workshop itself. Lastly, in the frozen action of dressing in a blue unadorned peasant shirt made of natural fabric Nimits's Santi-Asoke cultivator identity element is shown.

Norris and Makboon (2015) also demonstrate four identity elements of a participant called Tanya. Tanya's first identity element of being a friend can be seen in the frozen action of hanging up a painting that her friend gifted her. The friend identity element is further demonstrated through Tanya's mirroring of her friend and co-worker both verbally and non-verbally. The second identity element of being a working mother can be seen through the frozen action of hanging up a self-made photo calendar in her office, made up of pictures taken of her two children. Third, the frozen action of riding a bicycle to work is embedded in the bicycle leaning against the wall next to Tanya's desk showing Tanya's cyclist identity element. Lastly, Tanya's working identity element is demonstrated in her work motto "don't look back" being written on the whiteboard of her office.

Matelau-Doherty & Norris (2021), discuss a Māori creative artist navigating her identity in everyday life. They use the concept of vertical identity production (Norris 2020a) to show how identity elements can be conflicting or fluid. Matelau-Doherty & Norris (2021) demonstrate the conflicting identity element of a Māori and Pākehā third generation Australian woman, whose grandmother moved to Australia from New Zealand. The creative artist had moved to New Zealand to learn more about her ancestry. The conflict in identity elements for this participant occurs between her general Māori identity, the identity passed down to her by her grandmother of loyalty and strong family ties, and the continuous Māori identity element of a marginalised/colonised Māori she encountered upon her arrival in New Zealand. Matelau-Doherty & Norris

(2021) demonstrate how the conflict was resolved through the participant's fluid identity element production through her dance and choreography.

3.3. Method

In this section I discuss delineation of the data and introduce the three case studies I will be looking at. I then describe the process through which I organise the data into higher-level action tables and then into bundled higher-level action tables to show recurring themes in the data. Finally, I describe the transcription process as well as how the data was analysed.

3.3.1. Phase II: Delineating the data

According to Norris (2019), data set tables are produced during Phase II of the systematic way of working with multimodal data. Data Set Tables show the identification name for the data collected (which is always the same as in the Data Collection Tables); where the excerpt that is listed is found in the video and how long it is; who the participants are and one to three cultural tools that they were using during the excerpt/task; notes about the participants and/or the excerpt which are important for the analyst; and observational notes, which may be of relevance for the analysis.

When looking at the data set tables, we can see that data lengths differ greatly among dyads. However, what I found is that the length of the data pieces was not relevant to the analysis in this particular study as my focus was on what the participants were doing not how long they needed for the task.

3.3.1.1. Case study 1: Serbian native speaker dyad

The below table shows the data of the first case study in my research. The first row, column 1 displays that I am analysing the data piece called Dyadic Teamwork # 12 and that I am limiting my project to Task 1. The second column shows that the task started at 00:00:00:00 and took about 19 minutes to conclude. Column three names the participants, Milica and Aleks, and two cultural tools that they used, namely, Google maps plus street view and restaurant websites. The fourth column notes that Milica is female, and Aleks is male, and that they were given Paris as their city. Lastly, column five observes that they are in a relationship.

Table 4: Data set table for Serbian native speaker dyad

Name of data piece	Where/Length of recording	Participants involved 1-3 cultural tools	Notes	Observational Notes
Dyadic teamwork #12 Task 1	From 00:00:00 About 19 minutes	Milica Aleks Google maps plus Street view, restaurants websites	Female/ Male Paris dyad	In a relationship
Interview 23	From 00:00:00 About 7.5 minutes	Milica	Modes addressed 00:01:19 00:02:00	Facial expression Spoken language
Interview 24	From 00:00:00 About 9.5 minutes	Aleks	Modes addressed 00:03:00 00:03:37	Gaze Touch Non-verbal in general

The second row shows in the first column the data piece called Interview 23. The second column displays that the interview started at 00:00:00 and lasted for about 7.5 minutes. The third column lists the participant's name, Milica. In the notes (column 4), I show that she addresses modes in her interview starting at 00:01:19 and again at

00:02:00; and in the last column I noted my observational notes, stating that she spoke about the modes of spoken language and facial expression.

The third row in Table 4 shows, in the first column the data piece called Interview 24. The second column displays that the interview started at 00:00:00 and lasted for about 9.5 minutes. The third column lists the participant's name, Aleks. In the notes (column 4), I show that he addresses modes in his interview starting at 00:03:00 and then again at 00:03:37. In the last column I noted my observational notes, stating that he spoke about the modes of gaze, touch and non-verbal modes in general.

3.3.1.2. Case study 2: Mixed Serbian & English native speaker dyad

The below table displays the data of the second case study in my research. The first row, column 1 shows that I am analysing the data piece called Dyadic Teamwork # 3 and that I am limiting my project to Task 1. The second column illustrates that the task started at 00:00:00 and took about 7 minutes to conclude. Column three names the participants, Ivana and Duane, and three cultural tools that they used, namely a pen, Google maps, and restaurant websites. The fourth column notes that Ivana is female, and Duane is male, and that they were given Berlin as their city. Lastly, column five observes that they are friends.

Table 5: Data set table for mixed Serbian and English native speaker dyad

Name of data piece	Where/Length of recording	Participants involved	Notes	Observational Notes
		1-3 cultural tools		
Dyadic teamwork #3 Task 1	From 00:00:00 About 7 minutes	Ivana Duane Pen, Google Maps, Restaurant Websites	Female/ Male Berlin dyad	Friends
Interview 5	From 00:00:00 About 11 minutes	Ivana	Emotion & Modes addressed 02:46:25	Gaze Facial expression Spoken language
Interview 6	From 00:00:00 About 7 minutes	Duane	Modes addressed 04:49:25	Gaze Facial expression Spoken language

The second row shows in the first column the data piece called Interview 5. The second column illustrates that the interview started at 00:00:00 and lasted for about 11 minutes. The third column lists the participant's name, Ivana. In the notes (column 4), I show that she addresses emotions and modes in her interview starting at 02:46:25; and in the last column I noted my observational notes, stating that she spoke about the modes of spoken language, gaze, and facial expression.

The third row in Table 5 shows, in the first column the data piece called Interview 6. The second column displays that the interview started at 00:00:00 and lasted for about 7 minutes. The third column lists the participant's name, Duane. In the notes (column 4), I show that he addresses modes in his interview starting at 04:49:25; and in the last column I noted my observational notes, stating that he spoke about the modes of gaze, facial expressions and spoken language.

3.3.1.3. Case study 3: New Zealand English monolingual dyad

The below table shows the data of the third case study in my research. The first row, column 1, displays that I am analysing the data piece called Dyadic Teamwork # 6 and that I am limiting my project to Task 1. The second column shows that the task started at 00:00:00 and took about 4 minutes to conclude. Column three names the participants, Joel and Danielle, and two cultural tools that they used, namely, Google maps and Trip Advisor. The fourth column notes that Joel is male, and Danielle is female, and that they were given Madrid as their city. Lastly, column five observes that they are friends.

Table 6: Data set table for English native speaker dyad

Name of data piece	Where/Length of recording	Participants involved	Notes	Observational Notes
		1-3 cultural tools		
Dyadic teamwork #6 Task 1	From 00:00:00 About 4 minutes	Joel Danielle Google maps, Trip Advisor	Male / Female Madrid dyad	Friends
Interview 11	From 00:00:00 About 3 minutes	Joel	Modes addressed 00:01:38	Spoken language Facial expression
Interview 12	From 00:00:00 About 3 minutes	Danielle	Modes addressed 00:01:42	Gaze

The second row shows in the first column the data piece called Interview 11. The second column illustrates that the interview started at 00:00:00 and lasted for about 3 minutes. The third column lists the participant's name, Joel. In the notes (column 4), I show that he addresses modes in his interview starting at 00:01:38; and in the last column I noted my observational notes, stating that he spoke about the modes of spoken language and facial expression.

The third row in Table 6 shows, in the first column the data piece called Interview 12. The second column displays that the interview started at 00:00:00 and lasted for about 3 minutes. The third column lists the participant's name, Danielle. In the notes (column 4), I show that she addresses modes in her interview starting at 00:01:42; and in the last column I noted my observational notes, stating that she spoke about the mode of gaze.

3.3.2. Phase III: Selecting data pieces

While data lengths differed for the various dyads, I found that regardless of the time the participants took to complete the task, each dyad spent some time engaging in “helping” sequences. I found these “helping” sequences after I produced and bundled the higher-level action tables which indicated that all dyads engaged in these sequences. I found this very interesting and this became the focus of my study.

According to Norris (2019), higher-level action tables are produced during Phase III of the systematic way of working with multimodal data. It shows the higher-level actions performed during a task and the time at which they begin in the recorded video. The higher-level action tables allow us to see what the participants are doing in a data set that we are analysing, helping the researcher to easily locate occurrences at a later date for further analysis.

3.3.2.1. Higher-level action table: Serbian native speaker dyad

The higher-level actions for the Paris dyad are listed in the table below. The task starts at 00:00 with greetings and general discussion on whether the task started. Both Milica and Aleks dive right in at 00:16 to search for the location of the hotel. At 01:15 they discuss where the hotel is located in the city and discussion continues from 01:38 on

where they would like to eat. They start a discussion (02:46) on whether to use trip advisor to make the decision on where to eat, with Milica advocating for and Aleks against Trip Advisor. They decide to just look on Google maps and find a restaurant they like (03:56). Discussion continues (04:39) on what a good area would be to look for the restaurant. Aleks suggests that they should just pick a region and go for a walk once they arrive in Paris to choose a restaurant (05:22). At 06:19 Milica has opened Street view on Google maps and suggests that they take a virtual walk down the streets of Paris to find a place to eat.

Table 7: Higher-level action table for Serbian native speaker dyad

Milica and Aleks - Paris Dyad	
Time	Action
00:00	Greeting
00:16	Searching for Location of Hotel
01:15	Where is the hotel in relations to the City
01:38	Discussing where they would like to eat
02:46	On whether to use Trip Advisor or not to make the decision
03:56	Discussing where they would like to eat
04:39	Searching for a location where to look for restaurants
05:22	Weather to continue searching or just walk there once they get there
06:19	Milica asks Aleks to help her say Farris wheal in English as she can't remember the English work
06:30	Aleks loses his place and searches for the location they are discussing again
07:39	Milica Helps Aleks to go to Street View on Google maps
08:16	They are trying to get to the same location (maybe helping)
08:57	Banter/ Aleks is teasing Milica for getting lost
09:28	Discussing where they should go for a walk
09:54	Aleks helps Milica Spell the street he is on so she can be in the same location
10:13	Discussing location where to do Aleks says this area is not good
11:33	Aleks helps Milica find the area he just found with 4 restaurants
13:43	Aleks talks about a movie they watched that was filmed here and how expensive it will be to eat here
15:05	Searching for restaurants and general discussion

16:52	They agree on a restaurant
17:01	Searching for website of the restaurant
17:15	Discussing the choice/price and quality and Milica talks about another option
18:37	Aleks tells Milica they are going to the one Aleks picked as it meets all their needs
19:11	Move to next task

Aleks loses the place he was talking about where Milica has landed using Street view. While he tries to find the location Milica is located at, they discuss using Street view as an option to pre-plan vacations. At 07:39 Milica helps Aleks to figure out how to use Street view and at 08:16 Aleks is using Street view to try to find the location Milica is looking at. General discussion continues (08:16) as they try to get to the same location with Aleks teasing Milica for getting lost (08:57). They continue to discuss where they should go for a walk (09:28) while Aleks helps Milica spell the street he is looking at so they can get to the same location (09:54). At 10:13 they discuss the area they are looking at while Alex explains that he believes the area is not very good and he helps Milica find the area he just located with four restaurants (11:33). Aleks discusses how a movie they recently saw was filmed in the area they are looking at and how expensive it would be to eat there (13:43) and they continue to search for restaurants while having a general conversation (15:05). At 16:52 they agree on a restaurant and search for the restaurant website (17:01). Discussion on the restaurant choice, the price and quality of the food continues while Milica offers another option (17:15). Aleks tells Milica that they are going to the restaurant Aleks has picked (18:37) as it meets all their needs they agree and move onto the next task (19:11).

3.3.2.2. Higher-level action table: Mixed Serbian and English native speaker dyad

The higher-level actions for the Berlin dyad are listed in the table below. The task starts at 00:25 with Duane searching for the location of the hotel followed by some small talk to check if Ivana is hungry. At 00:38 they both search for the location of the hotel and discuss what kind of food they feel like eating. Agreeing that they would like to eat German food as they are visiting Germany, they start to look for restaurants near the hotel. As they search, they discuss whether to eat at a restaurant or a bar. At 01:35 Ivana helps Duane find a nearby restaurant faster and as he searches, he comes across Movenpick, so they briefly discuss going for an after-dinner desert. As they continue to search, they discuss whether to stay close to the hotel or venture a bit further away. At 01:59 Duane finds a restaurant and the pair discusses if it is a good option for them. Duane helps Ivana locate the restaurant he is looking at and while she searches, he looks for the menu. Ivana finds another option at 02:41 they discuss it and decide against it as it is Argentinian food. They continue to search for German food. Ivana finds a restaurant that sounds German at minute 03:13. She helps him find the restaurant and sends Duane a link.

Table 8: Higher-level action table for mixed Serbian and English native speaker dyad

Ivana and Duane – Berlin Dyad	
Time	Action
00:25	Duane opens task
00:29	Duane googles the hotel
00:32	Small talk - Duane checking if Ivana is hungry after the long flight
00:38	Searching Continues - both look for hotel location
00:42	Discussion on what kind of food they feel like eating and agreeing to eat German food
00:57	Searching for restaurants near by
01:03	Discussing Restaurant or Bar

01:04	Ivana helps Duane find the hotel
01:18	Agreement reached - eating at restaurant
01:20	Searching for restaurant
01:35	Ivana helping Duane to find a nearby restaurant faster
01:44	Discussing desert as Movenpick appeared on Duane's list
01:50	Discussing Location to eat - close or far away
01:59	Discussing options - Duane finds restaurant discussing if it is a good option
02:19	Duane helps Ivana locate the restaurant he is looking at
02:22	Duane looks for the menu while Ivana searches
02:41	Ivana has found the restaurant Duane was talking about and looks at other options in the area
02:58	Decide against this option as its Argentinian in favour of something local
03:03	Searching for German food
03:13	Ivana finds a restaurant that sounds German and they discuss the location
03:18	Ivana helps Duane to find the restaurant she is talking about
03:56	Discussing the restaurant Ivana sent the link for to Duane
04:49	Ivana offers another restaurant option and they helps Duane find it using share screen which Duane turns on as Ivana can't find how to turn it on
06:23	Duane finds another restaurant option and helps Ivana find it
07:22	Ivana finds the restaurant Duane is referring to and they discuss the location and the menu
07:58	Discuss price
08:28	Agree on this restaurant
08:29	Discuss how they will get to the restaurant
08:34	Move on to task two

While they are discussing this option and Duane is looking for the restaurant Ivana offers yet another option. At 04:49 Ivana is helping Duane find the restaurant she is talking about and as she struggles to explain where it is, Duane reminds her that his screen is shared, and she proceeds to give him instructions while watching his screen. Duane finds another restaurant option and assists Ivana to find it at 06:23. After Ivana has located the restaurant at 07:58 they discuss the location, menu, and price. At 08:28 they agree on the restaurant and discuss how they will get there. The task concludes by Ivana and Duane moving onto the second task.

3.3.2.3. Higher-level action table: New Zealand English native speaker dyad

The higher-level actions for the Madrid dyad are listed in the table below. The task starts with general greetings and discussion on what to eat in Madrid with Joel suggesting McDonald's (00:11). At 00:32 Danielle starts to look for the location of the hotel using Google maps and discussion on McDonald's continues (00:38). Joel and Danielle continue talking about who will look for the restaurants with Joel assigning the task to Danielle (00:54) who agrees and continues to look for the restaurant on Google maps (01:21). At 01:34 they discuss the location of the restaurants and how far they are willing to go for dinner. Danielle searches for the hotel (01:50) and comes across a link for trip advisor. She reads the options out to Joel, then starts to search for the hotel on Google maps (02:15).

Table 9: Higher-level action table for English native speaker dyad

Joel and Danielle – Madrid Dyad	
Time	Action
00:00	Greeting
00:11	Discussing what to eat - Joel suggests Mc Donald's
00:32	Danielle Starts googling the location
00:38	Discussion on Mc Donald's in America
00:54	Discussion over who will look for a restaurant
01:21	Danielle looks for restaurants in Madrid on google maps
01:34	Discussing location and how far they would go
01:50	Danielle searches for hotel
02:15	Danielle find a link to TripAdvisor and reads out to Joel the options she found / Joel google maps the hotel
03:01	Joel tells Danielle that there is a MC Donald's 2 block from the hotel, and they discuss this option
03:28	Danielle disagrees and tells Joel that the steak house looks really good / he agrees and says ok I like steak we will go there
03:43	Discussion over the how the restaurant looks / Joel refuses to look trusting Danielle to make the hoi
04:14	Joel tells Danielle she should pay because of Feminism

04:32	Discussion over Joel letting Danielle choose without him even looking at it
04:38	Move onto the next task

Joel advises Danielle that there is a McDonald's two blocks from the hotel and they discuss this option (03:01). Danielle disagrees with the McDonald's option and advises Joel about the steakhouse nearby that looks really good (03:28). He agrees with the steakhouse idea and they continue to discuss how the restaurant looks with Joel refusing to look up the restaurant trusting Danielle to make the decision (03:43). At 04:14 the pair discuss who will pay and Joel suggests that Danielle should pay because of feminism. The discussion continues over Joel letting Danielle make the decision without him even looking at the restaurant (04:32) and they move onto the next task at 04:38.

3.3.3. Bundled higher-level action tables

According to Norris (2019), bundled higher-level action tables are next produced during Phase III of the systematic way of working with multimodal data. The bundled higher-level action tables below summarise the higher-level action tables by identifying recurring themes and showing at what point in the video they begin. The bundled higher-level action table thus help identify trends that are occurring in our data and how often they occur to allow the researcher to identify moments of interest.

3.3.3.1. Bundled higher-level action table: Serbian native speaker dyad

Here, I have bundled the higher-level actions that the Serbian native speaker dyad performed as shown in Table 10. The first row in the Table below shows all the moments during task one when the participants engaged in searching either for the

hotel they were staying in or the restaurant they wanted to dine in. Milica and Aleks conducted six searching segments during task one.

Table 10: Bundled higher-level action table for Serbian native speaker dyad

Milica and Aleks - Paris dyad	
Substance of higher-level mediated action	Time and video
Searching	00:16, 04:39, 06:30, 08:16, 15:05, 17:01
Negotiating	01:38, 02:46, 03:56, 05:22, 09:28, 10:13
Helping	01:38, 02:46, 03:56, 05:22, 07:39, 09:28, 10:13
General discussion	00:00, 01:15, 08:57, 13:43, 17:15

The second row displays all the moments when negotiation occurred and the participants were agreeing on a choice, for example what type of food to eat. They conducted six negotiation segments during the first task. The third row illustrates all the moments during the task when one or the other participant was helping their partner. Milica and Aleks performed seven helping segments. While the final column shows five instances of general discussion that occurred between the participants during this task.

3.3.3.2. Bundled higher-level action table: Mixed Serbian and English native speaker dyad

Here, I have bundled the higher-level actions that the mixed Serbian and English native speaker dyad performed as shown in Table 11. The first row in the Table below shows all the moments during task one when the participants engaged in searching either for the hotel they were staying in or the restaurant they wanted to dine in. Ivana and Duane performed six searching segments.

Table 11: Bundled higher-level action table for mixed Serbian and English native speaker dyad

Ivana and Duane – Berlin Dyad	
Substance of higher-level mediated action	Time and video
Searching	00:29, 00:38, 00:57, 01:20, 02:22, 03:03
Negotiating	00:42, 01:03, 01:18, 01:50, 01:59, 02:41, 02:58, 08:28
Helping	01:04, 01:35, 02:19, 03:18, 03:56, 04:49, 06:23
General discussion	00:25, 00:32, 01:44, 03:13, 07:58

The second row displays all the moments when negotiation occurred and the participants were agreeing on a choice, for example what type of food to eat. The participants performed eight negotiation segments. The third row illustrates all the moments during the task when one or the other participant was helping their partner. Ivana and Duane performed seven helping segments. While the final column shows all the other general discussion that occurred during this task which was total of five segments for the Berlin dyad.

3.3.3.3. Bundled higher-level action table: New Zealand English native speaker dyad

Here, I have bundled the higher-level actions that the English native speaker dyad performed as shown in Table 12. The first row in the Table below displays all the moments during task one when the participants engaged in searching either for the hotel they were staying in or the restaurant they wanted to dine in. They performed three searching segments.

Table 12: Bundled higher-level action table for English native speaker dyad

Joel and Danielle – Madrid dyad	
Substance of higher-level mediated action	Time and video
Searching	00:32, 01:21, 01:50
Negotiating	00:11, 00:54, 01:34, 03:01, 03:28
Helping	02:15
General discussion	00:00, 00:38, 03:43, 04:14, 04:32, 04:38

The second row shows all the moments when negotiation occurred and the participants were agreeing on a choice, for example, who will look for the restaurant. They performed five negotiation segments. The third row displays all the moments during the task when one or the other participant was helping their partner which only occurred once. While the final column illustrates all the other general discussion that occurred during this task with a total of six instances for the Madrid dyad.

3.3.4. Phase IV: Transcribing the data

Phase IV, when systematically working with multimodal data (Norris, 2019), is multimodal transcription. First, we transcribe each mode separately. Then we collate all mode transcripts by using the time stamps to make a long final transcript. This long final transcript is then condensed into a shorter final transcript with arrows, circles, etc. to best show the sequence being analysed.

3.3.5. Phase V: Analysing the data

In Phase V to systematically analyse the data collected, we choose analytical tools. I chose higher-level and lower-level actions as well as identity elements. These tools were selected as they offer an insight into the non-verbal behaviour of the participants as well as their identity which was the focus of this study. The higher-level actions were

first utilised to find patterns in data collected that could offer an overview of what occurred during the task the participants were involved in. From there the lower-level actions of spoken language (to some extent), but more so of facial expression, postural movements, and hand/arm movements were analysed to observe the difference in the non-verbal expression between the monolingual vs bilingual participants.

3.4. Selecting Data Pieces for Micro Analysis

I selected helping sequences because the participants spent more time engaging with each other than they did during other higher-level actions. During these helping sequences the participants helped each other, for example, to locate specific points on the map of the city they were visiting, or to identify the restaurant the other participant was looking at. Interestingly, very few dyads actually shared their screen. Thus, since the participants were not in the same physical location (i.e. they were in different rooms), they had to be creative in helping the participant on the other side of the screen to see what they themselves were seeing, resulting in very interesting movements and gestures. Watching the sequences, it appeared that the participants from a monolingual English background gestured less and relied more on the spoken word to describe and give direction; whereas the participants with native Serbian, and thus a Serbian-English bilingual, background were very expressive with the gestures even if the other participant was not looking at the video feed of them at the time. Because of this, I made the hypothesis that participants with a native Serbian background are more expressive non-verbally than the participants with a New Zealand English background. Next, I wanted to see if my hunch was indeed correct, and asked the following research question:

How does the expression of identity elements through non-verbal actions differ between individuals from a Serbian-English bilingual background compared to individuals from a monolingual New Zealand English background?

3.5. Conclusion

In this chapter, I outlined the design of the study showing the process of data selection and collection. I showed all the collected data and define the three case studies in this thesis project, the Serbian native speaker dyad, the mixed Serbian and English native speaking dyad, and the New Zealand English native speaker dyad. I illustrated how I analysed the data through higher-level action tables. From here I showed how I bundled the actions into bundled higher-level action tables to highlight the themes within the data allowing for selection of a data piece for microanalysis.

In the next chapter I conduct a micro analysis of 40 seconds of a higher-level action, a helping sequence, for each of the 3 case studies. I analyse the modes of spoken language (to some extent) and the non-verbal modes of facial expressions, posture and hand/arm movements in detail for each of the participants to see if and how these are telling of the participants' identity.

4. Non-verbal Actions and Identity: Three Case Studies

In this thesis, I focus on the following three higher-level actions (or part of the higher-level actions):

1. Helping sequence one - Paris Dyad – Aleks and Milica 40 seconds – 07:39 to 8:12 (Multimodal Transcript 1);
2. Helping sequence two – Berlin Dyad - Ivana and Duane 40 seconds 3:11 to 3:54 (Multimodal Transcript 2); and
3. Helping sequence three – Madrid dyad – Joel and Danielle 40 seconds – 2:15 to 2:55 (Multimodal Transcript 3)

Helping sequence 3 (Madrid dyad) was only 40 seconds long; and in order to be able to compare, I analysed only the first 40 seconds of the sequence for each dyad. Here I use the modes of spoken language as my starting point and then analyse the facial expressions, posture, and hand/arm movement to analyse the non-verbal actions of the participants and how they relate to their identity. Norris (2011) describes how higher-level and lower-level actions are identity telling. Using the analysis of higher and lower-level actions of the participants I show how they produce their identity elements through their non-verbal actions. I begin each case study with a brief description of the participants and a multimodal transcript of the entire 40 seconds of the (inter)action.

In the multimodal transcript we see the timecode in the top left-hand corner of each image showing us exactly at which point in the task these images occur. In the bottom right-hand corner, we can see the number of the image in the transcript.

In this final transcript, I demonstrate three views for each participant. On the left of an image, I demonstrate the full body and postural movements. Then, in the middle, I show the upper body and hand movements, and the last two images show the facial expressions for each participant. To demonstrate the movements, I have used red arrows to show when they occur and numbers next to the arrows to show how many times each movement occurs.

Spoken language is shown in writing at the bottom of each participant's images.

Participant A's spoken language is shown in red, while participant B's spoken language is shown in yellow. The words showing the language are placed in the image approximately around the time they are spoken. The words representing the participants' utterances are also modified to show the intonations and the voice and the pauses that occur between words or utterances.

4.1. Case Study 1: Serbian Native Speaker Dyad - Milica Helping Aleks

Milica was born and raised in Serbia and has not been in New Zealand for very long. Milica's first language is Serbian and her English, although good, is not as good as her Serbian. Aleks was also born and raised in Serbia and came to New Zealand a few years ago. Aleks, having already spent a few years in New Zealand at the time of the research, has a much better command of English language than Milica.

Chains of lower-level actions are transcribed in the multimodal transcript of Milica and Aleks to demonstrate the higher-level actions of the first 40 seconds of the helping sequence. To demonstrate the mode of spoken language, what was said and how it was said, the chains of utterances are transcribed, illustrating the intonations in the

voice. For the mode of facial expressions, the chains of lower-level actions demonstrating the changes in the face are transcribed, displaying various facial expressions created during the task by the participants. For the mode of posture, the chains of lower-level actions of the postural changes of the participants are transcribed. Lastly, for the mode of hand/arm movement, the lower-level actions performed with the participants' hands or arms are transcribed.



Figure 6.1: Multimodal Transcript, Milica helping Aleks.

In image 1 of the transcript, in the top left corner, we can see the timecode indicating the very beginning of the segment we are evaluating at 00:07:39:00. Milica moves her hand 3 times while she is using the mouse indicated by the red arrows while producing a small smile. Aleks moves his head to the right, his right leg forward and his right hand left and right as he uses the mousepad and says (as shown in yellow) *directions*. The placement of the words on the image is representative of when they occur. In this instance, they are located near the middle of the image showing that they occurred, later then the time displayed on the timestamp, at 00:07:40:40. The shape of the words represents the tone in which the utterance was said, in this instance, Aleks's tone of voice is steady throughout.

In image 2 of the multimodal transcript, Milica says *oh you.... you* which occurs after the start of the segment at 00:07:44:22 and through the shape of the wording we can see that Milica's tone of voice raises slightly at the end of the word *oh* then levels out. Aleks's language is shown in yellow *how do you go to Street view?* and occurs at the start of the segment (00:07:42:34). From the shape of the words we can see that his tone of voice slowly increases over the words *how do you* and levels out for the rest of the utterance. Aleks also moves his head forward and to the right.



Figure 6.2: Multimodal Transcript, Milica helping Aleks.

In image 3, Milica says *okay so* slightly after the start of this image (00:07:45:29), then a few seconds later (00:07:45:36) she says *o... IIIII*. Aleks stays quiet and still during the segment. Then, in image 4, Milica starts by saying *o here* at the start of the segment at 00:07:46:23 and during the rest of the segment she leans forward, moves her feet up and down once, moves her left hand from underneath the table next to the keyboard and finally moves her left hand fingers closer to the keyboard and continues to speak. Aleks, meanwhile, moves the left side of his mouth slightly up.



Figure 6.3: Multimodal Transcript, Milica helping Aleks.

In image 5 Milica says *aa bottom* in a steady tone at the start of this segment 00:07:49:38 while she closes her eyes and presses her lips together. Aleks leans closer to the computer and produces a large smile. As can be seen in image 6, which starts at 00:07:50:42, Milica rocks her hand backwards and forwards five times and says *right* at 00:07:51:05 while looking up and squinting. Aleks moves his right leg slightly backwards and leans his upper body back while pushing his lips together.



Figure 6.4: Multimodal Transcript, Milica helping Aleks.

Image 7 starts at 00:07:51:30. Milica says *angle* in a steady tone at 00:07:51:39 followed by *of your* with an emphasis on the word *your* at 00:07:52:40. She also opens her eyes widely and parts her lips. Aleks moves his head forward and then to the right. Image 8 shows Milica saying, in a steady tone, *yeah so you just take it...am* at 00:07:56:08 while she opens her eyes widely and parts her lips slightly. Aleks says *aaaa yeah that little guy.... yeah* at 00:07:53:31 which occurs before Milica's utterance. He increases his tone of voice in the middle of his sentence. Aleks squints with his eyes and produces a small smile.



Figure 6.5: Multimodal Transcript, Milica helping Aleks.

Image 9 shows Milica starting by saying *okay take it ...and place him* which occurs at 00:07:56:08 shortly before the segment starts at 00:07:57:00. The shape of the words demonstrates that Milica's tone of voice increases at the end of the first part of her sentence *take it* and then again slightly at the word *place*. Milica also presses her lips together with her eyes slightly wider than normal. Aleks remains still and quiet for this segment. While we can see in image 10 that Milica starts her utterance at 00:07:58:03 prior to the start of the segment 00:07:58:30. She says *and I am placing mine to that*

little...m with a slight increase in her tone around the words *mine to that like*. Aleks once again remained still and quiet for this segment.

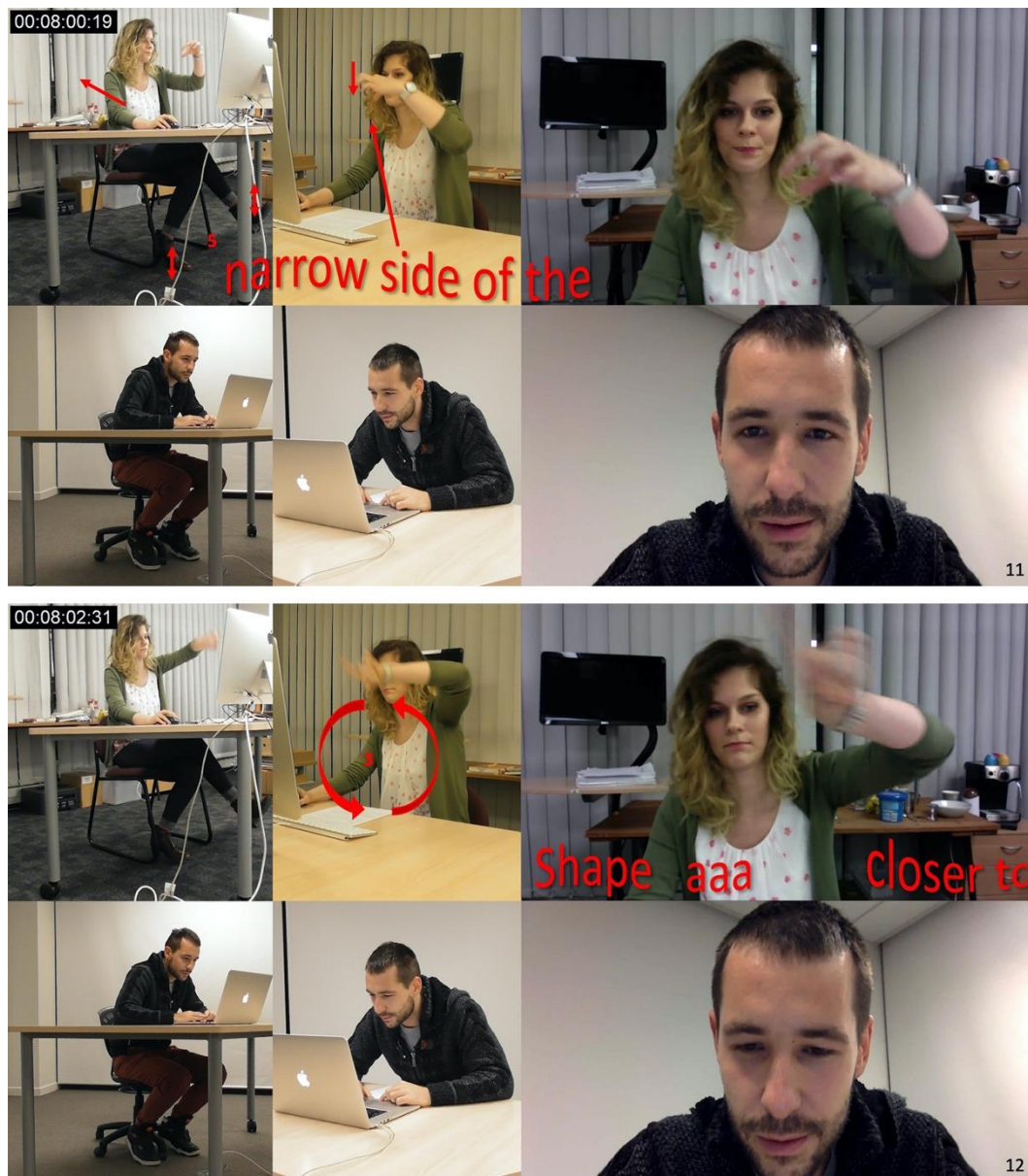


Figure 6.6: Multimodal Transcript, Milica helping Aleks.

Image 11 starts at 00:08:00:19 with Milica rocking her legs up and down five times and leaning backwards while pressing her lips very tightly together. Milica also raises her left hand all the way up and then just slightly down as she says, *narrow side of the* (00:08:00:46) in a steady tone. Aleks remains still and quiet, while we can see in image 12 starting at 00:08:02:31 that Milica is drawing a circle with her left hand three times

and then saying *shape aaa... close to* at 00:08:04:23 with a slight increase in her voice at the start of the word *closer* while pressing her lips together. Milica's hand movement occurs in between the utterance *shape* and the utterance *closer to* as she struggles to find the word in English to describe a Ferris wheel. Alex continues to remain still and quiet.



Figure 6.7: Multimodal Transcript, Milica helping Aleks.

Image 13 starts at 00:08:05:27 and shows Milica bounce her left hand up and down twice while pressing her lips tightly together. Aleks however, remains still and quiet;

and image 14 starts with Milica saying *Place de la Concorde street so away from the river* in a steady tone while she moves her left hand and arm backwards and forwards five times (00:08:06:13); and again Alex remains still and quiet.



Figure 6.8: Multimodal Transcript, Milica helping Aleks.



Figure 6.9: Multimodal Transcript, Milica helping Aleks.

Then, in image 15 starting at 00:08:11:17 Milica moves her left hand down to the table and says *is that where we want to be* with an increased tone of voice at the start of the sentence (00:08:12:27) while opening her eyes widely and parting her lips slightly. Here, Aleks pushes his lips together slightly; and image 16, starting at 00:08:13:25, shows Milica laughing at 00:08:16:44. Now, Aleks bounces his right foot up and down once and shifts his posture backwards. He moves his index finger away from the mousepad on his left hand and says *I am at the square* at 00:08:15:23 with his tone rising slightly in the middle of the sentence. Finally, image 17 starting at 00:08:17:07 shows Milica saying *okay so am I* (00:08:10:00) with the emphasis on the word *so*. She then says *never mind* in a steady tone while she lifts her left hand up and down while producing a smile; and Alex moves his left hand slightly forward.

4.1.1. Spoken Language: Aleks and Milica

In Audio Transcript 1, the first 40 seconds are transcribed for Aleks and Milica. Both, Aleks and Milica are Serbian native speakers. However, as mentioned earlier, Aleks has been in New Zealand for 3 years. At this moment, Milica is helping Aleks to find the

Street view in Paris. In Audio Transcript 1, I show Milica's spoken language in grey and Aleks's spoken language in black because here, I focus on Aleks's language in particular since he opened the higher-level action of the helping sequence by asking for help.

Audio transcript 1: Spoken language: Aleks

(1)	07:40:40	Aleks:	directions.....
(2)	07:42:34		how do you go to Street view?
(3)	07:44:22	Milica:	oh you...
(4)	07:45:03		you
(5)	07:45:29		okay so
(6)	07:45:36		so...llll
(7)	07:46:23		so here...
(8)	07:47:11		you have that little like ..
(9)	07:49:38		aa bottom the
(10)	07:51:05		right
(11)	07:51:39		angle
(12)	07:52:40		off your
(13)	07:53:31	Aleks:	aaaa yeah that little guy
(14)	07:54:44		yeah
(15)	07:54:48	Milica:	yeah so you just take it ...am..
(16)	07:56:08		okay take it and place him
(17)	07:58:03		and I am placing mine to that like...m
(18)	08:00:46		narrow side of the ...
(19)	08:03:06		Shape...aaa
(20)	08:04:23		closer to
(21)	08:06:13		Place de la Concorde street so away from the river ...
(22)	08:12:27		Is that where we want to be?
(23)	08:15:23	Aleks:	I am at the square
(24)	08:16:44	Milica:	hahaa
(25)	08:18:00		okay so am I
(26)	08:18:37		never mind

Audio Transcript 1 shows the spoken language of Aleks as he is being helped by Milica. Aleks, in the beginning of the segment, asks for help from Milica. In lines (1) and (2), he says *directions..... how do you go to Street view?* Then, in the middle of the segment, in lines (13) and (14) he indicates that he knows what Milica is talking about, saying *aaaa yeah that little guy yeah*. Then, later on and close to the end of this helping sequence (line 23), Aleks states *I am at the square*, signalling that he has achieved the task for which he had asked for help.

In Audio Transcript 2, the first 40 seconds are again transcribed for Milica and Aleks. Milica, who has lived in New Zealand for 1 year, is helping Aleks to find the street view in Paris. In this Audio Transcript 2, I show Aleks's spoken language in grey and Milica's spoken language in black because here, I focus on Milica's language in particular

Audio transcript 2: Spoken language: Milica

(1)	07:40:40	Aleks:	directions.....
(2)	07:42:34		how do you go to Street view?
(3)	07:44:22	Milica:	oh you...
(4)	07:45:03		you
(5)	07:45:29		okay so
(6)	07:45:36		so...llll
(7)	07:46:23		so here...
(8)	07:47:11		you have that little like ..
(9)	07:49:38		aa bottom the
(10)	07:51:05		right
(11)	07:51:39		angle
(12)	07:52:40		off your
(13)	07:53:31	Aleks:	aaaa yeah that little guy
(14)	07:54:44		yeah
(15)	07:54:48	Milica:	yeah so you just take it ...am..
(16)	07:56:08		okay take it and place him
(17)	07:58:03		and I am placing mine to that like...m
(18)	08:00:46		narrow side of the ...
(19)	08:03:06		Shape...aaa
(20)	08:04:23		closer to
(21)	08:06:13		Place de la Concorde street so away from the river ...
(22)	08:12:27		Is that where we want to be?
(23)	08:15:23	Aleks:	I am at the square
(24)	08:16:44	Milica:	hahaa
(25)	08:18:00		okay so am I
(26)	08:18:37		never mind

In the Paris-dyad, Aleks clearly asks Milica for help by asking her how he can find the Street view on Google Maps. When Milica is trying to help, she has quite a few false starts and repetitions throughout her whole helping segment. For example, she struggles to find the word to express the person icon when she says in lines 7-12 *so here...you have that little like...aa bottom the right angle off your*. Similarly, she struggles to express her thoughts and using repetitions in lines 15-17 *yeah so you just take it...am...ok take it and place him and I am placing mine to that like...m*.

Aleks's spoken language shows clarity in the way he expresses himself and although he has a few false starts (in other segments) he expresses himself well in English. This is telling of his New Zealander identity element. Milica, on the other hand, in her spoken language, has a significantly higher number of false starts throughout the tasks than Aleks and uses hand gestures to demonstrate her words which is telling of her Serbian as well as her immigrant identity elements.

4.1.2. Facial Expression: Aleks and Milica

The Figure below shows Aleks's facial expressions during the helping sequence of the Serbian dyad.



Figure 7: Facial expression Aleks.

In image 1 at the start of the helping sequence Aleks has a relaxed face and in image 2 he moves the left side of his lips slightly up. He produces a big smile in image 3 and

presses his lips together in image 4. In image 5 he closes his eyes slowly and lifts the corners of his mouth up.

Aleks produces six significant facial expressions during the helping sequence and Milica picked up on these as is evident from the interview insert below. When Milica is asked *What do you think he felt at different stages of the tasks?* she refers (in lines 26 to 36), to the facial expression Aleks produces from which she could tell how he was feeling.

Audio transcript 3: Milica speaking about Aleks's grin.

(26)	I could see it from
(27)	the like grin
(28)	around his head
(29)	you know
(30)	and just
(31)	well...
(32)	I know him...
(33)	and you know
(34)	so I think
(35)	that he was also
(36)	like enjoying this

That Milica was able to tell how Aleks was feeling by his facial expressions was further evident when Milica is asked *In what ways were you able to tell how he was feeling?* she responds (Audio Transcript 4) that she knew how he was feeling because she could see him (line 5) and that *when a person is smiling* (8) and *making jokes* (11) *you know* how they are feeling.

Audio transcript 4: Milica speaking how she can tell how Aleks is feeling.

(1)	Milica	well yeah...
(2)		I mean
(4)		I s..
(5)		I I saw him

(6) and you know
(7) it's just like
(8) when a person is smiling
(9) annnnd
(10) then you know just
(11) making jokes
(12) and everything... you know
(13) it's it's...
(14) I don't think
(15) we've reached
(16) the the
(17) the state of
(18) oooof like
(19) actually
(20) serious conversation
(21) you know
(22) so
(23) yeah like fun
(24) and easy
(25) and and
(26) I don't know
(27) just simple
(28) you know

Milica further explains that they did not reach (15) the state of serious conversation (17 to 20) to feel any big emotions. She explains that the tasks were fun, easy and simple (23 to 28).

The Figure below shows Milica's facial expressions during the helping sequence of the Serbian dyad.



Figure 8: Facial expression Milica.

Milica begins the helping sequence in image 1 with a slight smile. She then closes her eyes and presses her lips together in image 2 and squints and looks up while slightly closing her lips in image 3. Milica parts her lips slightly and opens her eyes widely in image 4 and in image 5 curves the corners of her mouth down. In image 6, Milica

presses her lips tightly together and in image 7 she flattens her lips with the corners slightly down. In image 8, she once again presses her lips together and then relaxes them as they part slightly, and she opens her eyes wide. In the final image, Milica produces a large smile with her eyes being pushed almost closed.

Milica produces significantly more facial expressions than Aleks in this helping sequence as illustrated in the transcripts (Figures 7 and 8) above; and when Aleks was asked *Do you think this sort of thing would be more difficult over the phone?* in the interview after the tasks were completed, he replied:

Audio transcript 5: Aleks speaking about how seeing a person affects the interaction

- | | | |
|------|------|-------------------------------------|
| (1) | Alex | yeah definitely |
| (2) | | definitely... |
| (3) | | umm |
| (4) | | I think yessss.... |
| (5) | | just maybe it's yourrrr |
| (6) | | your body |
| (7) | | you know that |
| (8) | | you know you you |
| (9) | | the fact that you're sitting |
| (10) | | the fact that you're not moving |
| (11) | | am you know |
| (12) | | that there's nothing else |
| (13) | | perceptually distracting you |
| (14) | | even if there was nothing on screen |
| (15) | | but you had to stand |
| (16) | | and talk |
| (17) | | I think you would |
| (18) | | be very similar |
| (19) | | you know |
| (20) | | but definitely |
| (21) | | the fact that |
| (22) | | there is another person there |
| (23) | | that you can see |
| (24) | | gets you more involved |
| (25) | | but uh |
| (26) | | I think it's better than a phone |
| (27) | | used for the conversation |

In his interview, Aleks says that would definitely be more difficult to have a conversation like the one they had during the task over the phone (lines 1 to 4). He expands that this is due to the fact that you are sitting still, there is nothing disturbing you and even if there was nothing on the screen it would still be different than a phone call (lines 5 to 20). Aleks then explains that you get more involved in the conversation due to another person being there that you can see, thus making video conferencing better than a phone call for conversations like this one (lines 21 to 27).

As we can see from the facial expression transcripts and the participant interviews, Milica and Aleks use many, and quite exaggerated, facial expressions. These exaggerated facial expressions differ from native speakers of New Zealand English (as we will see later in this chapter), and with these facial expressions, both Aleks and Milica are producing their Serbian identity element.

4.1.3. Posture: Aleks and Milica

The following Figure shows Aleks's postural movements during the helping sequence of the Serbian dyad.

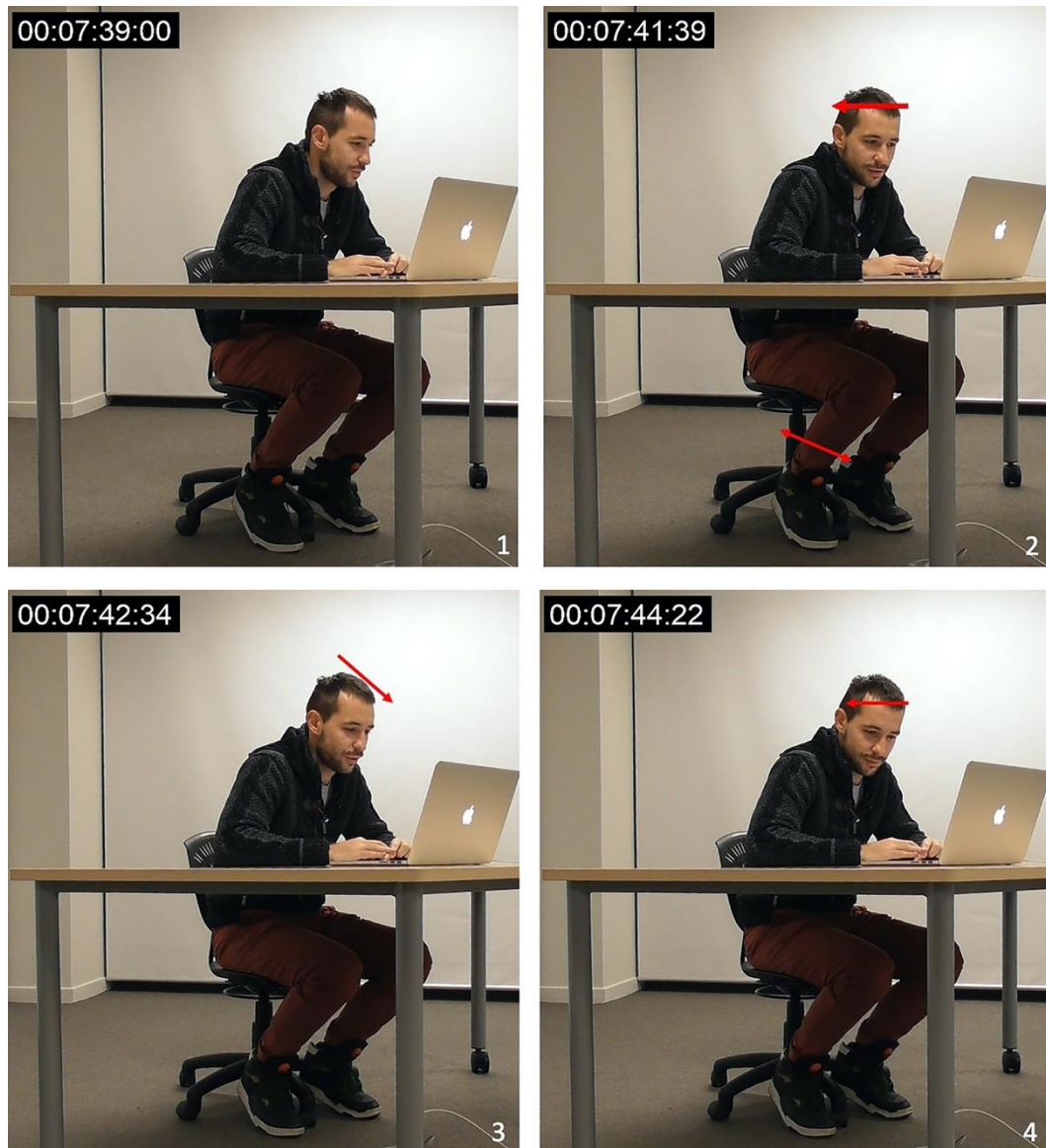


Figure 9.1: Posture Aleks.

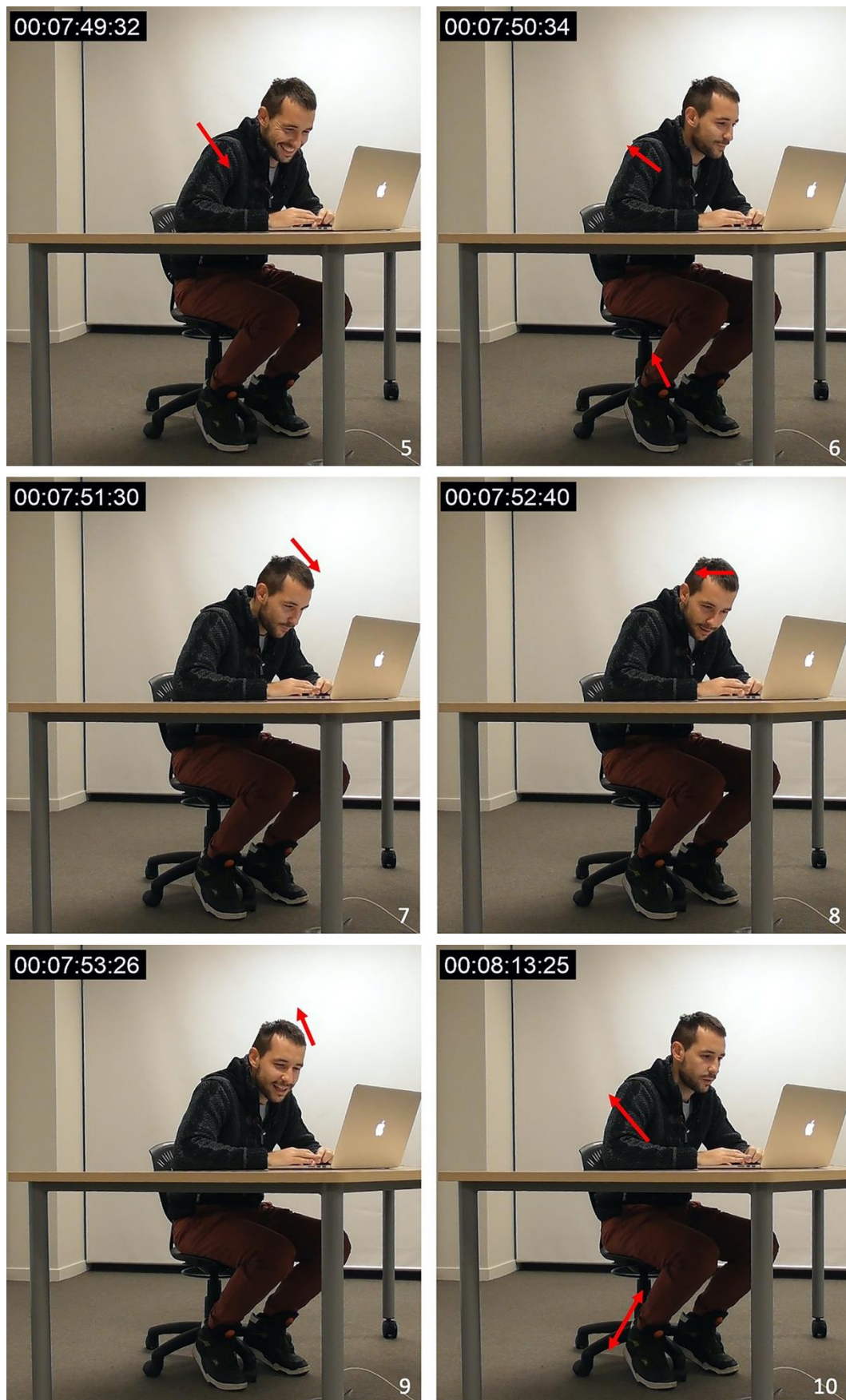


Figure 9.2: Posture Aleks.

In image 1 we can see Aleks with his elbows on the table looking at the computer and his legs down on the floor with his heels slightly raised. Image 2 shows him moving his head to the right and his right leg backwards and forwards once. In image 3 Aleks moves his head forward and in image 4 he moves his head to the right. Aleks leans forward in image 5 and back in image 6. In image 7 he moves his head forward and then right in image 8. Aleks moves his head back in image 9 and shifts back while bouncing his right leg up and down once in image 10.

The following Figure shows Milica's postural movements during the helping sequence of the Serbian dyad.



Figure 10: Posture Milica.

The first image shows Milica sitting with her legs crossed looking straight at the computer and using the mouse with her right hand. Milica leans forward and bounces her legs up and down once in image two. The third image shows her shifting back slightly while bouncing her legs up and down five times. Milica leans in slightly in image four and back in image five. She bounces her legs five times up and down in image six and moves her head back with her body slightly forward in image seven.

Both Aleks and Milica produce a significant amount of postural movement which is telling of their Serbian identity element. In the segment however, as Milica is helping

and Aleks is waiting for her instructions Milica produces significantly more postural movement.

4.1.4. Hand/arm movements: Aleks and Milica

In the Figure below we can see Aleks's hand/arm movements during the helping sequence for the Serbian dyad.

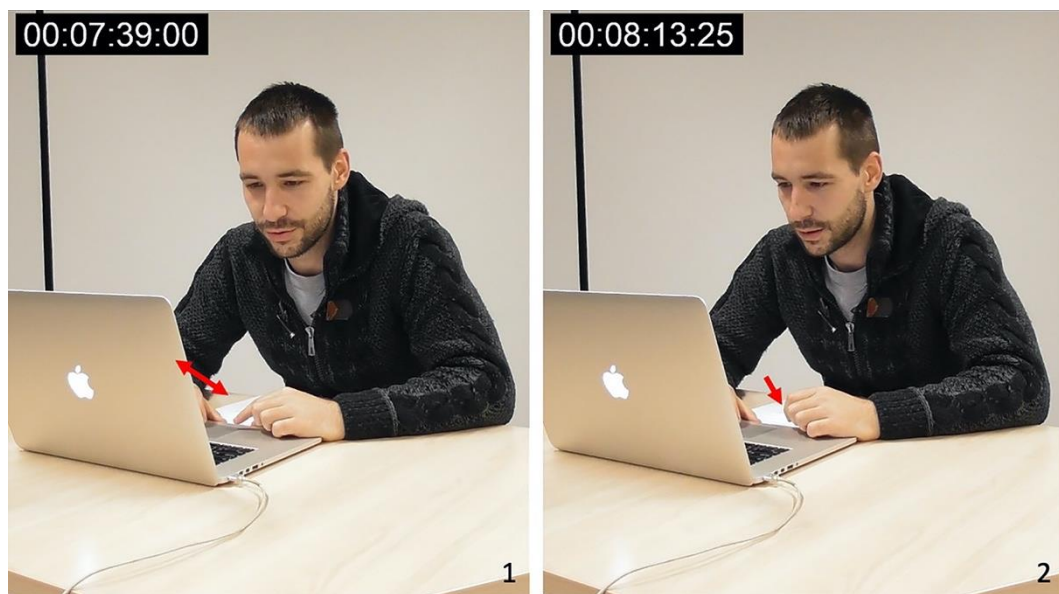


Figure 11: Hand/arm movements Aleks.

From image 1 and 2 we can see that Aleks produces very little hand/arm movements in this helping segment. He uses his right hand to move the cursor on the computer and his left hand to click.

Next, I show Milica's hand/arm movements during the helping sequence of the Serbian dyad in Figures 12.1 and 12.2.



Figure 12.1: Hand/arm movements Milica.

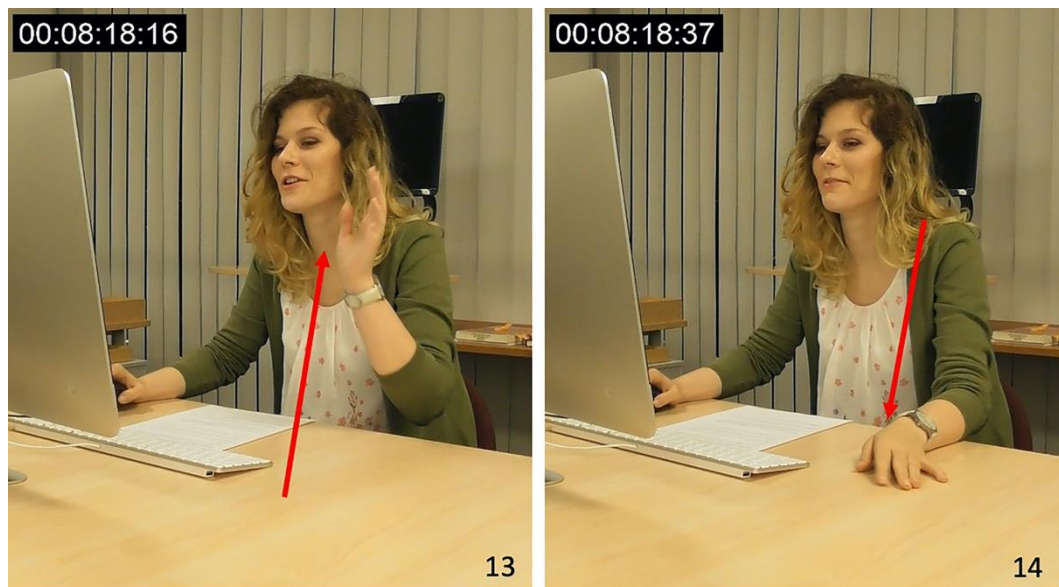


Figure 12.2: Hand/arm movements Milica.

Image 1 shows Milica's right hand moving left and right as she uses the computer mouse. Milica lifts her left hand onto the table from her lap in image 2 and moves her fingers closer to the keyboard in image 3. Image 4 shows Milica moving her left hand to the left and in image 5 she moves her hand backwards and forwards five times placing it down in image 6. Milica lifts her left hand all the way up in image 7, slightly down in image 8 and draws three circles with her left hand in the air in image 9. In image 10 she bounces her left hand up and down three times followed by moving her left hand back and forward five times in image 11. She rests her hand down in image 12, lifts it up in image 13 and places it down in image 14.

When examining the non-verbal actions that Milica and Alex produce through the mode of hand/arm movements, we can see Aleks is very still during the sequence producing almost no hand/arm movements as he waits for the instruction from Milica. Milica, however produces a significant amount of hand/arm movements while she tries to explain how to use Street view on Google maps and this is telling of her Serbian identity. Milica struggles to find the words in English and uses her hands to assist her which is telling of her immigrant identity element. Furthermore, Milica's increased

gestures during speech perturbations and hesitations are in line with Freedman's (1977) research.

4.2. Case Study 2: Serbian and English Mixed native speaker dyad

Ivana helping Duane

The second case study consists of a helping sequence in which Ivana is helping Duane to find a restaurant.

Ivana was born in Serbia and migrated to New Zealand with her parents and older sister in 1997 when she was a toddler. Ivana has spent significant time in the Serbian community growing up with several close family friends with children her age. She spoke only Serbian until she started preschool. Ivana continues to speak Serbian at home, however, most of her friends are English-speaking only and the Serbian friends that she remains close with today, she speaks English with. Ivana has visited Serbia four times since she arrived in New Zealand but other than her family, she does not hold close personal connections with friends in Serbia.

Duane is of Indian descent and was born in Bahrain. He migrated to New Zealand with his parents and an older brother when he was seven years old. Duane's first language is English, and he does not speak a second language. He has visited Bahrain only a few times since he arrived in New Zealand and does not hold close personal relationships in Bahrain outside his family.

In the multimodal transcript of Ivana and Duane chains of lower-level actions are transcribed to show the higher-level action of the first 40 seconds of the helping sequence. The chains of utterances are transcribed to show the mode of spoken

language, what was said and how it was said, showing the intonations and the voice. The chains of lower-level actions illustrating the changes in the face are transcribed for the mode of facial expressions, showing different facial expressions produced by the participants during the task. The chains of lower-level actions of postural shifts of the participants, were transcribed for the mode of posture. Finally, the lower-level actions performed with the hands or arms by the participants are transcribed for the mode of hand/arm movement.

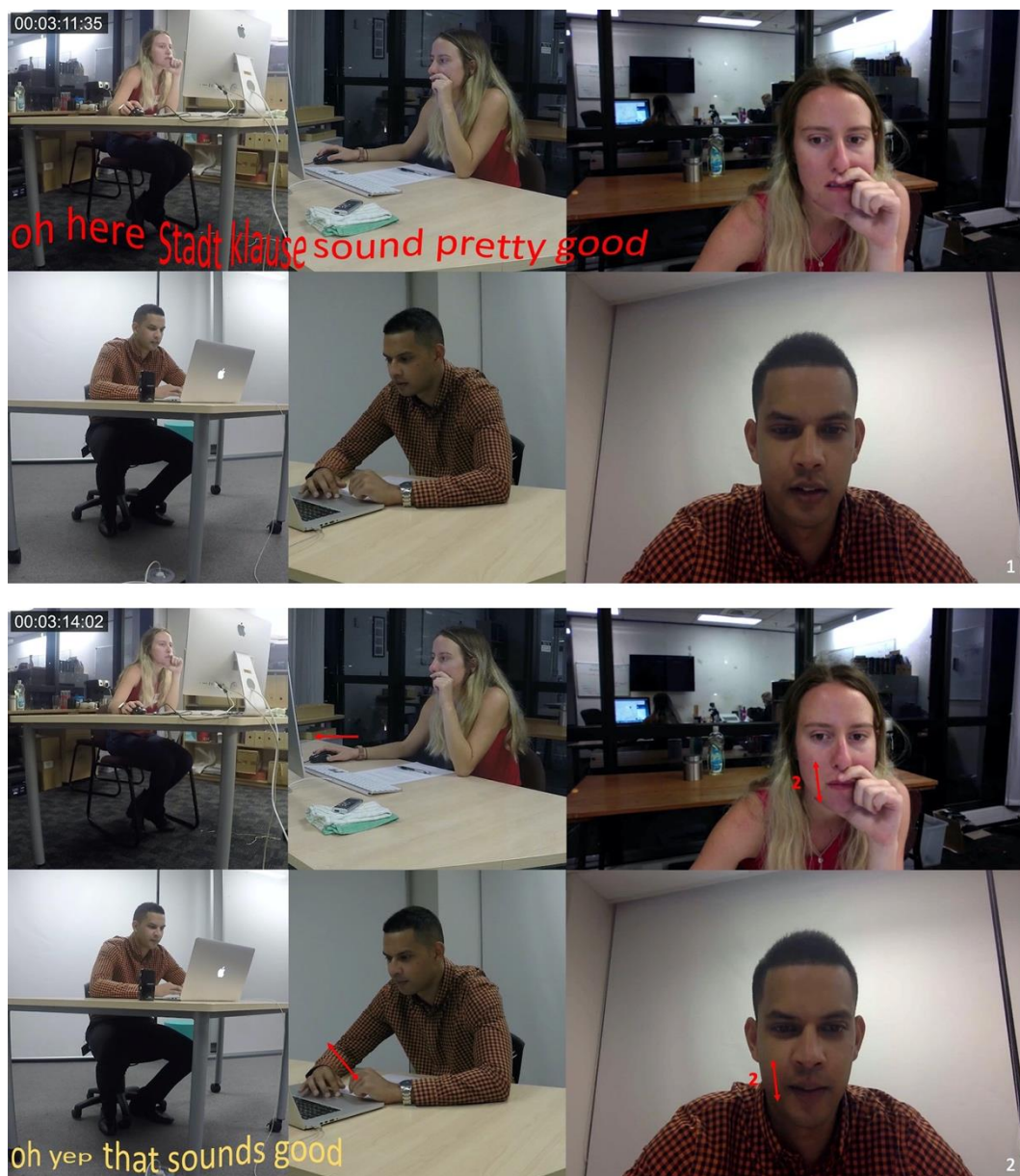


Figure 13.1: Multimodal transcript, Ivana helping Duane.

In image 1 of the transcript, in the top left-hand corner we can see the timecode shows the very beginning of the clip we are analysing which occurs at 00:03:11:35. Ivana's spoken language is shown in red *oh here Stadtklause sounds pretty good*. The placement of the words on the image is representative of when they occur, in this instance, they are located in the very beginning of the image showing that the utterance starts at the same time as shown in the timecode above. The shape of the words represents the tone in which the utterance was said, in this instance, Ivana's tone of voice raises slightly at the *oh here* and then continues steadily. Duane does not say anything during this segment and is sitting still.

In image 2 of the multimodal transcript, Ivana moves her right hand forward while using the mouse and opens and shuts her mouth twice. Duane's spoken language is shown in yellow *oh yep...that sounds good* at the start of this segment 00:03:14:02 and we can see that his voice dips around the word *yep* and continues at regular volume and rhythm for the remainder of the utterance. Duane also moves his right hand left and right once as he uses the mousepad on his computer and opens and shuts his mouth twice.

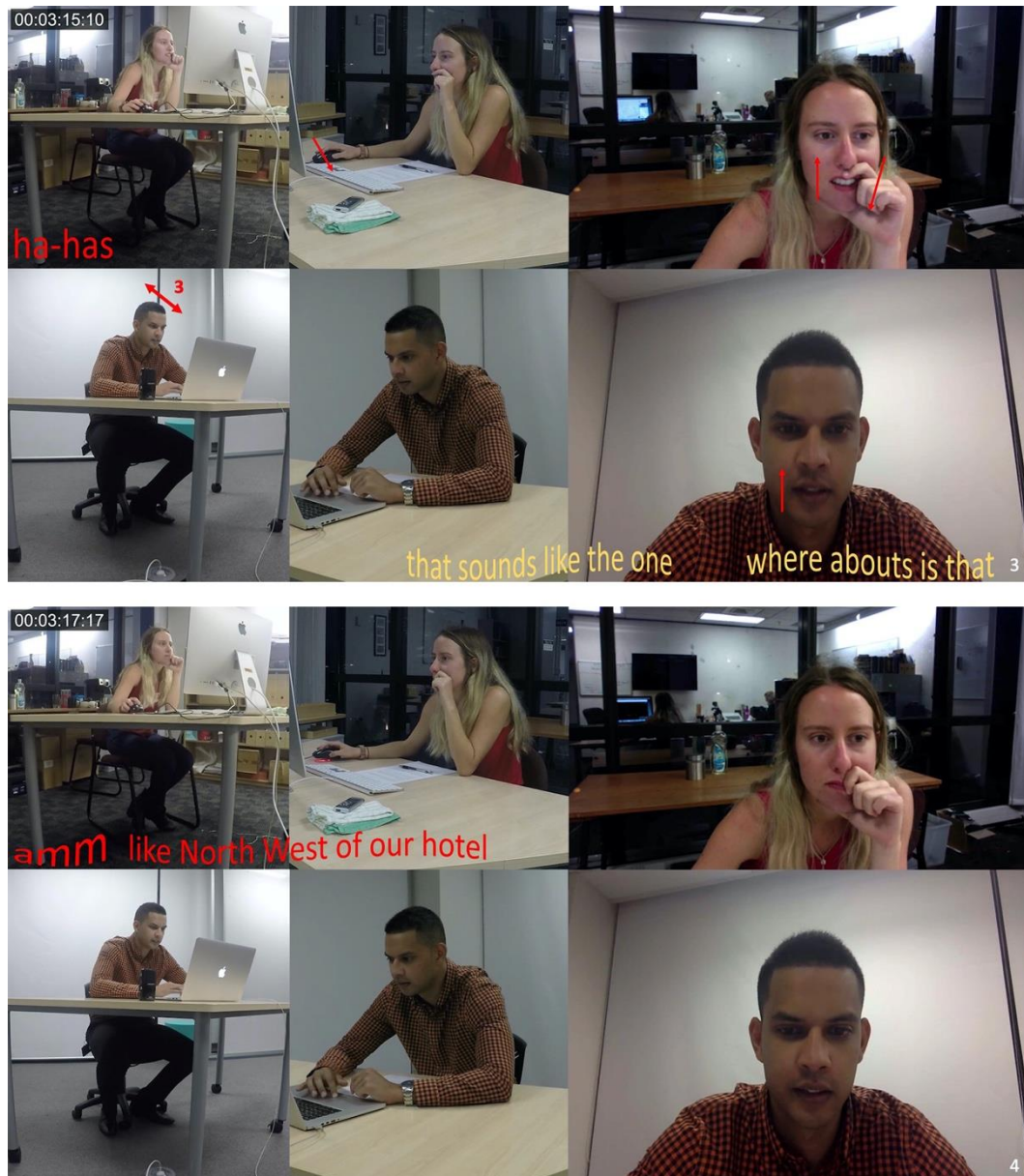


Figure 13.2: Multimodal transcript, Ivana helping Duane.

In image 3 of the transcript, we can see Ivana starts to talk by saying *ha-has* which occurs at the start of the segment 00:03:15:10. She continues to use the mouse with her right hand, moving it left and right while she opens her mouth and immediately shuts it by pulling her index finger over her lips. Duane starts by nodding his head three times whilst saying *that sounds like the one* at 00:03:15:32 followed by *where abouts is that?* at 00:03:16:38 and parts his lips slightly.

In image 4 of the transcript, Ivana's spoken language shows her starting by saying *ammmm* occurring at the start of the segment at 00:03:17:17 with the tone of her voice rising slightly and continues with a steady tone to say, *like North West of our hotel*. Duane is still and does not say anything during this part.



Figure 13.3: Multimodal transcript, Ivana helping Duane.

In image 5 of the transcript, Ivana is shifting slightly backwards while she opens her mouth and says *ammmmm* at 00:03:28:02 in a steady tone. Duane moves his body

slightly to the right and says, *how far am I going* at 00:03:25:38 which occurs prior to Ivana's utterance.

In image 6 of the transcript, we can see that the words representing Ivana's spoken language *it's just up the road from our hotel* are placed right at the start of the image to represent when they occur which is at the same time displayed in the timecode 00:03:30:17. Her second utterance in this image occurs at 00:03:32:42 in the words representing the spoken language *so up towards the left* are placed further along in the image to represent the time they occur. Furthermore, if we look at the words representing Duane's spoken language *where* which occurs at 00:03:32:35 we can see that they occur right in the middle of the previously mentioned utterances of Ivana's and as such are represented with the words being placed in the middle of the two utterances above.

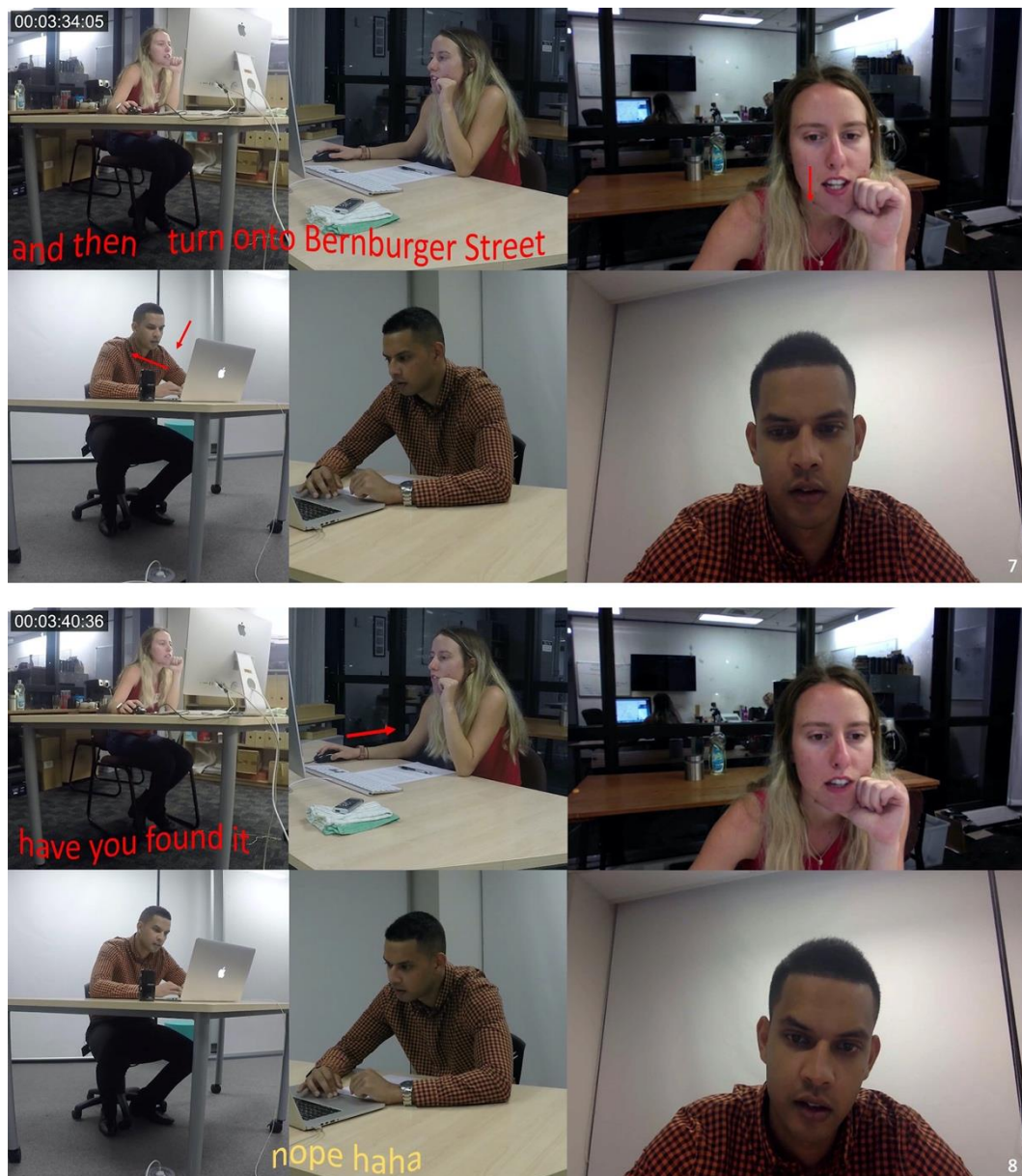


Figure 13.4: Multimodal transcript, Ivana helping Duane.

In image 7 of the transcript, Ivana says, *and then turn onto Bernburger Street* at 00:03:34:05 in a steady and rhythmic tone and closes her mouth after the utterance.

Duane shifts his upper body slightly down into the right. While in image 8, Ivana says in a steady and rhythmic tone *have you found it* at 00:03:40:36 and moves her right arm slightly back. Duane responds by saying *nope hahaha* at 00:03:41:17 immediately after the question is asked by Ivana.



Figure 13.5: Multimodal transcript, Ivana helping Duane

In image 9 of the transcript, Ivana moves her upper body slightly forward, shifting her left arm further forward while moving both hands left and right to use the keyboard and mouse. After the start of this image, Ivana starts her next utterance *alright I can send you a link* at 00:03:42:30. Duane moves his head to the right slightly and says *Schon Schoneberger* at 00:03:43:22 after Ivana has advised that she will send him a link and as he speaks, he produces a smile. Both participants say the utterances in a steady and rhythmic tone.

In image 10 of the transcript, Ivana says, *aha that one* at 00:03:48:41 and a few seconds later she says, *how do yo... oh there we ago* at 00:03:51:03. Ivana says the first utterance and the first half of the second utterance in a rhythmic tone while the second half of her second utterance is said in a flatter tone. Duane moves his head left and then right while he moves his right hand backwards and forwards using the mousepad on the computer.



Figure 13.6: Multimodal transcript, Ivana helping Duane.

The final image (11) of the transcript, shows Ivana shifting slightly forward while asking in slightly raised tone *get that* at 00:03:54:09. She then shifts her head up and says, *it's all in German* at 00:03:59:02. Duane slouches downs slightly while moving his feet apart and then moves his right leg further back. He then says *StadtK Klaus* at 00:03:55:38 which occurs between the two utterances of Ivana. Duane then says *ok* at 00:04:00:36 and shifts his head slightly to the left and places his hand over his mouth.

4.2.1. Spoken language: Duane and Ivana

Here, I transcribe the first 40 seconds for Duane and Ivana. Duane's first language is English, and Ivana is a native Serbian speaker. Both Ivana and Duane grew up in New Zealand, yet Duane has always spoken English and continues to only speak English. While, Ivana, although fluent in English, is also fluent in Serbian and speaks Serbian at home.

In the following transcript (Audio Transcript 6), I show Duane's spoken language in black and Ivana's spoken language in grey because here, I focus on Duane's language.

Audio transcript 6: Spoken language Duane

- | | | | |
|------|----------|-------|--|
| (1) | 03:11:35 | Ivana | oh here Stadtklause sound pretty good |
| (2) | 03:14:02 | Duane | oh yep... |
| (3) | 03:14:10 | | that sounds good |
| (4) | 03:15:10 | Ivana | ha-has |
| (5) | 03:15:32 | Duane | that sounds like the one |
| (6) | 03:16:38 | | whereabouts is that? |
| (7) | 03:17:17 | Ivana | ahh like North West of our hotel |
| (8) | 03:25:38 | Duane | how far am I going? |
| (9) | 03:28:02 | Ivana | aaaammmmmm |
| (10) | 03:30:17 | | it's just up the road from our hotel |
| (11) | 03:32:35 | Duane | where... |
| (12) | 03:32:42 | Ivana | so up to towards the left |
| (13) | 03:34:05 | | and then you turn onto Bernburger Street |
| (14) | 03:40:36 | | have you found it? |
| (15) | 03:41:17 | Duane | nope haha |
| (16) | 03:42:30 | Ivana | alright I can send you a link |
| (17) | 03:43:22 | Duane | Schon Schoneberger |
| (18) | 03:48:41 | Ivana | that one |

- | | | |
|------|----------------|---------------------------|
| (19) | 03:51:03 | how do yo..oh there we go |
| (20) | 03:54:09 | get that |
| (21) | 03:55:38 Duane | Stadtk klaus |
| (22) | 03:59:02 Ivana | it's all in German |
| (23) | 04:00:36 Duane | ok |

In Audio Transcript 6 Duane starts by agreeing with Ivana that the restaurant she mentioned sounds good and asks for help to locate the restaurant by stating in line (6) *whereabouts is that?*

Ivana offers verbal directions to look North West of the hotel to which Duane responds by asking in line (8) *how far am I going?* Ivana continues to give direction, but Duane is unable to locate the restaurant and once again asks in line (11) *where?* Ivana tries one more time by telling him the street the restaurant is located at and when Duane responds in line (15) *nope* to Ivana's questions in line (14) *have you found it* Ivana opts to send him the link to the restaurant and Duane reads the name in line (21).

Next, I show this excerpt again (Audio Transcript 7), but this time I show Ivana's spoken language in black and Duane's spoken language in grey because here, I focus on Ivana's language. Audio Transcript 7 starts with Ivana locating a restaurant that meets the requirements of their earlier conversation to find a German restaurant and says in line (1) *oh here Stadtklause sound pretty good*. Duane agrees and asks for directions so he can find the restaurant on Google maps.

Audio Transcript 7: Spoken language Ivana

- (1) 03:11:35 Ivana oh here Stadtklause sound pretty good
- (2) 03:14:02 Duane oh yep...
- (3) 03:14:10 that sounds good
- (4) 03:15:10 Ivana ha-has
- (5) 03:15:32 Duane that sounds like the one
- (6) 03:16:38 whereabouts is that?
- (7) 03:17:17 Ivana amm like North West of our hotel
- (8) 03:25:38 Duane how far am I going?
- (9) 03:28:02 Ivana aaaammmmmm
- (10) 03:30:17 it's just up the road from our hotel
- (11) 03:32:35 Duane where...
- (12) 03:32:42 Ivana so up to towards the left
- (13) 03:34:05 and then you turn onto Bernburger Street
- (14) 03:40:36 have you found it?
- (15) 03:41:17 Duane nope haha
- (16) 03:42:30 Ivana alright I can send you a link
- (17) 03:43:22 Duane Schon Schoneberger
- (18) 03:48:41 Ivana that one
- (19) 03:51:03 how do yo oh there we go
- (20) 03:54:09 get that
- (21) 03:55:38 Duane Stadtk klaus
- (22) 03:59:02 Ivana it's all in German
- (23) 04:00:36 Duane ok

Ivana tells him in line (7) that the restaurant is located North West of the hotel they are staying in. Duane is unable to locate it, so Ivana offers further instructions by saying in line (10) *it's just up the road from our hotel*. When Duane fails to find it, Ivana offers one last instruction by saying in line (12) *so up to towards the left ...* (line 13) *and then you turn onto Bernburger Street*. She then checks if he was able to locate it by saying in line (14) *have you found it?*. When Duane fails to locate the restaurant again

Ivana decides to send him the link saying in line (16) *alright I can send you a link*. Ivana then tries to figure out how to send the link and starts to ask in line (19) *how do yo...* and as she finds the message icon she answers her own question with (19) *...oh there we go*. After the link is sent, she checks with Duane that he received it in line (20) *get that* and Duane responds only by stating the name of the restaurant giving Ivana the indication that he is looking at the correct restaurant.

When examining the above transcripts, we can see that both Duane and Ivana produce the mode of spoken language as native speakers of New Zealand English. Even though Ivana's first language is Serbian, she speaks perfect English throughout the task with a New Zealand accent thus demonstrating her New Zealander identity element. Likewise, Duane speaks perfect English with a New Zealand accent and also demonstrates his New Zealander identity element with his spoken language.

4.2.2. Facial expression: Duane and Ivana

The Figure below shows Duane's facial expressions during the helping sequence of the mixed dyad.



Figure 14: Facial expressions Duane.

In image one we can see Duane at the start of the helping sequence with a relaxed facial expression and his lips slightly parted. Image two shows his lips pressed tightly together and his eyes closed slightly. Duane parts his lips in image three, lifting the left side of his mouth slightly, and his eyes widen (image 4). In image five we can see his lips shut, followed by a full-face smile in image six. Duane relaxes his face in image seven, parting his lips. Image eight shows Duane covering his bottom lip with his top lip and tightening his face a little. In image nine Duane once again relaxes his face and parts his lips. The final image shows him covering his mouth with his hand and lifting the left corner of his lip slightly.

Duane uses twice as many facial expressions as Ivana (shown in Figure 15 below), however, in her interview when asked *Do you think it was harder to tell what the other person was feeling over video conferencing as opposed to if you had done this face-to-face?* Ivana replied:

Audio transcript 8: Ivana speaking about the difficulty of knowing what Duane's was feeling

- (1) Ivana: hahahaha
- (2) amm
- (3) I think it was f...
- (4) aaaa...
- (5) I d....
- (6) I don't think that we kind of went through a...
- (7) as big a range of like emotional kind of spectrum
- (8) to be able to have a big kind of idea of it...
- (9) but in g...
- (10) in general I would think that it might be a bit harder...
- (11) especially because most of the time
- (12) while we were doing these tasks
- (13) I am not really looking at him..
- (14) coz I am not looking at his face
- (15) I am looking at the screen
- (16) he's just in the corner
- (17) so I'm mainly going by voice...
- (18) so what we were
- (19) was a lot more like a telephone call to me
- (20) then a Skype session
- (21) yeah but...

- (22) so I think in that sense it could be harder
(23) if you really want to go into it
(24) but for what we particularly did
(25) I think it was fine.

Starting in line 6 through 8, Ivana explains that she does not believe they went through a big spectrum of emotions to be able to have an idea of how Duane was feeling. She goes on to explain in lines (12) - (16) *while we were doing these tasks I am not really looking at him... coz I am not looking at his face I am looking at the screen he's just in the corner*. Ivana then continues to explain in lines 17 to 19 *so I'm mainly going by voice... so what we were was a lot more like a telephone call to me then a Skype session*.

The following figure shows Ivana's facial expressions from the helping sequence of the mixed dyad.

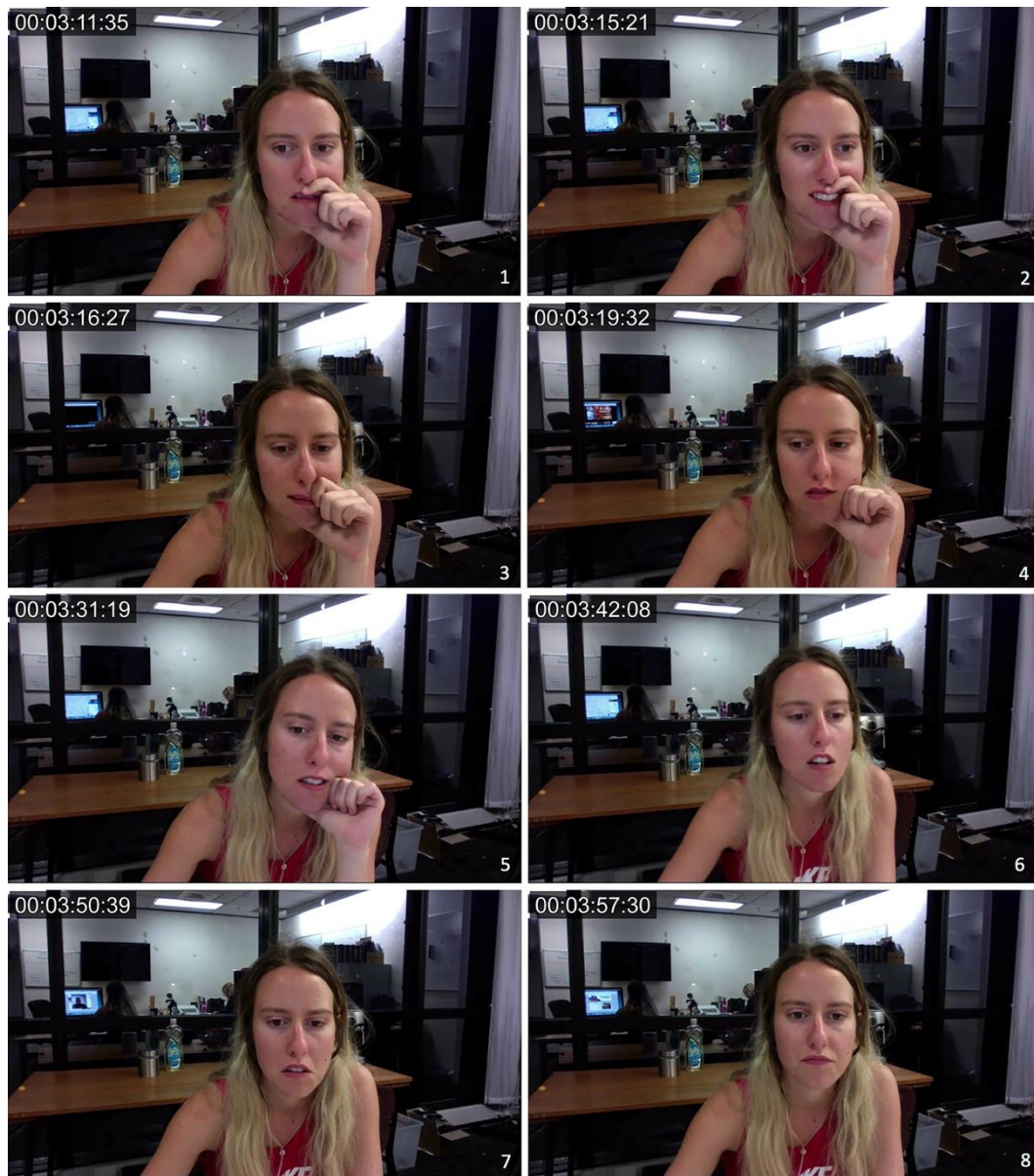


Figure 15: Facial expression Ivana.

Ivana starts the helping sequence (image 1) with a blank expression and her lips slightly parted. In the second image she produces a smile lifting the muscles around her eyes. In the third image, Ivana's face relaxes, and her lips are pushed shut with her index finger. The fourth image shows her lips slightly parted with the right-hand corner of her mouth lifted slightly. Ivana then opens her mouth slightly and pushes the right side of her mouth slightly upwards (image 5). In the six images Ivana's hand moves

away from her mouth, her face is relaxed, and her upper lip is slightly raised. Image seven shows both corners of Ivana's mouth pulled down with her lips slightly parted. The final image shows her lips pressed tightly together.

Even though Ivana does use facial expressions to express how she is feeling during her task by smiling, frowning and pressing her lips together, when Duane was asked in the interview after they had completed both tasks *Do you think it was harder to tell what the other person was feeling over video conferencing as opposed to if you had done this face-to-face?* he replied:

Audio transcript 9: Duane the difficulty of knowing what Ivana was feeling

- (1) Duane: I feel like it's...
(2) it's a lot harder to know what they're thinking
(3) not only coz
(4) I'm not always looking at their face
(5) in looking at Google
(6) and searching stuff up
(7) so I picked up more things in like the tones of voices
(8) so don't really know her expressions
(9) whereas if we were face-to-face
(10) I would pick up on that a lot more quickly
(11) coz you see the face and facial reactions
(12) and you sort of know.
(13) ammm
(14) so from the Skype
(15) I feel like yeah it's a bit hard
(16) there is more voice
(17) instead of face-to-face

In line (4), Duane explains that during this task he was not looking at Ivana as (line 5) he was looking at google (line 6) searching for stuff relating to the task. Duane goes on to explain in line (8) that he does not really know Ivana's facial expressions (lines 9 - 12) and that if they were face to face he would be able to pick up on the facial expressions a lot more quickly as he would be able to see them and know how she is

feeling. Thus, while Ivana certainly does produce facial expressions, Duane makes the point that he was better able to understand her emotions through her tone of voice (line 7). He sums it up (in lines 14 - 17) with *so from the Skype I feel like yeah it's a bit hard...there is more voice instead of face-to-face.*

Even though neither of the participants is looking at the other's face, the participants themselves are producing facial expressions that display their emotions and tell of their identity. If we look at Ivana's facial expressions, we can see that she produces only a few, small and not very exaggerated expressions. This limited production of facial expressions is telling of Ivana's New Zealander identity element. Duane on the other hand produces a few more facial expressions than does Ivana in the segment and like Ivana his facial expressions are not very expressive which is also showing his New Zealander identity element. However, in image 6 Duane produces a very expressive smile which may show his Indian identity element.

4.2.3. Posture: Duane and Ivana

The following Figure shows Duane's postural movements during the helping sequence of the mixed dyad.

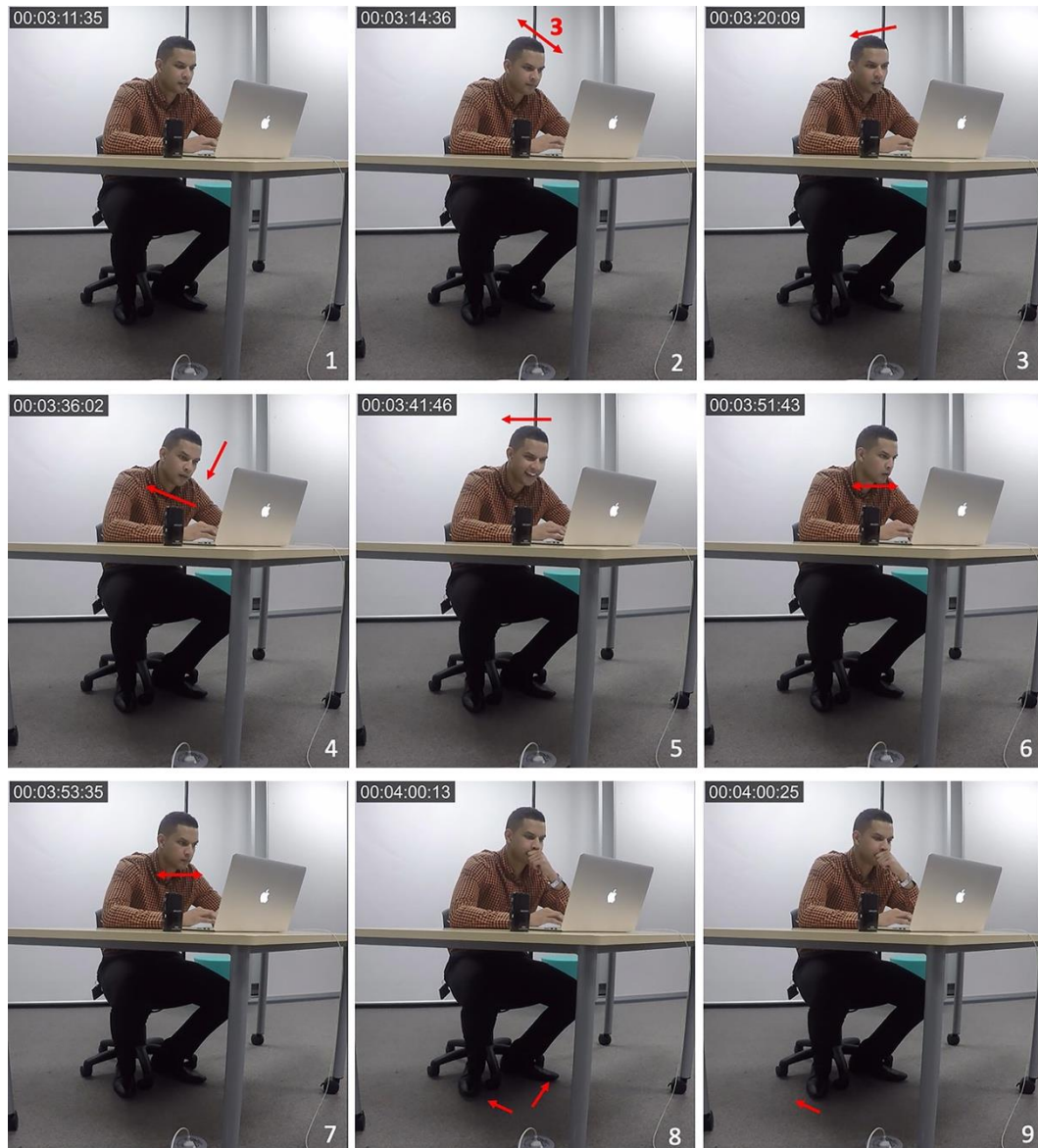


Figure 16: Posture Duane.

In image one we can see Duane resting his elbows on the desk leaning slightly forward. Image two shows Duane moving his head three times backwards and forwards. Duane moves his head to the left and tilts it slightly down and to the left in image four. In image five we can see his head moving to the left and in image six he moves his head left and then right. Duane repeats the head movement left and then

right in image seven. Image eight shows Duane's feet moving slightly out. The final image shows Duane's right foot moving slightly to the left.

The following Figure shows Ivana's postural movements during the helping sequence of the mixed dyad.

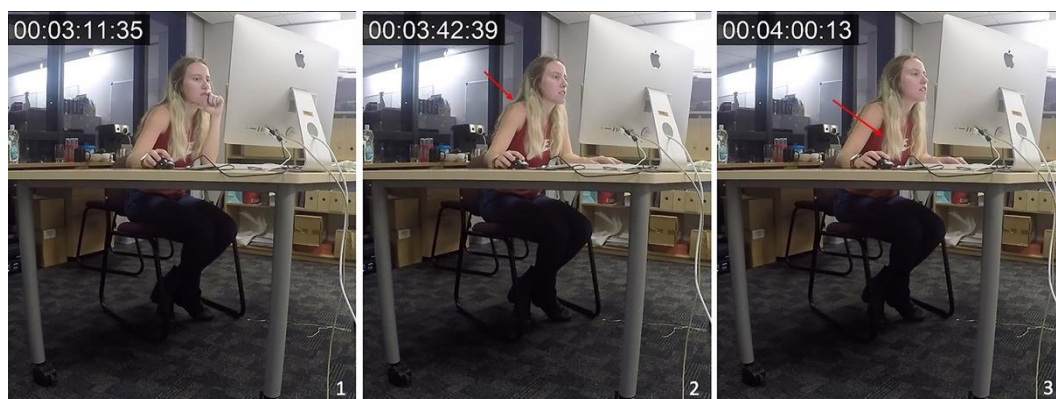


Figure 17: Posture Ivana.

In image one we can see Ivana leaning on the table with her upper body slightly leaned in and her legs bent under the chair and crossed. The second and third images show her leaning further towards the computer screen.

The non-verbal actions that Duane and Ivana produce through the mode of posture differ. Duane moves his head left and right back and forward throughout the whole segment and moves his legs a couple of times producing twice as many postural movements as Ivana. As such Duane produces more of an Indian identity element. While certainly very interesting, this is outside of the scope of this study. Ivana on the other hand produces only two postural movements to lean in closer to the computer; and with this lack of movement she is demonstrating her New Zealander identity element.

4.2.4. Hand/arm movements: Duane and Ivana

In the Figure below we can see Duane's hand/arm movements during the helping sequence of the mixed dyad.

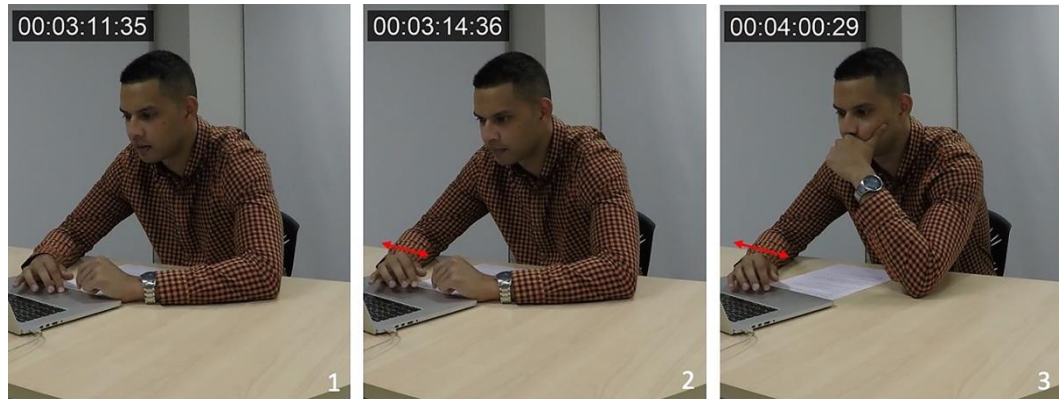


Figure 18: Hand/arm movements Duane.

Image one shows both hands close to the computer with the left hand resting just above the computer and the right hand using the mouse pad of the laptop. Duane continues to use the mousepad with his right hand in images two and three. Image three shows Duane lifting his left hand to cover his mouth.

In the following Figure we can see Ivana's hand and arm movements during the helping sequence of the mixed dyad.

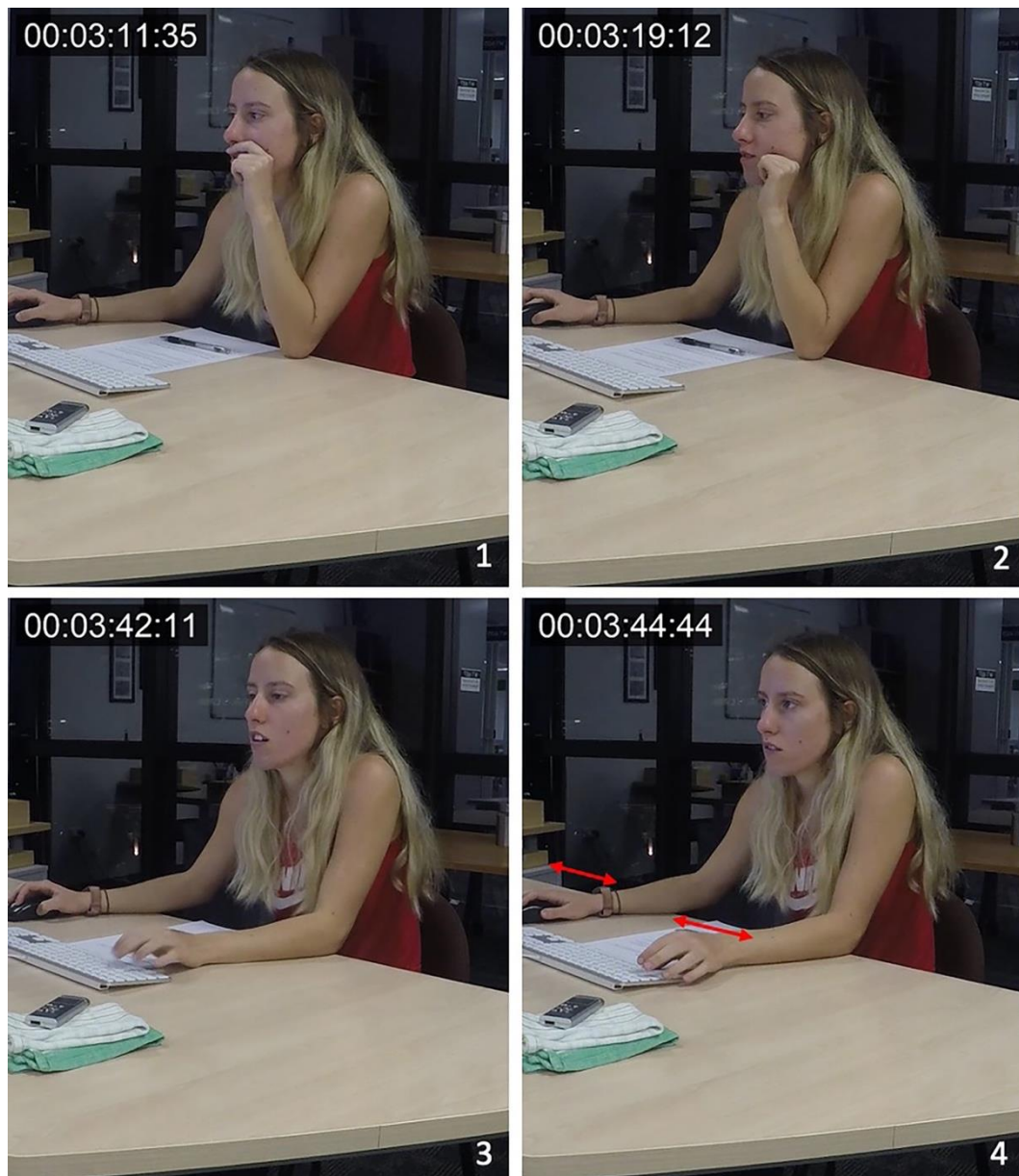


Figure 19: Hand/arm movements Ivana.

Image one shows Ivana's hand supporting her head slightly with the thumb under the chin and index finger over the lips. Ivana moves the index finger away from the lips and continues to support her head with her hand in image two. In image three her hand moves to the keyboard and she proceeds to move her hand over the keyboard as shown in image four.

When examining the non-verbal actions that Duane and Ivana produce through the mode of hand/arm movements, we can see that they both use very little hand/arm

movements which is consistent with their New Zealander identity element.

Furthermore, with both of them moving their hands to use the computer mouse and keyboard while looking at the screen and at some points resting their head in their hand, both Ivana and Duane produce the identity element of skilled computer users. Interestingly both participants cover their mouth with their hand while they are searching and contemplating the options. This may be telling of their high achiever identity element as they are stopping themselves from talking until they have a fully formed idea.

4.3. Case Study 3: New Zealand English native speaker dyad - Danielle helping Joel

The third case study shows a helping sequence in which Danielle helps Joel find a restaurant to dine in.

Danielle was born and raised in New Zealand and has never travelled outside of the country. Danielle was born in Whanganui and moved around New Zealand with her parents and younger brother until they settled in Auckland in 1994. She attended all formal education in New Zealand. Joel was born and raised in New Zealand and also attended all his formal education in New Zealand. He has spent some time travelling overseas. Both only speak English.

Chains of lower-level actions are transcribed in the multimodal transcript of Joel and Danielle to explain the higher-level action of the first 40 seconds of the helping sequence. In order to demonstrate the mode of spoken language, what was said and how it was said, the chains of utterances are transcribed, illustrating the voice and intonations. For the mode of facial expressions, the chains of lower-level actions

demonstrating the changes in the face are transcribed, displaying various facial expressions created during the task by the participants. For the mode of posture, the chains of lower-level actions of postural shifts of the participants are transcribed. Finally, for the mode of hand/arm movement, the lower-level actions performed with the participants' hand/arm movements are transcribed.



Figure 20.1: Multimodal transcript, Danielle helping Joel.

In image 1 of the Multimodal transcript, the start of the segment is shown with a timecode located in the top left corner indicating that Joel and Danielle's helping

segment started at 00:02:15:00. Furthermore, image one shows Joel moving his left arm from under the table to the keyboard while Danielle leans closer to the computer and turns her head to the right. Danielle's spoken language is shown in yellow and in this image she says *there we go* at 00:02:16:09 followed by *the ten best restaurants near that hotel* at 00:02:17:36. Both utterances occur after the start of this segment which is evident from the placing of the words further along in the image. The shape of the words illustrates Danielle's steady tone of voice during these two utterances. While image 2 starts at 00:02:27:27 and shows both Joel and Danielle moving their heads down and up. Danielle then says *aa there we go* at 00:02:29:01 with the tone of her voice slightly raised at the beginning of the utterance and quite low by the end. Danielle also squints her eyes in this segment.



Figure 20.2: Multimodal transcript, Danielle helping Joel.

Image 3, starting at 00:02:31:40, shows Joel lean in closer to the computer while Danielle moves her right leg to the right and her left hand down to the table. Danielle, after the start of this segment at 00:02:32:02, says *hmm* in a slightly increased tone near the end, followed by *there is a steakhouse* at 00:02:33:00 with a slight increase in tone around the word *steakhouse*. She presses her lips together while pushing her eyebrows together. Image 4 starts at 00:02:34:02 and shows Joel respond with a simple *yeah* increasing in tone at the end of the word. Danielle pushes her lips together shown in the lower right-hand corner.

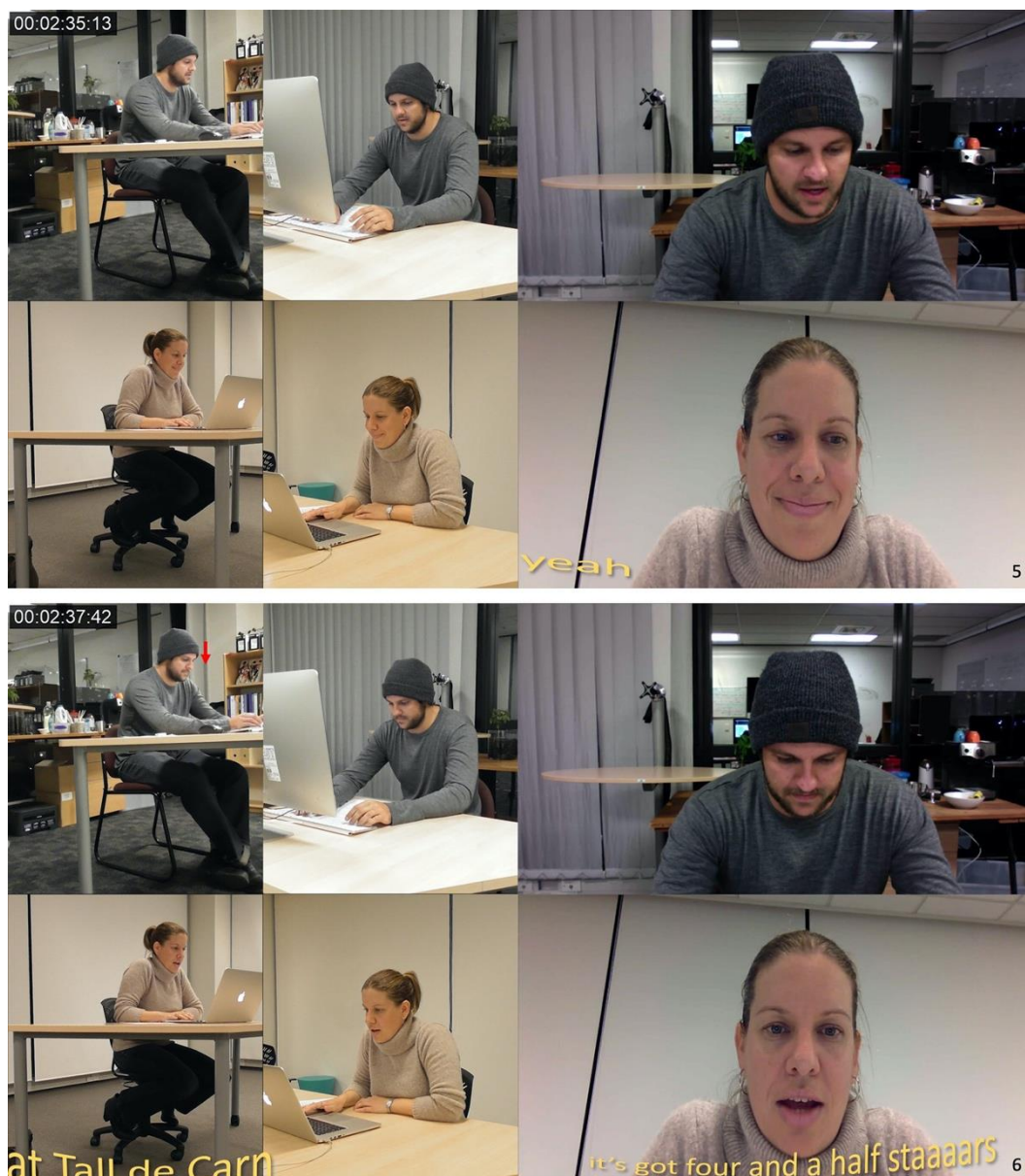


Figure 20.3: Multimodal transcript, Danielle helping Joel.

Image 5, starting at 00:02:35:13, shows Danielle saying *yeah* which occurs at 00:02:35:08 with her tone lowering near the end of the word while producing a smile. Joel remains still and quiet during this segment. While image 6 starts at 00:02:37:42 and shows Joel looking down while Danielle says *at Tall de Carn* at the start of the segment with a dip in her tone of voice near the middle of the sentence. She then says, *it's got four and a half staaaars* at 00:02:41:40 increasing in tone and stretching out the last word *staaaars*.



Figure 20.4: Multimodal transcript, Danielle helping Joel.

Image 7, starting at 00:02:45:30, shows Danielle saying *or a tap...aaaa* at the start of the segment and with a dip in the tone of voice after the word *tap* followed by *or there is a* at 00:02:47:24 with her tone fading away at the end of the utterance. Lastly, this image shows Danielle saying *pizza Spanish Italia Mediterranean* at 00:02:48:13 increasing in tone near the end of the utterance. While image 8 starts at 00:02:53:09 and shows Danielle producing a facial expression with her eyebrows raised and her lips pressed together and pushed to the right and up.

4.3.1. Spoken language: Joel and Danielle

Here, I transcribed the first 40 seconds for Joel and Danielle. Both Joel and Danielle are native English speakers and were born and raised in New Zealand. In order to better understand the helping segment between Danielle and Joel it is important to mention that about a minute prior to this helping segment occurring, Joel by lack of action, assigns the task of finding a restaurant solely to Danielle. Danielle verbally acknowledges this, and Joel reassures her that she is quite capable of finding a restaurant for the two of them, further implying that he would not be looking for the restaurant.

In the following transcript (Audio Transcript 10), I show Danielle's language in grey and Joel's language in black because here, I focus on Joel's language since he opened the higher-level action through silence.

Audio transcript 10: Spoken language: Joel

(1)	02:16:09	Danielle:	there we go
(2)	02:17:36		the ten best restaurants near that hotel
(3)	02:29:01		aa there we go ...
(4)	02:32:02		hmm
(5)	02:33:00		there is a steakhouse
(6)	02:35:08	Joel:	yeah
(7)	02:36:03	Danielle:	yeah
(8)	02:37:42		at Tall de Carn
(9)	02:41:40		it's got four and a half staaaars
(10)	02:45:30		or a tap... aaaaaa
(11)	02:47:24		or there is a
(12)	02:48:13		pizza Spanish Italian Mediterranean

Joel only has one utterance in his whole segment, saying *yeah* in line (6). As mentioned previously, Joel assigns the task of searching for a restaurant to Danielle by being silent, and from his lack of communication it is evident that he is letting her make the decision for him.

Next, I show this excerpt again (Audio Transcript 11), but this time I show Danielle's spoken language in black and Joel's spoken language in grey because here, I focus on Danielle's language. Audio Transcript 11 starts with Danielle saying in line (1) *there we go* then in line (2) *the 10 best restaurants near our hotel* as she locates a list of restaurants that are near their hotel, they are staying in. Then as she finds a restaurant, she feels might be good she says (3) *aa there we go...* (4) *hmmm* (5) *there is steakhouse....* to which Joel only responds with a (6) *yeah* while he continues to browse through Google maps. Danielle responds with a *yeah* in line (7) and continues to list the options for Joel in lines (8) through to (12).

Audio transcript 11: Spoken language: Danielle

(1)	02:16:09	Danielle:	there we go
(2)	02:17:36		the ten best restaurants near that hotel
(3)	02:29:01		aa there we go ...
(4)	02:32:02		hmm
(5)	02:33:00		there is a steakhouse
(6)	02:35:08	Joel:	yeah
(7)	02:36:03	Danielle:	yeah
(8)	02:37:42		at Tall de Carn
(9)	02:41:40		it's got four and a half staaaars
(10)	02:45:30		or a tap... aaaaaa
(11)	02:47:24		or there is a
(12)	02:48:13		pizza Spanish Italian Mediterranean

As shown in Audio Transcript 11, Danielle, a native speaker of English, is very precise with her words, and with the exception of a few *a's* and *am's*, which are specifically used as pause moments, she has no false starts and no repetition.

Both Joel and Danielle speak fluent English with strong New Zealand accents through which they demonstrate their New Zealand identity elements.

4.3.2. Facial expression: Joel and Danielle

The Figure below shows Joel's facial expressions during the helping sequence of the New Zealand dyad.

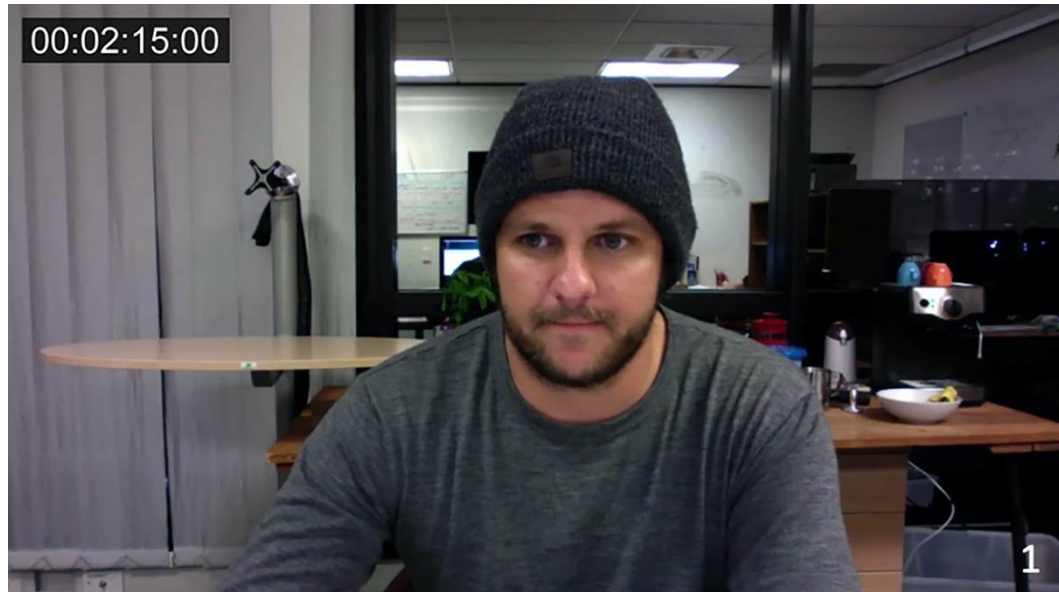


Figure 21: Facial expression Joel.

Joel starts off with the facial expression shown above and remains neutral in the face for the rest of the task. Producing so few facial expressions is telling of Joel's New Zealander identity element.

When asked *Do you think it was harder to tell what the other person was feeling over video conferencing as opposed to if you had done this face-to-face?* Danielle responded:

Audio transcript 12: Danielle speaking about being able to see Joel.

- (1) Danielle: um...
(2) aw it's pretty much the same thing
(3) coz you can
(4) yeah yeah
(5) and you can see
(6) like if it was
(7) if it was talking on the phone
(8) you wouldn't be able to
(9) tell as much
(10) whereas
(11) physically seeing him
(12) whether he's in front of me
(13) or in front of the computer
(14) you can kind of
(15) tell
(16) yeah

In line (2), Danielle explains that videoconferencing is pretty much the same thing as a face-to-face conversation because you can see the other person (5). She goes on to explain that if the conversation was over the phone (7) you would not be able to tell as much (8-9) however if she can physically see Joel (11) it does not matter whether it is in person or over the computer (12-13) you could tell how they're feeling (14-15).

The following figure shows Danielle's facial expressions from a helping sequence of the New Zealand dyad.

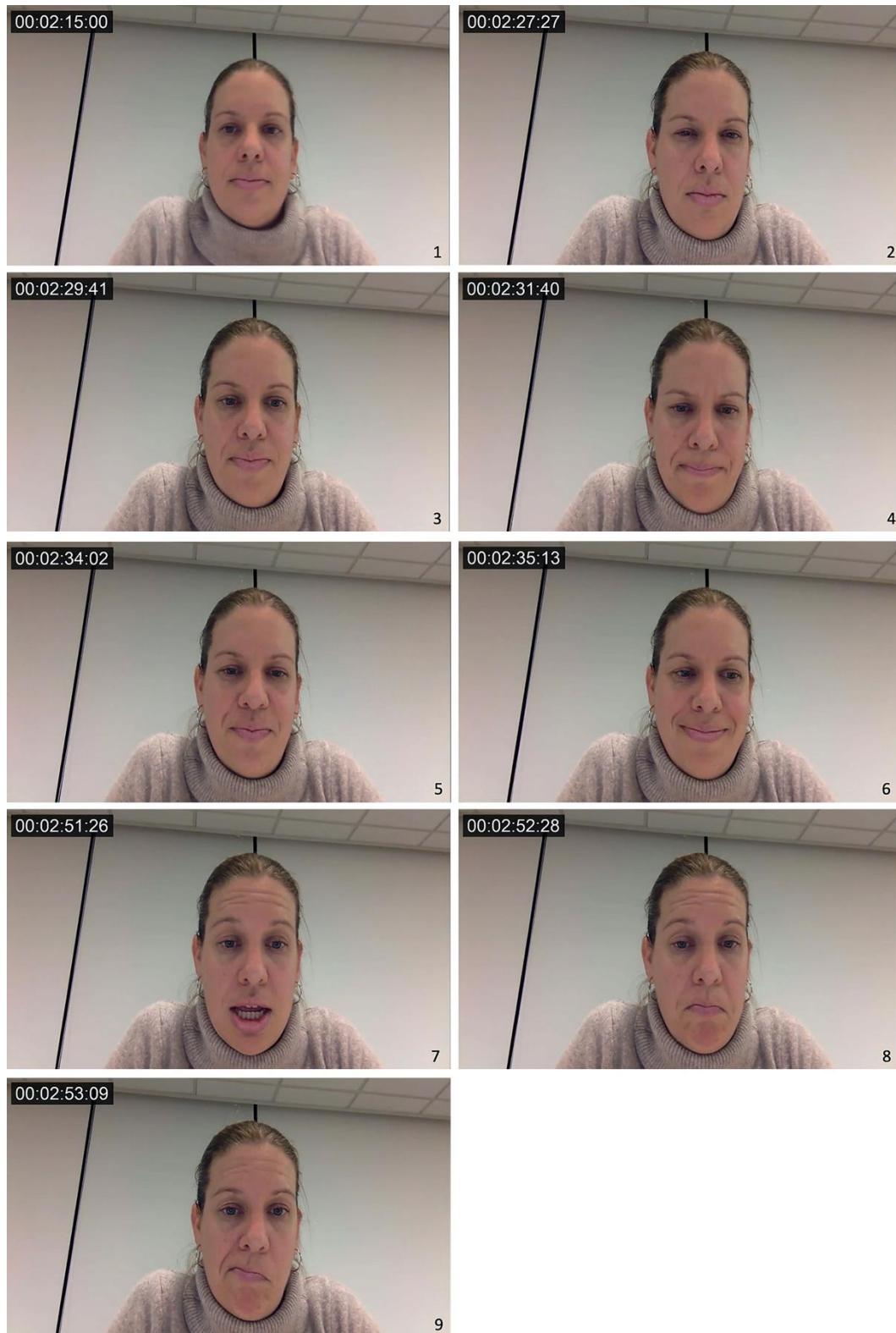


Figure 22: Facial expression Danielle.

Danielle starts the helping sequence with her lips slightly pressed together (image 1). In the second image she squints her eyes and then presses her lips in image 3. In image 4, Danielle pushes her eyebrows together and presses her lips tightly. Image 5

shows Danielle pushing her lips together and producing a smile in image 6. Image 7 shows Danielle pushing her eyebrows up; and with her eyebrows up she presses her lips together in image 8. In image 9 Danielle pushes the right side of her lips up slightly, while relaxing her eyebrows.

When asked *What are some of the ways you could tell how she was feeling?* Joel responded:

Audio transcript 13: Joel talking about past experience, tone of voice and facial expression.

- | | | |
|-----|-------|------------------------|
| (1) | Joel: | pfft |
| (2) | | past experience |
| (3) | | knowing her |
| (4) | | for like a long time |
| (5) | | and |
| (6) | | her tone in her voice |
| (7) | | sometimes |
| (8) | | her facial expressions |

Joel explains that he can tell how Danielle is feeling because of *past experience* (2), *knowing her for a long time* (3-4) as well as her tone of voice (7) and *sometimes her facial expressions* (7-8).

4.3.3. Posture: Joel and Danielle

The following Figure shows Joel's postural movements during the helping sequence of the New Zealand dyad.

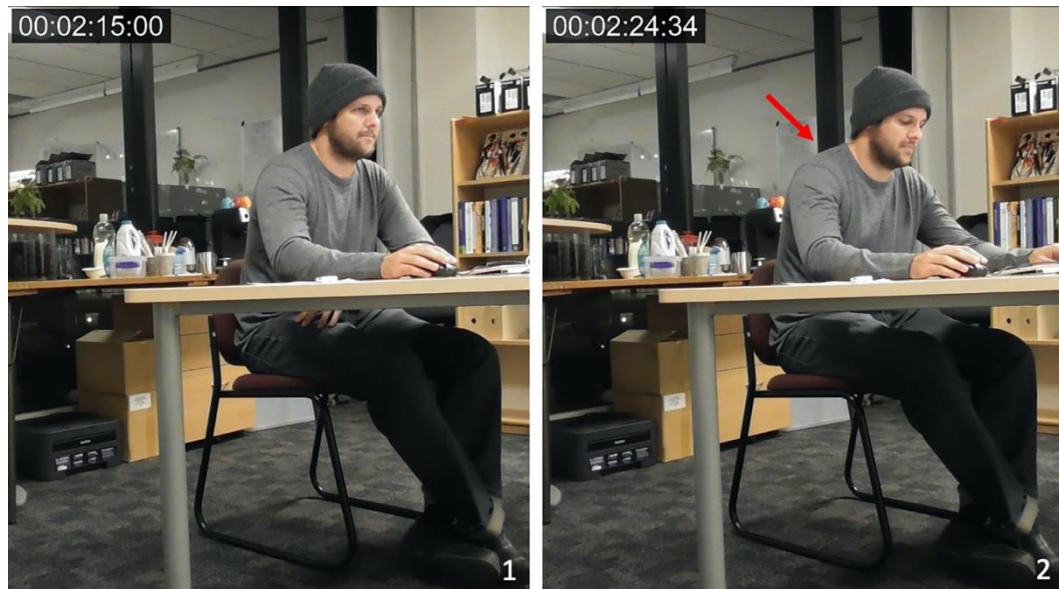


Figure 23: Posture Joel.

Image one shows Joel at the start of the helping sequence with his elbows resting on the table and his feet crossed at the ankles underneath the table. Joel makes one postural movement demonstrated in image two where he leans in to use the keyboard.

The following Figure shows Danielle's postural movements during the helping sequence of the New Zealand dyad.

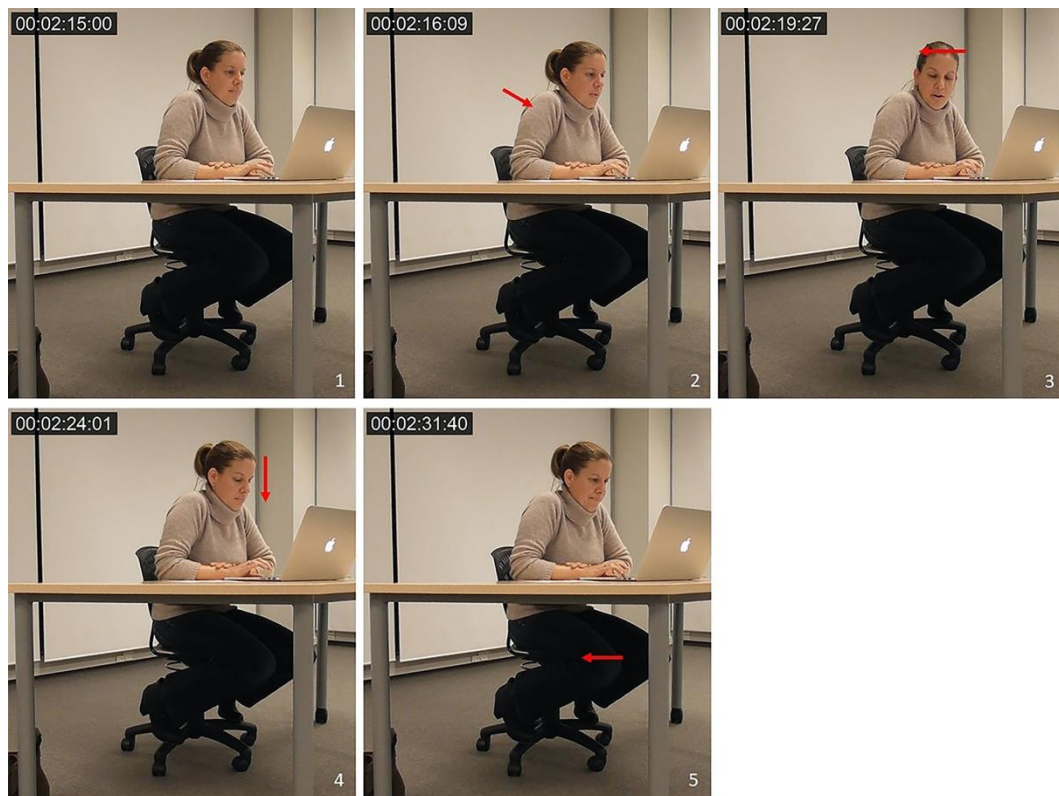


Figure 24: Posture Danielle.

In image one we can see Danielle at the start of the helping sequence with her elbows resting on the table, her left hand resting on her right arm, and her legs bent and feet resting on the bottom of the chair. She adjusts her posture forward in image two, turns her head to the right in image three and moves her head down in image four. Danielle moves her right knee to the right slightly in image five.

The non-verbal actions produced by Joel and Danielle through the mode of posture are quite similar. Although Danielle appears to move more than Joel, all of her movements are small and mostly necessary. This lack of movement by both Joel and Danielle demonstrates their New Zealander identity element.

4.3.4. Hand/arm movements: Joel and Danielle

In the Figure below we can see Joel's hand/arm movements during the helping sequence of the New Zealand dyad.

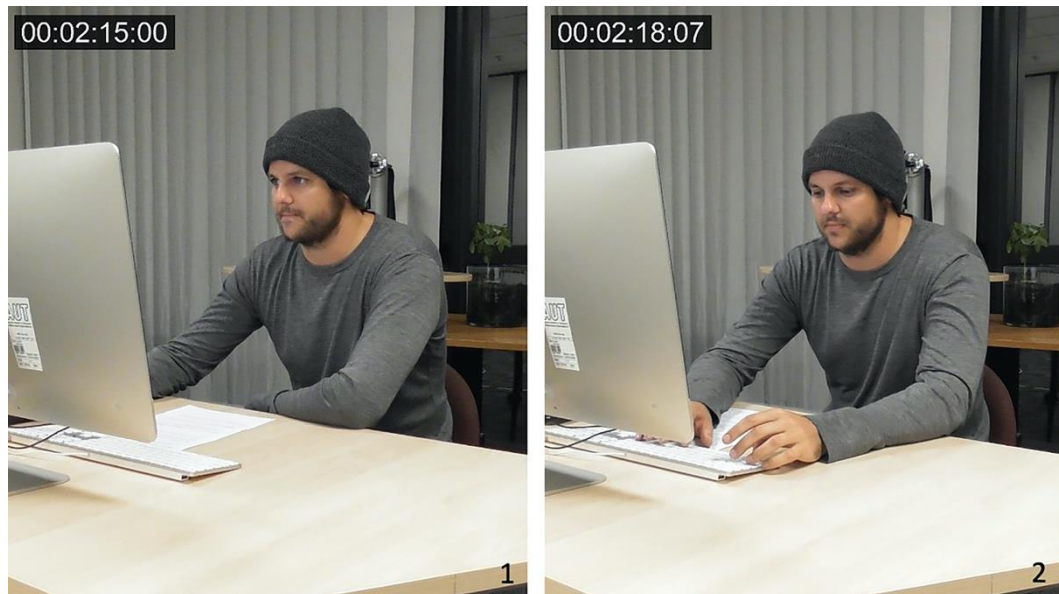


Figure 25: Hand/arm movements Joel.

In Figure 25 we can see that Joel, during the entire helping sequence, moves his hands only to use the keyboard and mouse.

In the Figure below we can see Danielle's hand/arm movements during the helping sequence of the New Zealand dyad.

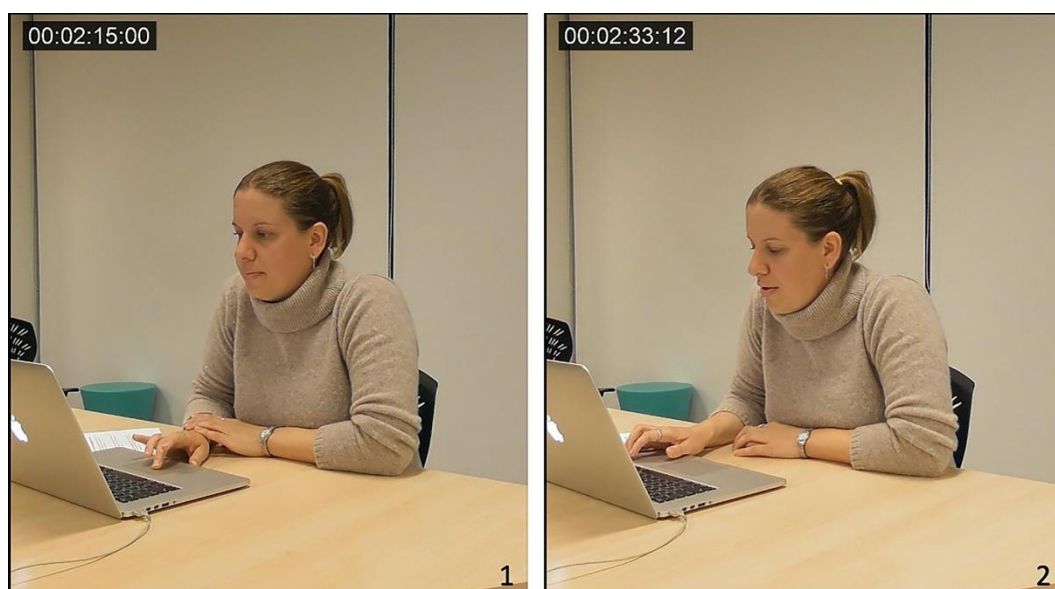


Figure 26: Hand/arm movements Danielle.

From Figure 26 we can see that Danielle, during the entire helping sequence, moves her hands only to use the keyboard and mouse pad. From the lack of movement of both participants in this helping sequence we can see that they both demonstrate their New Zealander identity element.

4.4. Conclusion

In this chapter I analysed (to some extent) the spoken language, and analysed facial expressions, posture, and hand/arm movements in-depth for each of the participants in the three dyads. Further, I examined how all participants produced their identity through their non-verbal actions.

In the following chapter I first compare the Serbian helper's (case study 1) with the New Zealand helper's (case study 3) non-verbal modes. Then, I compare the Serbian helpee's (case study 1) with the New Zealand helpee's (case study 3) non-verbal modes. Last, I compare the Serbian with the New Zealand dyad's non-verbal actions.

5. Comparing the Serbian and the New Zealand dyad

Display rules, according to Ekman (1972) referred to the management of the facial expressions and emotions in social context which is socially learnt and differs between cultures. However, other non-verbal actions also differ between cultures. In this chapter I compare facial expressions, posture and hand/arm movements for helpers in action Milica and Danielle as well as helpees in action Aleks and Joel. I chose to compare helpers with each other and helpees with each other as they performed a different function during the task. The helpers offered instruction and gave directions while the helpees mostly listened and clarified instructions.

5.1. Comparison of the non-verbal actions between the Serbian and the New Zealand dyad helpers

While this part of the chapter will illuminate how the native Serbian and native New Zealand English speaking Helpers' non-verbal actions compare, I would like to first point out that the language in their helping sequences differs greatly. This difference is due to the fact that Milica is a second language speaker of English, while Danielle is a monolingual English speaker. However, the focus here is not the spoken language but rather their production of non-verbal actions.

5.1.1.1. A comparison of facial expression: The Serbian and the New Zealand dyad helpers

When comparing Milica's, the Serbian native speaker's, facial expression with the facial expression that Danielle, the English native speaker, produces when helping her team

partner, we find that Milica produces short quick and frequent facial expressions, while in contrast Danielle produces large prolonged facial expressions.



Figure 27: Comparing facial expression in Milica and Danielle.

Although both Milica (left in the transcript) and Danielle (right in the transcript) have almost the same number of facial expressions during their helping sequence, Milica actually produces more movement in her face than Danielle does. Milica's facial expressions are more pronounced and use more of the facial muscles to create more exaggerated expressions than Danielle. Danielle's facial expressions are very minimal and are mostly created with her mouth.

Milica starts with a smile in image one, closed eyes half smile in image two, an eye squint and gaze upwards in image three, wide open eyes and slightly parted mouth in surprise in image four, wide eyes and pressed lips in a frown in image five, tightly

pressed mouth in image six, mouth pressed into a straight line in image seven, mouth pressed all the way in in image eight, to open eyes and slightly parted mouth in surprise in image nine, and a broad smile in image ten. Whereas, Danielle starts with a neutral facial expression in image one, eye squint in image two, lips pressed tightly together, and eyebrows pushed in in image 4, lips pushed together in image 5 and a small smile in image 6. Then, when we look at images number seven, eight and nine of Danielle's helping segment, we can see that they all relate to the same prolonged facial expression. Danielle squashes her forehead in image seven, in image eight she adds pressing of the lips and continues to move the left-hand side of her lip further up in image nine.

Thus, Milica produces short quick and frequent facial expressions, while in contrast Danielle produces large prolonged facial expressions. However, in both Milica's and Danielle's helping sequence we can see that they each produce a squinting facial expression (Figure 28).

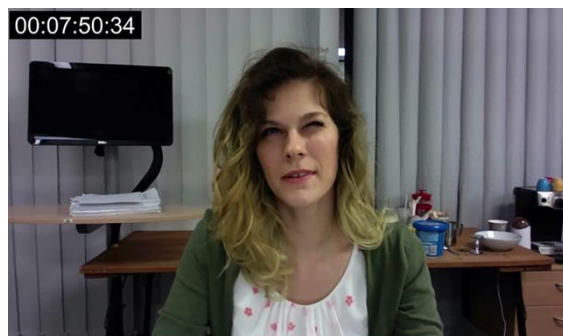


Figure 28: Squinting the eyes.

Milica looks up and Danielle remains focused on the screen. Both squint their eyes at this moment. Milica says (07:51:05) *right* followed by a very short pause and then *angle off* just after this squinting facial expression. Milica is trying to remember the words to give direction during her squinting facial expression. Thus, just like gestures (Freedman, 1977) which occur more often during speech perturbations and hesitations,

facial expressions may occur with greater frequency when a person is trying to think of a word. Whereas Danielle squints and a few seconds later says (02:29:01) *aa there we go*, indicating that she has found what she was searching for. Danielle is thus also using the squint in a *thinking moment*, but she analyses whether the website she has found contains the information she was searching for.

5.1.2. A comparison of posture: The Serbian and the New Zealand dyad helpers

When comparing the postural movements of Milica and Danielle, it is evident that Milica the native Serbian speaker produces a larger number as well as a more exaggerated postural movements than Danielle the native English speaker.

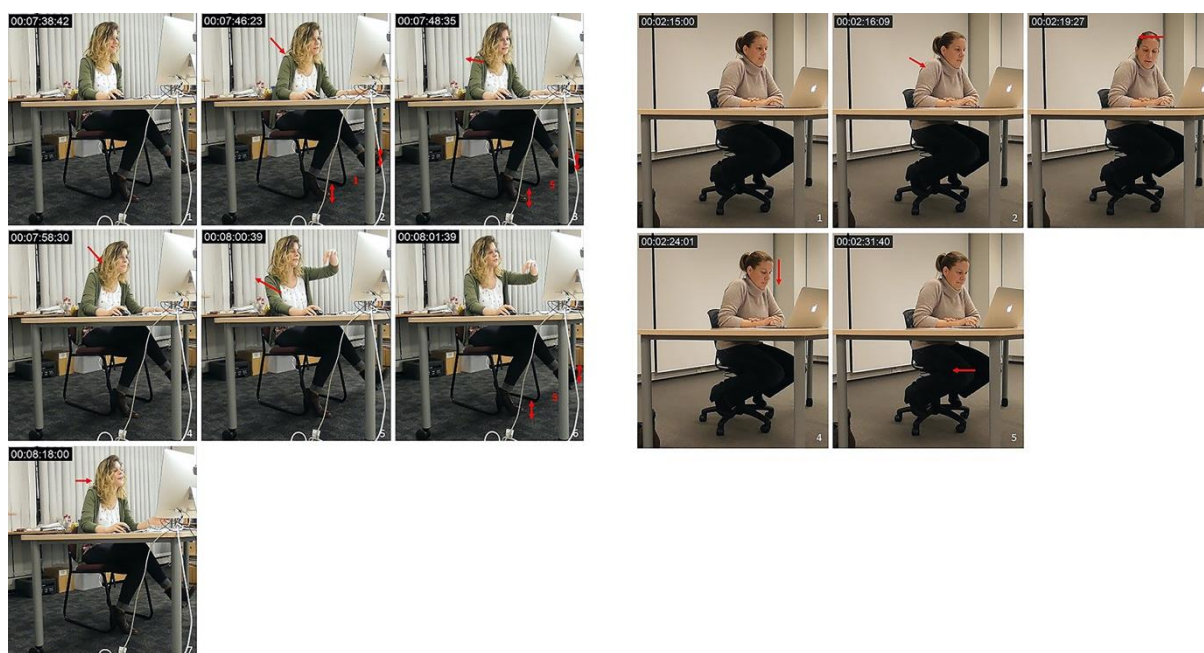


Figure 29: Comparing posture for Milica and Danielle.

Looking at the transcript above, Milica (shown on the left) moves her feet up and down constantly and produces several postural movements during the segment. Notably,

between images 2 and 5 she starts with leaning into the computer in image 2 then away from the computer in image 3 and repeats the process in images 4 and 5. Milica tilts her head back while pushing her shoulders forward in image 7. Danielle, meanwhile, as shown on the right in the transcript, moves hardly at all during the 40 second segment analysed. She leans into the computer in image one, looks over to the right in image three, looks down in image four and moves her knee to the right in image 5.

5.1.3. A comparison of hand/arm movement: The Serbian and the New Zealand dyad helpers

According to Norris (2004, 2011, 2019), all movements of the hand/arm are communicative. This way of looking at hand/arm movements includes McNeill's (1998) or Kendon's (1997) notions of gesture but includes other movements as well. In the comparison of the hand/arm movements of Milica and Danielle the difference in the expressiveness of these two participants is the most evident through the analysis of this mode.

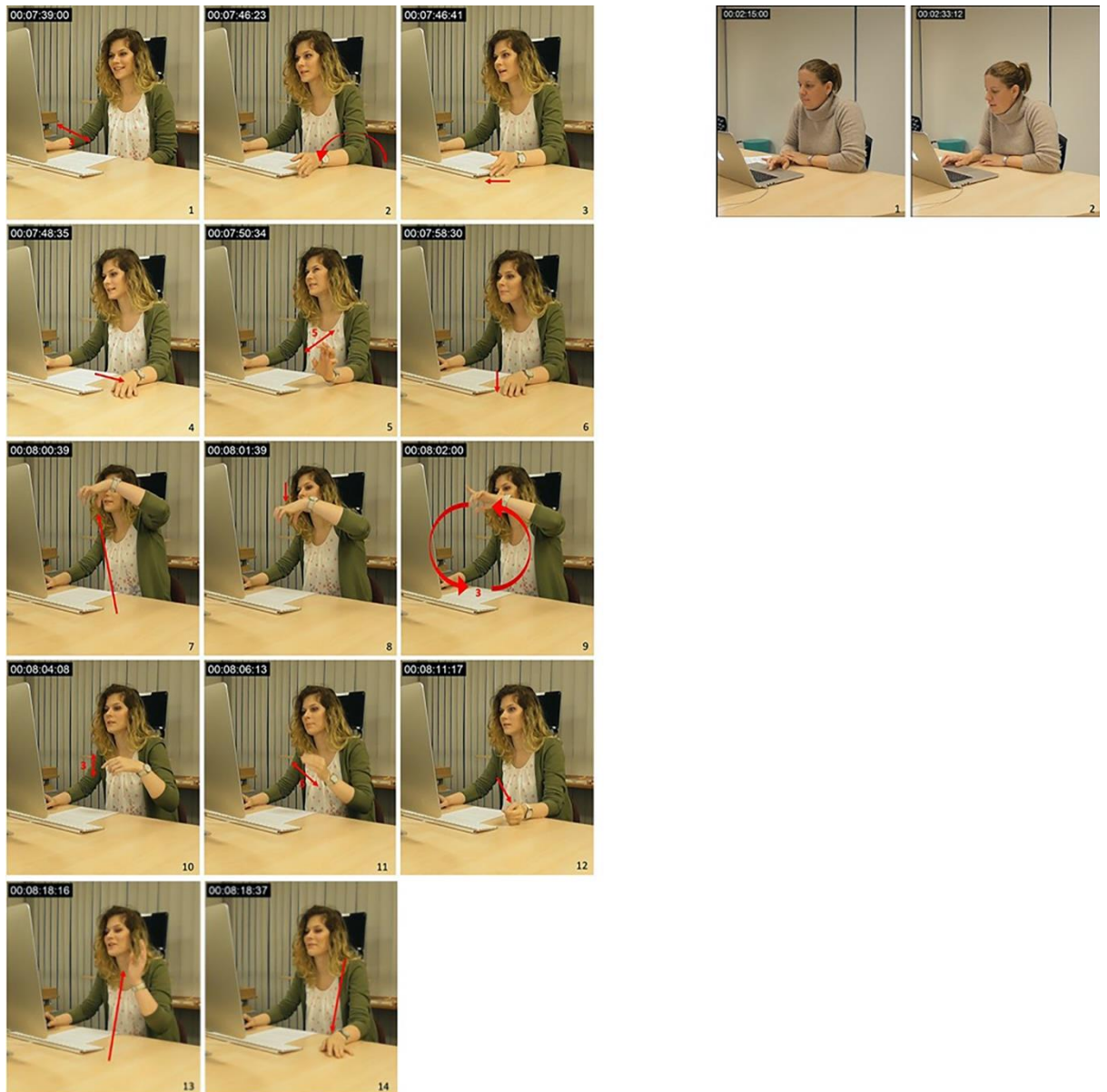


Figure 30: Comparing hand/arm movements for Milica and Danielle.

Milica starts her segment in images 1 to 3 using hand/arm movements that serve a purpose in her interaction with the space around her and the objects within that space. In image 1 Milica is using the computer mouse with her right hand to move around the map of Paris that she is looking at on Google Maps. She then moves her left hand from her lap to the desk (images 2 and 3) and closer to the keyboard. She produces this movement in response to Aleks asking for help, presumably thinking that she may need to use the keyboard. Realising that she does not need the keyboard she rests her hand on the desk (image 4). Milica then starts to give Aleks the instructions and produces a beat gesture with her left hand in sync with her utterances starting with

07:49:38 *aa bottom* moving her hand down as she says *bottom* (image 5). The second movement occurs in sync with 07:51:05 *right*, third one in sync with 07:51:39 *angle* and the last two hand movements occur in sync with the words 07:52:40 *of your*. Then as she finishes explaining to Aleks where to find the little figure on Google maps needed to activate street view, she again rests her hand on the desk (image 6) until she requires it again to describe where she is placing her little google maps figure. Images 7 and 8 show Milica producing a beat gesture while instructing Aleks to place his little Google figure near the *narrow side of the... Ferris Wheel*. Image 9 shows Milica producing an iconic gesture as she cannot remember the name of the Ferris Wheel and uses her gesture to describe it while saying *shape...aaa* at 08:03:06. She continues with her instruction by saying *closer to* 08:03:06 while producing 3 beat gestures in line with her utterance (image 10). Continuing to give instructions, Milica produces 5 deictic gesture as she gives further detail as seen in image 11 about the location that she is looking at by saying in line with the gesture *Place de la Concorde street so away from the river*. 08:06:13. Milica rests her hand (image 12) and finally, after not managing to explain to Aleks where she is exactly, Aleks announces that he is at the square. Now, she first says, *so am I* and follows it with *never mind* 08:18:37 in line with her hand movement up and down (images 13 and 14).

Thus, most of Milica's hand/arm movements occur as aids to her conversation. While, and in contrast, Danielle uses her spoken language to express herself and only moves her hands/arms to use the computer.

While it is not surprising that Milica gestures a lot since scholars such as Freedman (1977) found that gestures occur with greater frequency during speech perturbations and hesitations; and it is not surprising that a native speaker of English would therefore gesture less, it is noteworthy however to point out that Milica's (the native Serbian speaker's) hand/arm movements are very pronounced and exaggerated using quite a

lot of the space around her. Furthermore, her movements involve her entire arm from the shoulder to produce spatially expansive gestures in line with Efron's (1972) findings when he compared Italian native speakers with native English speakers in New York.

5.2. Comparison of the non-verbal actions between the Serbian and the New Zealand dyad helpees

In this section, I compare the non-verbal actions of facial expressions, posture, and hand/arm movement of the Serbian and New Zealand helpees.

5.2.1. A comparison of facial expression: The Serbian and the New Zealand dyad helpees

The figure bellow demonstrates the difference in the facial expression produced by the helpees of the Serbian (left in the transcript) and New Zealand (right in the transcript) dyads.

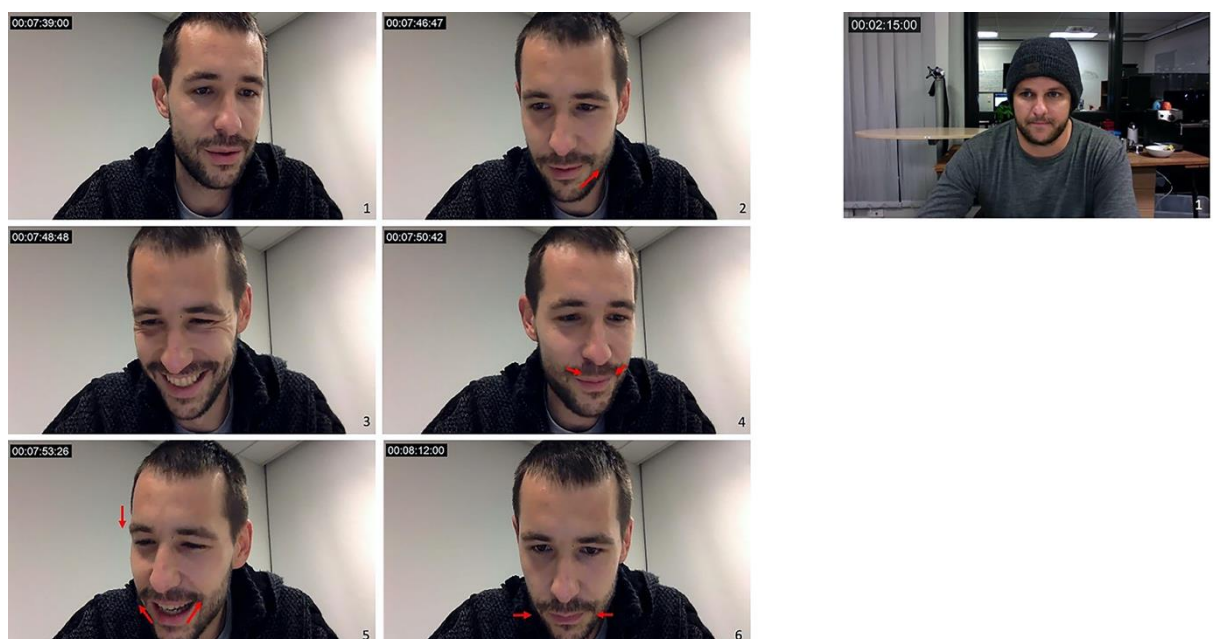


Figure 31: Comparing facial expression for Aleks and Joel.

The above transcript shows the facial expressions of Aleks and Joel. Aleks (on the left in the transcript, image 2) lifts the right corner of his mouth slightly while Milica starts talking and he laughs (image 3) as Milica has a few false starts between 07:44:22 and 07:47:11 *oh you... you...so...lll...so here...you have that little like....* Image 4 shows him pushing his lips together as he starts to concentrate on locating the little Google figure Milica is directing him to. Aleks squints and smiles in image 5 as he says *aaa yeah that little guys* 07:53:31 and in image 6 he displays a more neutral facial expression with his lips pushed together slightly as he concentrates on placing the little Google figure. Aleks is very animated and non-verbally engaged in this segment. His facial expressions are very exaggerated, and he uses quite a few facial muscles to display pronounced expressions. In contrast Joel (right in the transcript) remains neutral throughout the segment with no change in facial expressions, and relaxed muscles around his face.

5.2.2. A comparison of posture: The Serbian and the New Zealand dyad helpees

The figures below demonstrate the difference in the postural movements produced by the helpees of the Serbian (left in the transcript) and New Zealand (right in the transcript) dyads.



Figure 32: Comparing posture for Aleks and Joel.

The above transcript shows the postures of the helpees. Aleks (left in the transcript) moves his legs left and right (images 2 and 6) and up and down as illustrated in image 10. He leans forward (image 3) and moves his head as shown in images 2, 3, 4, 7, 8 and 9. Image 8 demonstrates Aleks's head movement to the right, which correlates with Milica's instruction to look at the bottom right hand corner of his screen, which

occurs between 07:49:38 and 07:52:40. He also leans back as shown in images 6 and 10. Aleks, although the helpee in the analysed segment, produces a significant number of movements as he waits for Milica to give him the instruction he was asking for. While his hands remain fixed on the mouse pad and keyboard, Aleks continues to move throughout the segment. Joel on the other hand leans into the computer (image 2) only once during the entire helping segment.

5.2.3. A comparison of hand/arm movement: The Serbian and the New Zealand dyad helpees

The figures below demonstrate the difference in hand/arm movements between the Serbian (left in the transcript) and the New Zealand (right in the transcript) dyad helpees.

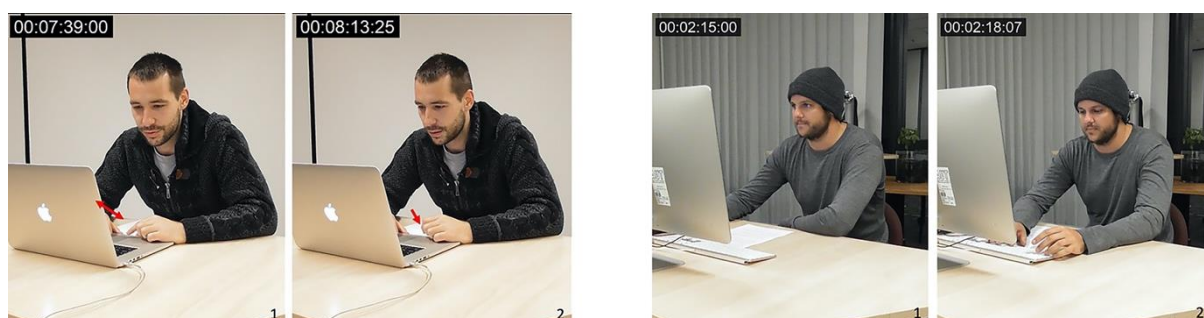


Figure 33: Comparing hand/arm movements for Aleks and Joel.

The above figure shows Aleks and Joel producing very few gestures only moving their hands to use the keyboard and mouse. As the helpees in this segment they are listening and waiting for instruction from the helpers and as such engage in very little movement in this mode.

5.3. Comparing the Serbian with the New Zealand helpers and helpees

In this section, I compare the mode of language (in general terms) and the non-verbal actions in the mode of facial expressions, posture, and hand/arm movement between the Serbian helpers and helpees and New Zealand helpers and helpees.

5.3.1. Comparing spoken language: Serbian and New Zealand dyads

When comparing the spoken language between the Serbian and the New Zealand dyad, we see quite a difference. Looking at the transcripts below we can see that the Serbian dyad produces significantly more utterances than the New Zealand dyad with a larger number of pauses and false starts.

(1)	07:40:40	Aleks:	directions.....	(1)	07:40:40	Aleks:	directions.....
(2)	07:42:34		how do you go to Street view?	(2)	07:42:34		how do you go to Street view?
(3)	07:44:22	Milica:	oh you...	(3)	07:44:22	Milica:	oh you...
(4)	07:45:03		you	(4)	07:45:03		you
(5)	07:45:29		okay so	(5)	07:45:29		okay so
(6)	07:45:36		so...lllll	(6)	07:45:36		so...lllll
(7)	07:46:23		so here...	(7)	07:46:23		so here...
(8)	07:47:11		you have that little like ..	(8)	07:47:11		you have that little like ..
(9)	07:49:38		aa bottom the	(9)	07:49:38		aa bottom the
(10)	07:51:05		right	(10)	07:51:05		right
(11)	07:51:39		angle	(11)	07:51:39		angle
(12)	07:52:40		off your	(12)	07:52:40		off your
(13)	07:53:31	Aleks:	aaaa yeah that little guy	(13)	07:53:31	Aleks:	aaaa yeah that little guy
(14)	07:54:44		yeah	(14)	07:54:44		yeah
(15)	07:54:48	Milica:	yeah so you just take it ...am..	(15)	07:54:48	Milica:	yeah so you just take it ...am..
(16)	07:56:08		okay take it and place him	(16)	07:56:08		okay take it and place him
(17)	07:58:03		and I am placing mine to that like...m	(17)	07:58:03		and I am placing mine to that like...m
(18)	08:00:46		narrow side of the ...	(18)	08:00:46		narrow side of the ...
(19)	08:03:06		Shape...aaa	(19)	08:03:06		Shape...aaa
(20)	08:04:23		closer to	(20)	08:04:23		closer to
(21)	08:06:13		Place de la Concorde street so away from the river ...	(21)	08:06:13		Place de la Concorde street so away from the river ...
(22)	08:12:27		Is that where we want to be?	(22)	08:12:27		Is that where we want to be?
(23)	08:15:23	Aleks:	I am at the square	(23)	08:15:23	Aleks:	I am at the square
(24)	08:16:44	Milica:	hahaa	(24)	08:16:44	Milica:	hahaa
(25)	08:18:00		okay so am I	(25)	08:18:00		okay so am I
(26)	08:18:37		never mind	(26)	08:18:37		never mind

(1)	02:16:09	Danielle:	there we go	(1)	02:16:09	Danielle:	there we go
(2)	02:17:36		the ten best restaurants near that hotel	(2)	02:17:36		the ten best restaurants near that hotel
(3)	02:29:01		aa there we go ...	(3)	02:29:01		aa there we go ...
(4)	02:32:02		hmm	(4)	02:32:02		hmm
(5)	02:33:00		there is a steakhouse	(5)	02:33:00		there is a steakhouse
(6)	02:35:08	Joel:	yeah	(6)	02:35:08	Joel:	yeah
(7)	02:36:03	Danielle:	yeah	(7)	02:36:03	Danielle:	yeah
(8)	02:37:42		at Tall de Carn	(8)	02:37:42		at Tall de Carn
(9)	02:41:40		it's got four and a half staaaaars	(9)	02:41:40		it's got four and a half staaaaars
(10)	02:45:30		or a tap... aaaaa	(10)	02:45:30		or a tap... aaaaa
(11)	02:47:24		or there is a	(11)	02:47:24		or there is a
(12)	02:48:13		pizza Spanish Italian Mediterranean	(12)	02:48:13		pizza Spanish Italian Mediterranean

Figure 34: Comparing spoken language: Serbian (top) and New Zealand (bottom) dyad.

In contrast the New Zealand dyad's utterances are in general longer, more precise and to the point.

5.3.2. Comparing facial expression: Serbian and New Zealand dyads

The Figures below demonstrate the difference in facial expressions between the Serbian and the New Zealand dyad.

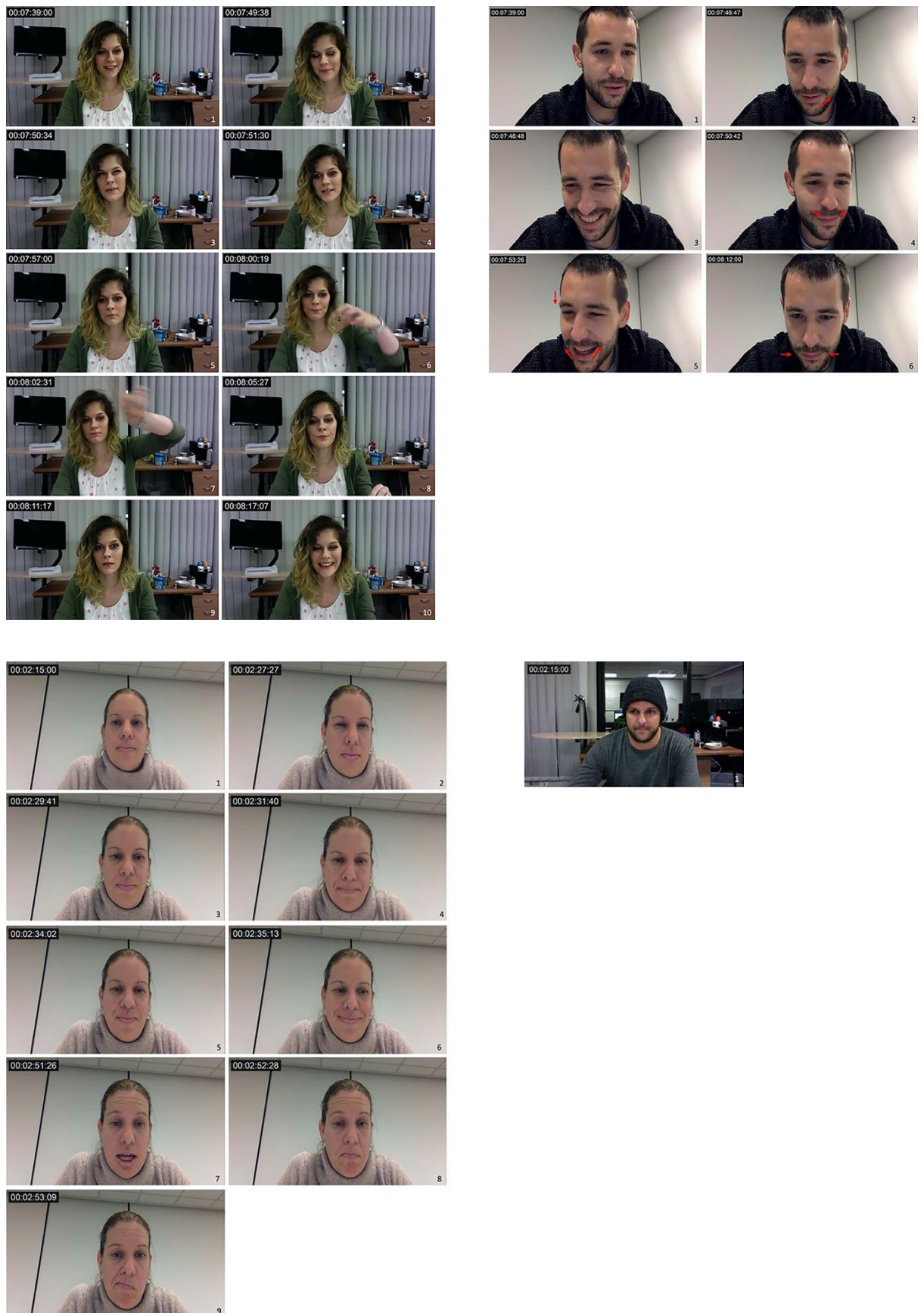


Figure 35: Comparing facial expression: Serbian (top) and New Zealand (bottom) dyad.

In comparing the two dyads it is evident that they produce different kinds of facial expressions. The Serbian dyad produces a larger variation of facial expressions with more exaggerated muscle movement. In contrast the New Zealand dyad produce very few facial expressions overall, with very minimal muscle movement and little variation.

5.3.3. Comparing posture: Serbian and New Zealand dyads

Just as with facial expression, a difference in lower-level actions is visible when comparing the posture for the Serbian and the New Zealand dyad.



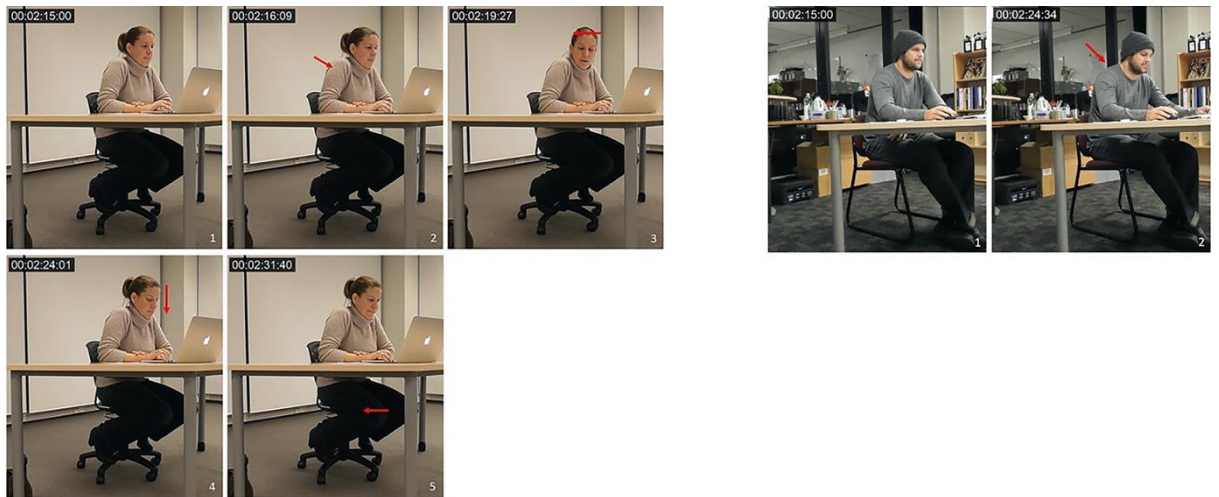


Figure 36: Comparing posture: Serbian (top) and New Zealand (bottom) dyad.

From the images above it is clear that the Serbian dyad produces significantly more postural movements than the New Zealand dyad. The postural movements produced by the Serbian dyad are larger, more exaggerated and encompass the entire body whereas the New Zealand dyad produces very minimal movements and mostly to lean in closer to the computer.

5.3.4. Comparing hand/arm movement: Serbian and New Zealand dyads

Similarly, as with facial expression and posture, we again can see a difference in the production of lower-level actions when comparing the hand/arm movements between the Serbian and the New Zealand dyad.

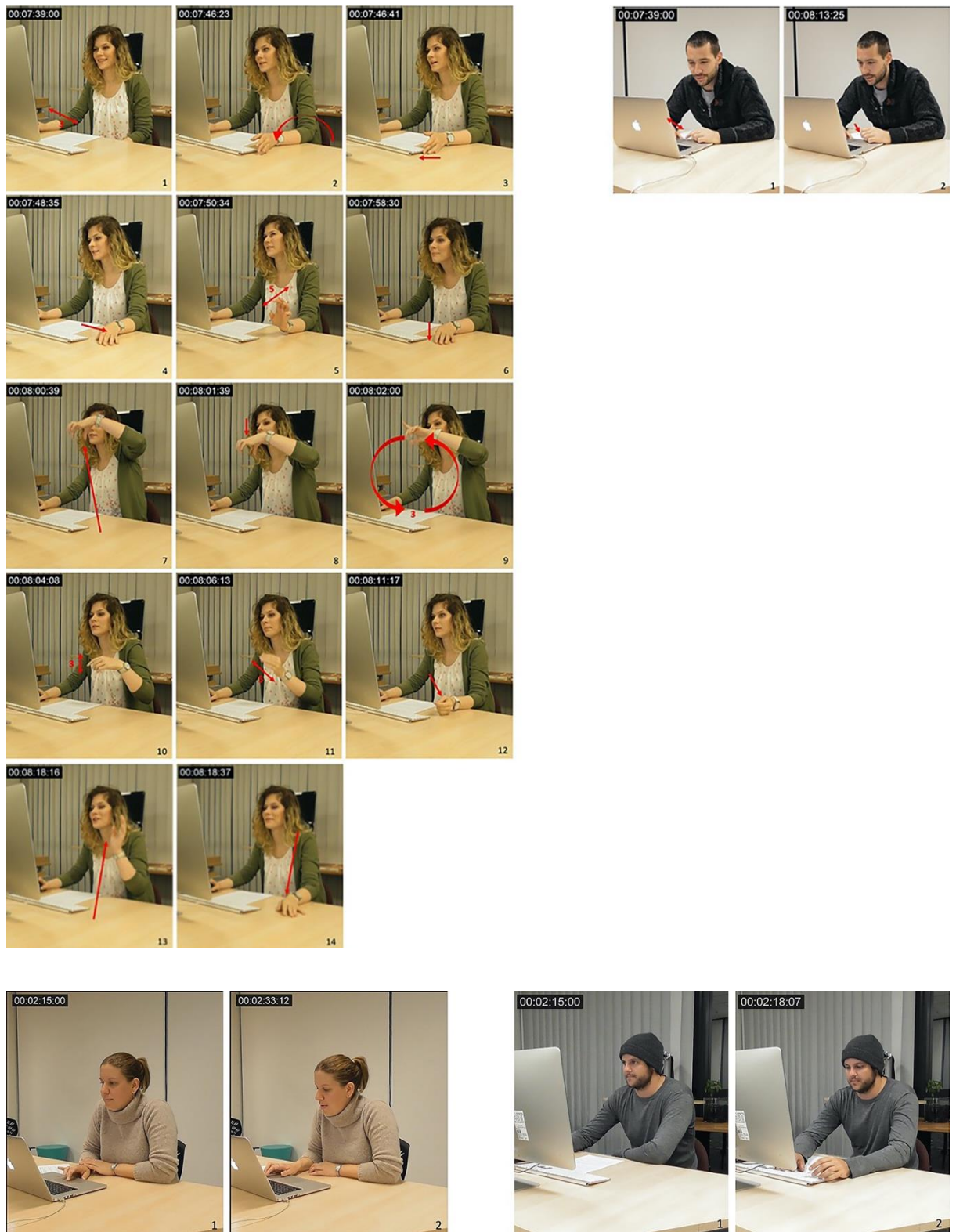


Figure 37: Comparing hand/arm movement: Serbian (top) and New Zealand (bottom) dyad.

The Figure above clearly shows the difference in the hand/arm movement between the Serbian and the New Zealand dyad. The Serbian dyad produce large, exaggerated

movements using the whole arm from the shoulder joint. In contrast, the New Zealand dyad make very small hand/arm movements using only the hand from the elbow down.

5.4. Conclusion

In this chapter I first compared the non-verbal modes of facial expressions, posture, and hand/arm movements for Serbian and New Zealand dyad helpers with each other. Then, I compared the non-verbal modes of facial expressions, posture, and hand/arm movements for Serbian and New Zealand dyad helpees with each other. Last, I compared the non-verbal actions mentioned above along with spoken language for the Serbian and the New Zealand dyad.

In the next chapter I discuss each case study in light of their non-verbal actions and production of identity elements. Then, I conclude my thesis.

6. Discussion, Conclusion, and Implications

In this chapter, I discuss the links between non-verbal actions and identity in the three dyads and conclude the thesis. I first discuss the Serbian native speaking dyad and how their non-verbal actions are telling of their identity. I discuss the production of a Duchenne smile for both participants of the Serbian dyad and I discuss how intimate relationships are expressed through closer non-verbal action. Finally, I discuss the Serbian and English mixed native speaker dyad followed by the New Zealand English native speaker dyads and how their actions are telling of their identity.

6.1. Case study 1: Serbian native speaker dyad

First, I discuss Aleks's non-verbal actions and identity. As Lin et al. (2019) explain, cultural identity involves shared beliefs, values and worldviews. Furthermore, they explain that settling in a new country is a complex process involving negotiation of identity.

Figure 38.1 shows an excerpt of the Multimodal Transcript 6 discussed in Chapter 4.



Figure 38.1: Aleks's non-verbal actions and identity.

As we can see from Aleks's example, a portion of his non-verbal actions are telling of his Serbian identity as he produces exaggerated facial expressions as seen in Chapter 4, Figure 7. However, he remains relatively still in his overall posture and produces very little hand/arm movements as shown in Chapter 4, Figures 9.1 and 11, revealing his adaptation into the non-verbal behaviour of New Zealand culture. Leach (1972) explains that learning a new language in a foreign culture requires the simultaneous learning of correct non-verbal behaviour of that region which Aleks is clearly demonstrating through his non-verbal behaviour. Matelau-Doherty & Norris (2021), show that producing multiple identity elements from different cultures can be conflicting or fluid. Aleks's production of the Serbian as well as New Zealand identity elements appears seamless and therefore fluid.

Now, I discuss Milica's non-verbal actions and identity. All Milica's non-verbal actions are exaggerated and very expressive through which she demonstrates her Serbian identity element.

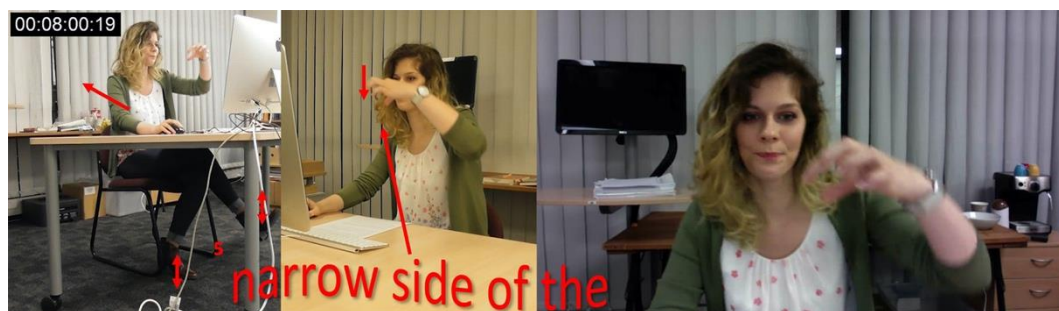


Figure 38.2: Milica's non-verbal actions and identity.

Through Milica's spoken language and her hand/arm movements (an example from the Multimodal Transcript (Chapter 4, Figure 6) is shown in Figure 38.2). Here, we see how she demonstrates what Matelau-Doherty & Norris (2021) describe as a conflict between multiple identity elements from different cultures. Milica struggles to find the words in English, producing small utterances and using filler words such as *a* and *am*

while using her hand to illustrate the words she struggles to find. Thus, here, she demonstrates a conflict between the Serbian and New Zealand identity elements.

However, Milica only uses English during this helping segment even though Aleks speaks Serbian and she could have used a Serbian word to describe the words she was missing in English. The fact that she does not use any Serbian words and instead uses her non-verbal language to get her point across demonstrates what Lin et al. (2019) refer to as a negotiation of identity present during the process of settling in a new country. Although Milica is in the process of achieving membership to the New Zealand culture and its beliefs, values, and worldviews she is still non-verbally producing mostly her Serbian identity elements and as such she shows her migrant identity element.

6.1.1. Duchenne smile: Aleks and Milica

In the excerpt analysed in this thesis, at 07:42 Aleks asks *How do you go to street view?* and Milica starts to respond with five false starts between 07:44 and 07:46. At 07:47 Aleks starts a smile which lasts until 07:49.

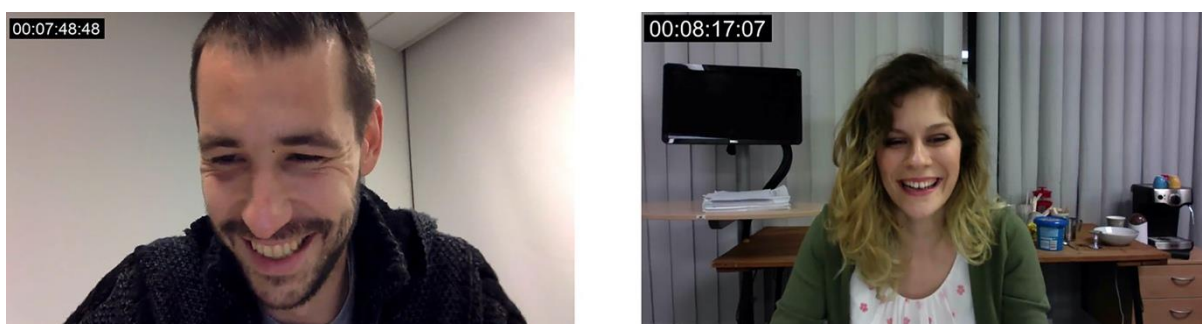


Figure 39: Aleks and Milica producing a Duchenne smile.

In this instance Aleks produces a Duchenne smile in response to Milica's false starts. The Duchenne smile (the smile of enjoyment) easily distinguished from a deliberate smile is evident as Aleks contracts both the zygomatic major muscle which raises the corners of his mouth and the orbicularis oculi muscle which then pulls the skin from the cheeks and forehead toward the eyeball (Ekman, 1992).

At 07:48 Aleks makes a sound during his Duchenne smile catching Milica's attention in response to which Milica also produces a brief Duchenne smile that is much less exaggerated than Aleks's but still present as we still see the slight contraction of both the zygomatic major and orbicularis oculi muscles.

Ekman et al. (1972) explain that although facial expressions of emotion form in the same configuration of muscle movements across all cultures, they have different cultural rules about social expression. Furthermore, every action is telling of your identity according to Scollon (1997) and all non-verbal actions including facial expressions can tell of your ethnic or national identity (Norris, 2007). Here, the production of a pronounced Duchenne smile present in both Milica's and Aleks's non-verbal repertoire is telling of their Serbian identity.

6.1.2. Expressive actions

When Aleks is asked in his interview after the tasks were completed *What if you're doing it face to face, how do you think that might have changed the way that you work together?* he replies:

Audio Transcript 14: Aleks speaking about his and Milica's expressive ways of interacting.

- (1) aha
- (2) aaaaaa
- (3) but still honestly
- (4) I don't think you
- (5) would change much.
- (6) I mean maybe
- (7) I mean we wo...
- (8) maybe we would just be
- (9) a bit more physical.
- (10) you know
- (11) maybe we would just uh
- (12) you know
- (13) make more fun of each other
- (14) you know
- (15) and like
- (16) push each other
- (17) or something like that
- (18) you know..
- (19) but amm
- (20) I don't think
- (21) it would make much of a difference
- (22) other than that.
- (23) I mean
- (24) she's very expressive
- (25) I'm very expressive
- (26) you know we're not introverted
- (27) so aaa
- (28) I think it wouldn't change much

LaFrance and Mayo (1978) demonstrated that intimate relationships are expressed through closer distance and more touch than interactions with strangers. From Aleks's interview transcripts excerpt above we can see a more intimate relationship demonstrated between these two participants. Aleks explains that if this task were performed face-to-face the two participants would be *a bit more physical* (8,9) make more fun of each other (13) and push each other or something similar (16,17). Aleks goes on to explain in lines 24 through 26 how Milica is very expressive and not an introvert. From this and from analysing the Serbian dyad we can draw similarities to Efron's (1972) study which shows first-generation Italian immigrants producing full arm gestures just like Milica. Furthermore, the Serbian dyad's increased rate of gesture in contrast with the New Zealand dyad's lack of gesture is also in line with the Goldin-

Meadow and Saltzman's (2000) study showing Taiwanese mothers producing three times as many gestures when interacting with their children when compared to American mothers.

Next, I discuss non-verbal actions and identity production of the participants from the 2nd case study.

6.2. Case study 2: Serbian and English mixed native speaker dyad

Who we are derives in part from the multiple connections we have to other people, events and things, whether these are geographically close or distant, located in the present or past (Conradson & McKay 2007: 167). Ivana, having arrived in New Zealand as an 18 months-old toddler, is close to a 2nd generation migrant, but she grew up in a largely Serbian-New Zealand community. This community has stronger and better maintained connections within New Zealand than it does with the homeland.

Lee (2011) explains, intradiasporic transnationalism refers to ties created across different diasporic populations within 2nd generation migrants. Intradiasporic transnationalism is evident in Ivana's example, as she continues to maintain connections with the Serbian-New Zealand community. Her example is also in line with Lee's (2011) concept of indirect transnationalism which refers to the emotional connection to the homeland of their parents without their own direct connection with their homeland. Although Ivana has visited Serbia a few times, she does not maintain any close connections in Serbia apart from her extended family. She does, however, remain emotionally connected to Serbia through her parents.

Fishman (1999) explains that due to the immersion of second-generation migrants into the host country's education system, their strongest language becomes the language of the host country, which is evident with Ivana. Having come to New Zealand at such a young age, Ivana speaks fluent and flawless English whereas her Serbian, although good, is not at the same level as her English.

According to Bartley (2010: 385), the concept of 1.5 generation migrants is described by Zhou (1997) as the generation between the first and the second-generation migrants. The difference between generation 1.5 and their parents is of sociological significance due to their immersion into the host country's culture through the education system, which their parents did not experience. Duane fits into the concept of 1.5 generation migrants as his parents migrated to New Zealand when he was 7 years old and most of his formal education has been in New Zealand.

The Figure below is a snapshot of image 3 from the Multimodal Transcript (Figure 13) illustrated in Chapter 4. In this Figure (40.1), we see Duane producing several head movements and clear long utterances. From his utterances (Chapter 4, Audio transcript 6) and his hand/arm movements (Chapter 4, Figure 18) we can see Duane's production of his New Zealand identity as Duane has spent a significant portion of his life in New Zealand he has gained membership into the cultural identity of New Zealand (Leach 1972).



Figure 40.1: Duane's non-verbal actions and identity.

According to Kusters (2017), less oral expressions of communication are considered a virtue in India. As such in examining Duane's facial expressions and postural movements (Chapter 4, Figures 14 and 16) we see Duane's production of his Indian identity element. Duane produces multiple cultural identity elements from his New Zealander as well as his Indian identity showing a fluid amalgamation of his identity elements (Matelau-Doherty & Norris 2021). However, in this study, I focus primarily on the non-verbal actions and identity of native Serbian and English speakers in New Zealand, and thus will not go into further detail about Duane here.

Rather, I will now focus my further analysis on Ivana's non-verbal actions and her display of identity. Figure 40.2 below is a snapshot from image 7 in the Multimodal Transcript (Chapter 4, Figure 13).



Figure 40.2: Ivana's non-verbal actions and New Zealand identity.

When looking at Figure 40.2 above, we can see a snapshot of Ivana's production of a New Zealander identity element. Juul (2014) discovered in her research that Serbs in Denmark cherished their ability to perform belonging invisibly. Ivana, through her lack of emotional expression, lack of non-verbal actions and clear long utterances seamlessly produces a New Zealander identity while her Serbian identity element remains hidden.

6.3. Case study 3: New Zealand English native speaker dyad

Much research has been conducted on facial expression and gesture with English native speakers. However, few studies have compared English with Serbian native speakers. Here, I examine the New Zealand native speakers in relation to the Serbian native speakers above.



Figure 41.1: Joel's non-verbal actions and identity.

During the entire helping segment analysed, Joel produces almost no movements and only says one word. The movements he does produce such as the postural shift forward, and the hand/arm movements are only produced out of necessity. In this case, they are produced when Joel is required to use the computer keyboard.

Katz (2003) discusses what it means to be white and names some of the unspoken rules such as 'don't show emotion,' when speaking of white Anglo-Saxon or Anglo-

American culture. Joel, the “kiwi bloke” with separation and independence from influence’ (Bannister 2005, page 258) through his lack of non-verbal expression and therefore a lack of emotional expression, shows his New Zealander identity element.

When examining Danielle from the New Zealand English speaking dyad in comparison with Joel above we can see many similarities. Danielle’s hand/arm movements as well as postural movements, like Joel’s, are produced out of necessity. She moves her hands to use the computer keyboard and most of her postural shifts are to use the computer or look at the task sheet. Danielle only produces one postural movement, a slight shift of her right leg, that is not related to necessity.

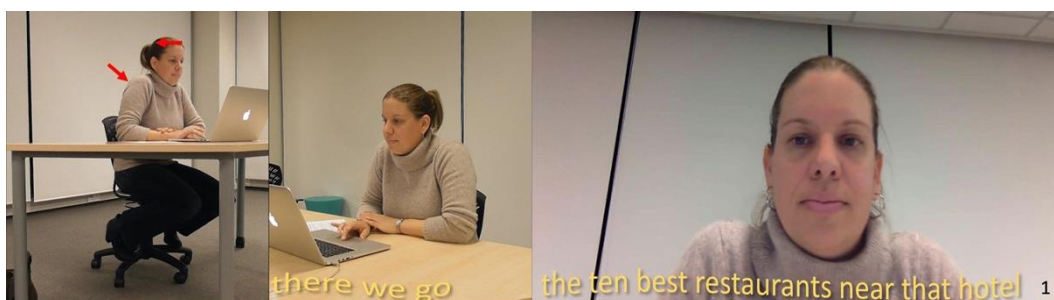


Figure 41.2: Danielle’s non-verbal actions and identity.

Danielle produces nine facial expressions during the entire helping sequence analysed in contrast to Joel’s one, however, most of her facial expressions are not very exaggerated and many appear to be one facial expression slowly produced. For example, Chapter 4, Figure 22, images 3, 4, 5 and 6 as well as 7, 8 and 9 demonstrate the slow progression of two facial expressions rather than seven separate facial expressions. This, combined with the lack of other non-verbal actions and coupled with Danielle’s clear, precise, and long utterances, illustrates Danielle’s New Zealander identity. Gruber, et al.’s (2016) findings are in line with my study as they found, when comparing Māori and the Pākehā speakers, that Pākehā speakers produced almost no gestures.

Furthermore, Danielle along with all helpers in this study, through the action of helping produce a friend identity element. Norris (2011) found that individuals simultaneously displayed several identity elements through various action simultaneously.

When comparing Joel's non-verbal actions with those of Milica and Aleks (6.1 above) we can see a massive difference in their identity production. Milica and Aleks, through their exaggerated and expressive non-verbal actions demonstrate their Serbian identity element while Joel through his lack of non-verbal action demonstrates his New Zealander identity. Similarly, Danielle's display of her identity elements through her non-verbal actions differs greatly from those of Aleks and Milica, the Serbian dyad. Where Aleks and Milica overall produce much larger and more expressive non-verbal actions, Danielle produces much smaller and/or less expressive non-verbal actions.

6.4. Conclusion and Implications of the thesis

At this point, I will conclude the thesis by providing a summary of the study followed by my findings. I then address the shortcomings of the study and suggest further research directions before ending the thesis.

6.4.1. Brief summary

In Chapter 1, I stated the research question:

How does the expression of identity elements through non-verbal actions differ between individuals from a Serbian-English bilingual background compared to individuals from a monolingual New Zealand English background?

Further, I addressed the significance of the study for New Zealand, for the cross-cultural examination of non-verbal modes as well as the significance to the study of

identity. In Chapter 2, I discussed the design of the study, how I collected and selected the data for analysis, and I showed a series of data collection tables displaying all the collected data. In Chapter 3, I explored relevant thematic literature on migrants and identity, non-verbal actions as well as multimodal (inter)action analysis and identity. Then, I defined the data for analysis through higher-level action tables followed by bundled higher-level action tables allowing for selection of data pieces for micro analysis. Finally, I described the transcription process of the data. In Chapter 4, I compared the non-verbal actions of the three dyads I chose for analysis and how the modes of spoken language, facial expression, posture, and hand/arm movements are telling of their identity. In Chapter 5, I conducted a comparative analysis of the helpers as well as the helpees from the New Zealand native English speaking dyad with the Serbian native speaking dyad. In Chapter 6, I revisited all three dyads and showed how their non-verbal actions produce their identity. Next, I discuss my findings.

6.4.2. Findings

While comparing the helpers and the helpees from the New Zealand native speaking dyad with the Serbian native speaking dyad I found that the Serbian dyad expressed themselves with a larger number of non-verbal actions than their New Zealand counterparts.

The Serbian helper Milica produced shorter and more frequent facial expressions during the helping segment, while Danielle, the New Zealand helper, produced fewer and prolonged facial expressions. However, they both produced a squinting facial expression during a thinking moment illustrating the universality of facial expressions as Ekman (1972) explains. Furthermore, Milica produced many postural movements during the segment, demonstrating her Serbian identity element, while Danielle only moved out of necessity to use the computer, demonstrating her New Zealander identity

element. Finally, Milica produced a significant amount of hand gestures using these as aids to her spoken language, demonstrating conflicting New Zealander/Serbian identity elements and thus producing a migrant identity element. Milica's increased hand/arm movements occur during speech perturbations and hesitations which is in line with Freedman's (1977) findings. Similarly, her hand/arm movements involved the entire arm from the shoulder joint, concurrent with Efron's (1972) findings in comparing Italian native speakers with native English speakers from New York. Danielle, on the other hand, produced minimal movements out of necessity to use the computer, through which she demonstrates her New Zealander identity element.

When comparing the helpees from the Serbian native speaker dyad with the New Zealand native speaker dyad, I found Aleks, the Serbian helpee, produced significantly more non-verbal actions than Joel, the New Zealand helpee. Although, the helpees produced fewer actions altogether in comparison with the helpers as they spent more of the time listening to the helpers when they attempted to help them with various issues. Aleks produced several expressive facial expressions during the helping segment, demonstrating his Serbian identity element, while Joel remained expressionless throughout the whole segment, showing his New Zealander identity element. Similarly, when analysing the posture of the helpees, I found Aleks to be significantly more expressive in producing movement throughout the whole segment, showing his Serbian identity element, while Joel, once again, remained still, illustrating his New Zealander identity element. When looking at hand/arm movement both Aleks and Joel produced only the necessary movements to use the computer. Aleks, through all the modes of his non-verbal actions, produced an amalgamation of his Serbian with his New Zealander identity elements as he was very expressive in some of his modes and quite still in others. His production of both identity elements is in line with Leach's (1972) findings that migrants, while learning the verbal language of a new country also learn the appropriate non-verbal behaviour of that region. While Joel through his

minimal non-verbal behaviour illustrates his New Zealand identity element and his “kiwi bloke” persona through separation and independence from influence as described by Joseph and Falcous (2019).

In analysing the mixed Serbian/English native speaking dyad, I found Ivana, the Serbian speaker, produced fewer facial expressions that were less expressive than Duane the English native speaker. Even though both participants used several facial expressions during the task neither of them were able to tell how the other one was feeling based on these. This was evident from their interviews after the tasks, as they both explained that neither of them looked at each other during the tasks but rather concentrated on what they were searching for using Google. In the comparison of body posture, I found Duane produced a significant amount of body movement including a large number of head movements, which is telling of his Indian identity element. Ivana, on the other hand, moved only to lean in closer to the computer, thus demonstrating her New Zealander identity element. Both Ivana and Duane used their hands predominantly to use the computer, maybe demonstrating their skilled computer user identity elements. Similarly, they both covered their mouth while they were searching and contemplating the options, which may be telling of their high achiever identity element as they were stopping themselves from talking until fully forming an idea. Ivana’s lack of non-verbal actions further demonstrates Leach’s (1972) findings that while learning a new language, migrants also learn the non-verbal behaviour of the host country. Furthermore, as all of her formal education has occurred in New Zealand, her English is much stronger than her Serbian and thus, she falls closer to a 2nd generation migrant (Fishman, 1999). Ivana also demonstrated intradiasporic transnationalism (Lee, 2011) as she maintains ties with the Serbian-New Zealand community while also producing indirect transnationalism as she maintains an emotional connection, without direct ties to Serbia (the homeland of her parents). Duane, however, having immigrated to New Zealand when he was 7 years old is more

in line with the 1.5 generation. He produced a fluid amalgamation (Matelau-Doherty & Norris 2021) of his New Zealand and his Indian identity elements through non-verbal actions at different parts of the helping segment.

I further found that non-verbal performance of belonging (Juul, 2014) to a different culture was more fluid in Aleks's example who had spent significantly longer in New Zealand than in Milica's example, who at the time of the study, had only been in New Zealand for less than a year. This was illustrated through some of his non-verbal communication, such as his hand/arm movement, being almost non-existent showing his New Zealander identity element. In Milica's example I found the performing of belonging to New Zealand culture conflicted with her performing of belonging to Serbian culture. This was evident from her struggle to find words in English and as a result, she produced significantly more non-verbal movement than any other participant. Ivana, on the other hand, who had spent the majority of her life in New Zealand performed belonging to New Zealand culture seamlessly, while showing minimal Serbian identity as her non-verbal behaviour was minimal. While Duane, like Aleks, seamlessly performed his belonging to the New Zealand culture through his language and some of his non-verbal behaviour which like other New Zealanders was quite still.

Lastly, I found that both Milica and Aleks produced a Duchenne smile, a smile of enjoyment (Ekman et al., 1990) during their helping segment. Moreover, Aleks explains in his interview that, had the task been in person, they would have had more of a physical interaction, pushing each other and having more fun. This demonstrates a more intimate relationship between the participants according to LaFrance and Mayo (1978) who found that more intimate relationships were expressed through a closer distance and more touch than in interaction with strangers.

Next, I discuss the shortcomings of my research.

6.4.3. Further research direction

While a study of three dyads (inter)acting for 40 seconds each may not be enough to generalise the findings, my study raises interesting points about the cross-cultural non-verbal communication and the production of identity that warrant further exploration. In any case, it is astonishing how much we were able to see from such short interactions in this study. I believe that a larger sample of participants interacting for longer should be studied to draw more definitive conclusions about how identity elements are produced in a cross-cultural setting between Serbian-English bilingual and English monolingual individuals in New Zealand. Research could also focus on other cultural groups to further deepen our understanding of non-verbal communication and identity in such an incredibly diverse and multi-cultural place like New Zealand.

6.4.4. In Conclusion

In conclusion, facial expressions have received much attention over the years and their universality has been to a large extent proven (Izard 1971, Ekman, Sorenson, & Friesen, 1969) with the rules of display differing culturally (Ekman and Friesen, 1969). These findings could also be true for non-verbal actions. In my study I explored how expression of identity elements through non-verbal actions differ between individuals from a Serbian-English bilingual background compared to individuals from a monolingual New Zealand English background. The findings suggest that the production of nonverbal actions within these two cultural groups differ in the dimensions, scale and size which appears to be linked to their national and cultural identity. Furthermore, I found that the first-generation migrants displayed significantly

more non-verbal actions than did the second-generation migrants as was evident by Ivana's example. However, due to my study having such a limited sample size, further exploration is required to make a definitive claim in these areas. What is astonishing from my study is the amount of information that can be seen from the non-verbal actions of individuals interaction for just 40 seconds and how much I was able to tell about their identity from such a short segment. Further exploration in this field would surely produce incredible results and insights into the non-verbal cross-cultural production of, and connection between, non-verbal actions and national/cultural identity.

7. References

- Bannister, M. (2005). Kiwi blokes: Recontextualising white New Zealand masculinities in a global setting. *Genders OnLine*, 42.
- Bartley, A. (2010). 1.5 generation Asian migrants and intergenerational transnationalism: Thoughts and challenges from New Zealand. *National Identities*, 12(4), 381-395. <https://doi.org/10.1080/14608944.2010.520976>
- Birdwhistell, R.L. (1970). *Kinesics and Context*. University of Pennsylvania Press.
- Conradson, D., & McKay, D. (2007). Translocal subjectivities: mobility, connection, emotion. *Mobilities*, 2(2), 167-174.
- Duchenne, G. B., (1990). *The Mechanism of Human Facial Expression*. Cambridge University Press.
- Efron, D. (1972). *Gesture, race and culture*. The Hague: Mouton.
- Ekman, P. (1972). *Universals and cultural differences in facial expressions of emotion*. In J. K. Cole (Ed.). Nebraska Symposium on Motivation (vol. 19). University of Nebraska Press.
- Ekman, P. (1992). Are there basic emotions? *Psychological Review*, 99(3), 550-553. <https://doi.org/10.1037/0033-295X.99.3.550>
- Ekman, P., & Friesen, W. V. (1969). The repertoire of nonverbal behavior: Categories, origins, usage, and coding. *Nonverbal communication, interaction, and gesture*, 57-106.
- Ekman, P., & Friesen, W. V. (1975). *Unmasking the face*. Spectrum-Prentice Hall.
- Ekman, P., Friesen, W. V., & Ellsworth, P. (1972). *Emotion in the human face: guidelines for research and an integration of findings*. Pergamon Press.

- Ekman, P., Davidson, R.J., & Friesen, W.V. (1990). The Duchenne Smile: Emotional Expression and Brain Physiology II. *Journal of Personality and Social Psychology*. 58(2): 342-353.
- Ekman, P. & Friesen, W. (1969). The repertoire of nonverbal behavior: Categories, origins, usage and coding. *Semiotica*, 11, 49-98.
- Fishman, J. A. (1999). *Handbook of language and ethnic identity*. Oxford University Press.
- Friedman, L. (1977). *On the other hand: New perspectives on American Sign Language*. Academic Press.
- Goffman, E. (1959). *The Presentation of Self in Everyday Life*. Doubleday.
- Goffman, E. (1963). *Behavior in Public Places*. Free Press of Glencoe.
- Goffman, E. (1974). *Frame Analysis*. Harper & Row.
- Goldin-Meadow, S., & Saltzman, J. (2000). The cultural bounds of maternal accommodation: How Chinese and American mothers communicate with deaf and hearing children. *Psychological Science*, 11(4), 307-314.
- Gruber, J., King, J., Hay, J., & Johnston. L. (2016). The hands, head, and brow: A sociolinguistic study of Māori gesture. *Gesture* 15(1): 1-36.
- Gumperz, J. J. (1982). *Discourse Strategies*. Cambridge University Press.
- Hall, E. T. (1959). *The Silent Language*. Fawcett Publications.
- Izard, C. E. (1969). The emotions and emotion constructs in personality and culture research. *Handbook of modern personality theory*, 496-510.
- Jakobson, R. (1972). Motor signs for 'yes' and 'no'. *Language in Society*, 91-96.

- Joseph, J., & Falcous, M. (2019). Negotiating the 'Kiwi bloke': accessing mosaic masculinities through Afro-Brazilian sport in New Zealand/Aotearoa. *Qualitative Research in Sport, Exercise and Health*, 11(2), 258-273.
- Jovanović, V. Ž. (2012). Emblematic Elements of Non-verbal Communication with English and Serbian Speakers, Collection of papers. *Language, Literature, Communication*, 452-473.
- Juul, K. (2014). Performing belonging, Celebrating Invisibility?: The role of festivities among migrants of Serbian origin in Denmark and in Serbia. *Nordic Journal of Migration Research*, 4(4), 184-191. <https://doi.org/10.2478/njmr-2014-0030>
- Katz, J. H. (2003). *White awareness: Handbook for anti-racism training*. University of Oklahoma Press.
- Kendon, A. (1997). Gesture. *Annual review of Anthropology*, 26(1), 109-128.
- Kita, S. (2009). Cross-cultural variation of speech-accompanying gesture: A review. *Language and Cognitive Processes*, 24(2), 145-167.
<http://dx.doi.org/10.1080/01690960802586188>
- Kress, G., & Van Leeuwen, T. (2001). *Multimodal Discourse: The Modes and Media of Contemporary Communication*. Edward Arnold.
- Kusters, A. (2017). Gesture-based customer interactions: deaf and hearing Mumbaikars' multimodal and metrolingual practices. *International Journal of Multilingualism*, 14(3), 283-302.
- LaBarre, W. (1947). The cultural basis of emotions and gestures. *Journal of Personality*. 16(1): 49-68.
- LaFrance, M., & Mayo, C. (1978). Cultural aspects of nonverbal communication. *International Journal of Intercultural Relations*, 2(1), 71-89.

- Leach, E. (1972). The influence of cultural context on non-verbal communication in man. *Non-verbal communication*, 315-349.
- Lee, H. (2011). Rethinking transnationalism through the second generation. *The Australian Journal of Anthropology*, 22(3), 295-313.
- Lin, S., Maher, J., & Sheer, V. C. (2019). Through the eyes of older Chinese immigrants: Identity, belonging and home in a foreign land. *China Media Research*, 15(2), 39-49.
- Makboon, B. (2015). *Spiritual vegetarianism: identity in everyday life of Thai non-traditional religious cult members*. PhD thesis, Auckland University of Technology.
- Maynard, S. (1990). Conversation management in contrast: Listener response in Japanese and American English. *Journal of Pragmatics*, 14(3), 397- 412.
- Maynard, S. K. (1993). *Kaiwabunseki [conversation analysis]*. Kuroshio.
- McNeill, G. H. (1998). *Hand and Mind: What Gestures Reveal About Thought*. University of Chicago Press.
- McNeill, D., & Duncan, S. D. (2000). Growth points in thinking-for-speaking. *Language and gesture*, 141-161.
- Mitrovic, M., & Vujovic, M. (2017). Intercultural Non-Verbal Communication from the Perspective of Serbian Communications Students. *Balkan Social Science Review*, 10(10), 115-131.
- Morris, D., Collett, P., Marsh, P., & O'Shaughnessy, M. (1979). *Gestures: Their origins and distribution*. Stein and Day.
- Müller, C. (1998). *Redebegleitende Gesten: Kulturegeschichte, Theorie, Sprachvergleich*. Berlin Verlag.

- Norris, S. (2004). *Analyzing multimodal interaction: a methodological framework*. Routledge.
- Norris, S. (2007). The micropolitics of personal national and ethnicity identity. *Discourse and Society* 18(5), 653-674.
- Norris, S. (2011). *Identity in (inter) action: Introducing multimodal (inter) action analysis* (Vol. 4). Walter de Gruyter.
- Norris, S. (2019). *Systematically working with multimodal data: Research methods in multimodal discourse analysis*. John Wiley & Sons.
- Norris, S. (2020a). Multimodal Interaction Analysis. In: C.A. Chapelle (Ed.). *The Encyclopedia of Applied Linguistics*. Wiley. <https://doi-org.ezproxy.aut.ac.nz/10.1002/9781405198431.wbeal0814.pub2>
- Norris, S. (2020b). *Multimodal Theory and Methodology: For the Analysis of (Inter)action and Identify*. Routledge.
- Norris, S. & Makboon, B. (2015). Objects, Frozen actions, and Identity: A multimodal (Inter)action analysis. *Multimodal Communication* 4(1), 43-59.
- Scollon, R. (1997). Handbills, tissues and condoms: A site of engagement for the construction of identity in public discourse. *Journal of Sociolinguistics* 1(1), 39-61.
- Scollon, R. (1998). *Mediated Discourse as Social Interaction*. Longman.
- Scollon, R. (2001). *Mediated Discourse: The Nexus of Practice*. Routledge.
- Statistics New Zealand. (2018). *Census Data*. <https://www.stats.govt.nz/tools/2018-census-ethnic-group-summaries>
- Tannen, D. (1984). *Conversational Style: Analyzing Talk Among Friends*. Ablex.
- Van Leeuwen, T. (1999). *Speech, Music, Sound*. Macmillan Press.

Zhu, H., & Li, W. (2016). Transnational experience, aspiration and family language policy. *Journal of Multilingual & Multicultural Development*, 37, 655-666.
doi:10.1080/01434632.2015. 1127928

Appendix A: Ethics approval

AUTEC Secretariat

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T: +64 9 921 9999 ext. 8316
E: ethics@aut.ac.nz
www.aut.ac.nz/researchethics

The logo for Auckland University of Technology (AUT) is displayed in white text on a black rectangular background.

16 March 2017

Sigrid Norris
Faculty of Design and Creative Technologies

Dear Sigrid

Re Ethics Application: **17/46 Examining multimodality in team work**

Thank you for providing evidence as requested, which satisfies the points raised by the Auckland University of Technology Ethics Committee (AUTEC).

Your ethics application has been approved for three years until 15 March 2020.

As part of the ethics approval process, you are required to submit the following to AUTEC:

- A brief annual progress report using form EA2, which is available online through <http://www.aut.ac.nz/researchethics>. When necessary this form may also be used to request an extension of the approval at least one month prior to its expiry on 15 March 2020;
- A brief report on the status of the project using form EA3, which is available online through <http://www.aut.ac.nz/researchethics>. This report is to be submitted either when the approval expires on 15 March 2020 or on completion of the project.

It is a condition of approval that AUTEC is notified of any adverse events or if the research does not commence. AUTEC approval needs to be sought for any alteration to the research, including any alteration of or addition to any documents that are provided to participants. You are responsible for ensuring that research undertaken under this approval occurs within the parameters outlined in the approved application.

AUTEC grants ethical approval only. If you require management approval from an institution or organisation for your research, then you will need to obtain this.

To enable us to provide you with efficient service, please use the application number and study title in all correspondence with us. If you have any enquiries about this application, or anything else, please do contact us at ethics@aut.ac.nz.

All the very best with your research,

A handwritten signature in black ink, appearing to read 'K O'Connor', is placed above the printed name.

Kate O'Connor
Executive Secretary
Auckland University of Technology Ethics Committee

Cc: jessepirini@gmail.com; Ivana Rajic

Appendix B: Consent Form



Consent and Release Form

Project title: **Examining multimodality in team work**

Project Supervisor: **Sigrid Norris**

Researchers: **Jesse Pirini and Ivana Rajic**

- ☐ I have read and understood the information provided about this research project in the Information Sheet dated 09/02/2017.
- ☐ I have had an opportunity to ask questions and to have them answered.
- ☐ I understand that taking part in this study is voluntary (my choice) and that I may withdraw from the study at any time without being disadvantaged in any way.
- ☐ I understand that if I withdraw from the study then I will be offered the choice between having any data that is identifiable as belonging to me removed or allowing it to continue to be used. However, once the findings have been produced, removal of my data may not be possible.
- ☐ I permit the researchers to use the videos that are part of this project and/or any drawings from them and any other reproductions or adaptations from them, either complete or in part, alone or in conjunction with any wording and/or drawings solely and exclusively for (a) the researcher's academic work; and (b) educational exhibition and examination purposes and related design works;
- ☐ I understand that the data will be used for academic purposes only and will not be published in any form outside of this project without my written permission.
- ☐ I understand that any copyright material created by the photographic/video sessions is deemed to be owned by the researcher/artist and that I do not own copyright of any of the photographs/videos.
- ☐ I agree to take part in this research.
- ☐ I wish to receive a copy of the report from the research (please tick one): Yes ☐ No ☐

Statistical information

Date of birth:

First language:

Language/s spoken at home:

City and country where you grew up:

Time living in NZ (years/months):

Participant's signature:

Participant's name:

Participant's Contact Details (if appropriate):

.....

.....

.....

Date: ____/____/____

*Approved by the Auckland University of Technology Ethics Committee on **type the date on which the final approval was granted** AUTEK Reference number **type the AUTEK reference number***

Note: The Participant should retain a copy of this form.

Appendix C: Information sheet

06 April 2017

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Appendix A

Participant Information Sheet

Primary Participants



Date Information Sheet Produced:

09/02/2017

Project Title

Examining Multimodality in Team Work

An Invitation

My name is Sigrid Norris. I am a Professor at AUT University in Auckland in the School of Communication. Along with some other researchers we are doing a project to find out how people interact and solve problems over video conferencing.

In order to do this, we are asking people to participate in a one-hour research session. Participants will carry out a range of different tasks with a partner or in groups of four, while using videoconferencing. We will give you a simple problem-solving task and ask you to find a solution.

Following completion of the tasks we will conduct a 5 to 10-minute interview with you and your partner/s regarding the tasks.

Your participation in this project would be voluntary and you may withdraw up until the completion of data collection. Please read the details below and feel free to ask me any questions.

What is the purpose of this research?

The purpose of this study is to understand the impact of video conferencing on social interaction and teamwork.

This is an academic research project. The findings from this research will be published in academic journals, books and theses. They will also be presented to international conferences. The data collected here may also later be used for further study.

Myself, and no more than seven other academic researchers will analyse your data. The researchers on this project are Sigrid Norris, Jesse Pirini and Ivana Rajic (*Others to be added as they join - JP*). If you know any of these researchers, we can exclude them from analysing your data if you tell us to. As other researchers join the project, we will contact you with their names if they intend to analyse your data. At that time, you may indicate if you do not wish them to analyse your data.

How was I identified and why am I being invited to participate in this research?

We have no particular criteria for participants, other than you are interested in participating. So, we are recruiting from our personal networks and via posters and flyers. You have been identified by one of the researchers or someone in their network as someone who might like to consider participating, or you might have responded to a flyer or poster.

Students of Sigrid Norris and Jesse Pirini do not qualify to participate in this study.

What will happen in this research?

I would like to invite you to contribute one hour of your time to carry out two tasks with another person or in groups of four. These tasks involve working in a team via video conferencing to come to a solution for a simple problem.

What opportunity do I have to consider this invitation?

You have a week (7 days) to consider this invitation, you may contact me to accept or ask any questions during that time. After a week, I will call you to see if you are interested.

How do I agree to participate in this research?

If you are willing to take part in this project all you need to do is fill out the attached consent form indicating that you are providing informed consent. Then we can work out a suitable time to carry out the research session.

Will I receive feedback on the results of this research?

Once the completion of the final draft of any publications is made, you can receive a copy of them if you like.

What do I do if I have concerns about this research?

Any concerns regarding the nature of this project should be notified in the first instance to the project supervisor (see the contact details below).

Concerns regarding the conduct of the research should be notified to the Executive Secretary of AUTECH, Kate O'Connor, ethics@aut.ac.nz, 921 9999 ext 6038.

Whom do I contact for further information about this research?**Researcher Contact Details:**

Ivana Rajic
Ph: 022 6769 771
Email: rajicka@gmail.com

Jesse Pirini
Ph: 027 2259 774
Email: jessepirini@gmail.com

Project Supervisor Contact Details:

Professor Sigrid Norris (Auckland University of Technology)
ph: 09 921 9999 ext. 6262
email: sigrid.norris@aut.ac.nz
Approved by the Auckland University of Technology Ethics Committee on

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