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Social Interaction

Video-Based Studies of Human Sociality

From appearings to disengagements: Openings and closings in video-mediated tele-homecare encounters

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Abstract

In this article, we examine openings and closings in video-mediated tele-homecare for older adults in Finland, using multimodal conversation analysis. We demonstrate how participants organise these boundaries sequentially and multimodally, how visual appearing and disengaging are of key importance in these processes, and how openings and closings mirror each other in this institutional setting. In the openings, the participants orient to sequential structures that resemble those from mundane telephone conversations and Skype interactions: summons-answer, appearing-noticing, greeting-greeting and the "how are you" question-answer. The participants treat appearing as an accountable part of the opening, and delay advancing to the "how are you" question until a proper visual appearing is produced. Closings are managed through stepwise transition practices that result in a terminal exchange and both participants disengaging from the encounter: the clients, by walking away; the nurses, by closing down the connection. In addition to managing visuality, time-oriented talk is present in both openings and closings. A comparison of our results with findings from other technology-mediated encounters emphasises the importance of visuality in managing closings, and shows that tele-homecare is an interesting hybrid of institutionality and informality.

Keywords: tele-homecare, openings, closings, video-mediated interaction,

multimodal conversation analysis

1. Introduction

Openings and closings serve as the boundaries for institutional encounters. They set the conditions for the first topic and later make explicit the moment when the issues to be dealt with are sufficiently resolved. In face-to-face interaction, these boundaries are achieved through the close coordination of verbal and bodily practices, and the use of material surroundings and artefacts (Broth & Mondada, 2013, 2019; Harjunpää, Mondada, & Svinhufvud, 2018; Hartford & Bardovi-Harlig, 1992; Heath & Luff, 1992a; Heritage & Robinson, 2006 Robinson, 1998; 2001; Ruusuvuori, 2001). These transition practices gain meaning through their relationship to the overall structure of the institutional encounter (Drew & Heritage, 1992; Robinson & Stivers, 2001). Even though participants engage in different practices to achieve openings and closings, there are similarities between the boundaries in terms of their structural characteristics (Femø Nielsen, 2013; Schegloff & Sacks, 1973, 297). In business meetings, for example, participants engage in similar kinds of practices in reverse order when opening and closing encounters (Femø Nielsen, 2013). Encounters that take place in technologically mediated settings challenge the multimodal organisation of openings and closings (see, e.g. Arminen, Licoppe, & Spagnolli, 2016; Heath & Luff, 1992b; Luff et al., 2003; Luff, Heath, Yamashita, Kuzuoka, & Jirotka, 2016). In this article, we examine openings and closings in video-mediated (henceforth, VM) tele-homecare for older adults in Finland. We show how participants organise these boundaries sequentially and multimodally, how visual appearing and disengaging are of key importance in these processes, and how the openings and closings mirror each other in this institutional setting.

In institutional telephone interaction, the participants simplify the sequential organisation of both openings and closings. Openings in institutional telephone interaction are kept short, and consist of the call-taker answering and identifying the service, and then the caller acknowledging this and proceeding to the central issue (e.g. Kevoe-Feldman, 2015; Leydon, Ekberg, & Drew, 2013; Whalen & Zimmerman, 1987; Zimmerman, 1992). In comparison, mundane telephone calls through three adjacency pair structures: summons-answer, operate identification-recognition and the "how are you" guestion-answer (henceforth, HAY) (Schegloff, 1968, 1986). Closings in institutional telephone interaction are often managed through a caller's expression of gratitude or acceptance of a service, which leads to the terminal exchange (e.g. Kevoe-Feldman, 2015; Raymond & Zimmerman, 2016; Woods, Drew, & Leydon, 2015), while in mundane telephone interactions, the closings are initiated by a closing section, starting with potential pre-closing tokens and ending with a terminal exchange (Schegloff & Sacks, 1973). One recurrent practice in both institutional (see, e.g. Ekberg & Lecouteur, 2014) and mundane telephone interactions (Schegloff & Sacks, 1973, 315) is the forming of future arrangements as a closing implicative action. While institutional telephone encounters may involve the professional's use of artefacts and technologies (Kevoe-Feldman, 2015; Zimmerman, 1992), openings and closings are achieved solely through talk, as the interaction lacks visual cues.

In the openings of VM encounters, orientation to visibility is central to determining whether the participants can proceed (e.g. Licoppe, 2017; Pappas & Seale, 2009). Analogical to the aural summons-answer adjacency pair, participants in mundane Skype interactions organise openings around the visual appearingnoticing adjacency pair (Licoppe, 2017). Appearings are differentiated from merely "becoming visible on the screen", and participants can refrain from advancing to greetings until the talking heads configuration, which shows the interactants' face and upper body, is established (Licoppe & Morel, 2012). Furthermore, participants often topicalise seeing and visibility in the openings (Duuly & Tudini, 2016; Licoppe & Dumoulin, 2010; Pappas & Seale, 2009; Stommel, van Goor & Stommel, 2019). Additionally, participants coordinate their verbal and bodily conduct to establish a shared orientation and readiness to proceed to the first topic of these encounters. For example, in tele-consultations, doctors' HAY questions both establish attentiveness to the patient and serve as an implicit means of checking the audio connection (Stommel et al., 2019). While openings in VM settings have gained substantial attention, to the best of our knowledge there are few published EM/CA research findings on closings in VM settings.

This study focuses on tele-homecare for older adults, which has so far remained understudied (for a review on EM/CA research on VM interaction, see Mlynár, González-Martínez, & Lalanne, 2018). Homecare encounters are institutionally managed visits, in which a home helper (in Finland, this is often a practical nurse) assists an older adult with everyday tasks and minor medical issues. While activity transitions have been studied in face-to-face homecare settings (Lindström & Heinemann, 2009), the openings and closings of the encounters have not been studied. Sävenstedt, Zingmark, Hydén and Brulin (2015) studied older adults as participants in VM interaction, emphasising the importance of gaze-direction practices and social talk in building joint attention between older adults living in residential care and nurses, using a CA-inspired method. So far, however, no rigorous EM/CA analysis of activity transitions in VM interactions involving older adults has been performed.

In this study, we examine how practical nurses (for the sake of convenience, we will henceforth refer to the professionals in our data as *nurses*) and homecare clients organise openings and closings in VM tele-homecare encounters. We will show how the participants organise openings around four adjacency pairs, and closings through stepwise transition, how these transitions are multimodal achievements in which visual appearing and disengaging are of key importance,

and how the management of institutional and technological relevancies produces these boundaries as a mirroring each other (Femø Nielsen, 2013).

2. Data and method

The data for this study comprises video recordings from 14 tele-homecare encounters, collected from a Finnish homecare unit undergoing a service pilot in which one of the daily visits was replaced by a video call. Twelve encounters were recorded in the nurses' office, and two were recorded in the clients' homes. Each encounter was recorded from one side of the interaction. The transcripts are in Finnish with English translations, accompanied by line drawings. Word-byword translations are provided as supplementary material. We used the Jeffersonian (Jefferson, 2004) transcription system, accompanied by Mondadastyle (2001) annotation for visual conduct. The data collection and analysis were part of the Healthcare Workers in the Eye of the Digital Turbulence research project, conducted in Tampere University and the Finnish Institute of Occupational Health, with funding from the Finnish Work Environment Fund. All clients lived alone and had some level of mild memory deficit. During the recruitment process, special attention was given to ensuring that the clients' rights were protected. An ethical statement for the study was granted by the ethical committee for the Tampere region (document number 49/2017).

Four older adults living at home used a tablet with a simple program that allowed them to answer calls. Before the encounter, the tablet was in screen-saving mode. When the nurse initiated the call, the screen changed to indicate the incoming call and display the caller identification. The client answered by tapping the caller identification icon. None of the clients used the phonebook feature to initiate calls themselves. (Figure 1a) After the client had tapped the icon, the screen changed, showing the caller's information, as well as a loading bar to indicate the establishment of the connection (1b). Subsequently, the screen turned to encounter mode, in which the client's own image is visible in the "vanity screen" at the bottom-right corner (1c). While the clients were able to close the connection if they wished, this never occurred in our data.



Figure 1b

Figure 1a

Figure 1c

Figure 1. Clients' user interface

The three nurses who participated in the study used a computer in their shared office. In order to initiate the call, the nurses first had to select the client from the contact list showing all the clients, and then click an icon to confirm that they wanted to proceed (Figure 2a). This would open a dialogue box with contact information, which the nurse then clicked to proceed (2b). The screen would then change, showing the contact information, and the nurse would click once more to initiate the call (2c). Between the nurses' initiation and the clients' answer, the nurses would see their own image both in full screen and on the "vanity screen" on the bottom-right corner (2d). When the clients answered, the clients' image would replace the nurses' image on the screen (2e).

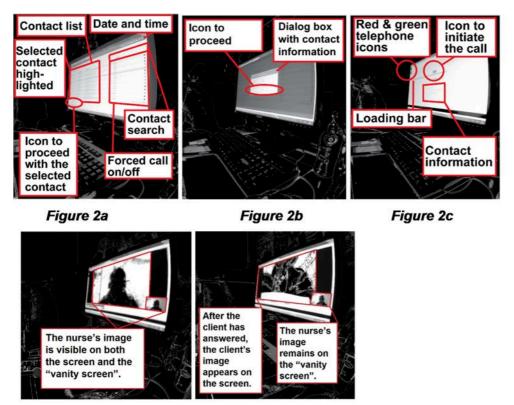


Figure 2d Figure 2e Figure 2. Nurses' user interface

We employed multimodal Conversation Analysis (Mondada, 2019; Sidnell & Stivers, 2013) as our analytic approach. After a preliminary analysis of all the topic and activity transitions, we chose the openings and closings as the focus for this article, since they are fundamental for managing the encounter. We then analysed how the participants achieved the transition from opening to the institutionally relevant HAY question, and from the last topic to closing the encounter, as well as how the management of institutional and technological relevancies produces these boundaries as mirroring each other.

Before the analysis, we wish to highlight two aspects about the data. First, when the participants look at their own screens, they appear to look slightly sideways at the other interactant (Arminen et al., 2016; De Fornel, 1994), and when they look directly at the web-camera, thus appearing as gazing directly at the distant participant, they cannot reciprocally see the distant participant's gaze on the screen. Therefore, mutual gaze, in the sense of gazing directly into each others' eyes, as occurs in face-to-face encounters, is impossible. However, analogous to gaze contact in face-to-face encounters, the co-interactant's gazing at, as opposed to away from, the screen is treated as relevant when managing transitions (c.f. Satar, 2013). Second, as each encounter was recorded from only one location, we cannot analyse how the distant participant receives the turns at talk or bodily actions. What is produced at one end of the encounter differs from what is perceived at the other (see, e.g. Luff et al., 2016; Ruhleder & Jordan, 2001). Thus, both participants may interact on the basis of a slightly different understanding of the ongoing action. Therefore, to assume that recordings from only one location would capture both members' perspective would be to overlook the fundamental ways in which technical mediation becomes sequentially relevant. We will concentrate on features that are analysable with data from only one perspective, and reflect on this limitation in the discussion section.

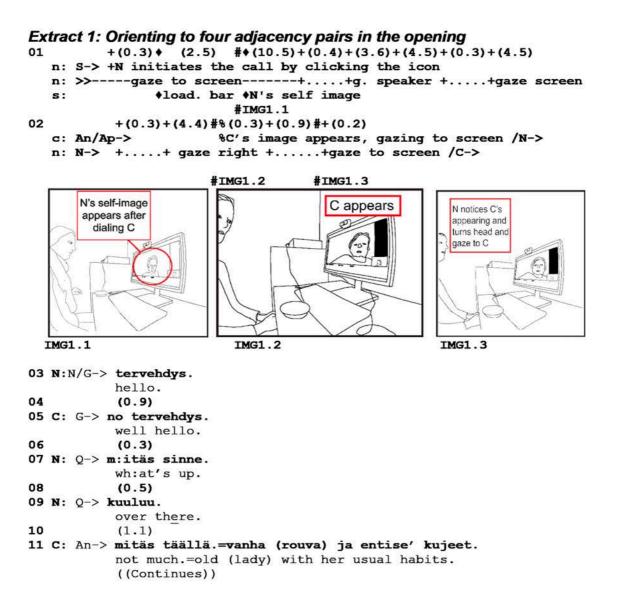
3. Analysis

3.1 Openings in tele-homecare

In their simplest form, openings in our data are organised around a recurring sequential structure consisting of four subsequent adjacency pairs:

- (1) summons(S)–answer(An)
- (2) appearing(Ap)-noticing(N)
- (3) greeting(G)–greeting(G) and
- (4) HAY-question(Q)-answer(An).

This is exemplified in Extract 1. The nurse (N) has selected the client (C) from the phone book and initiated the call.



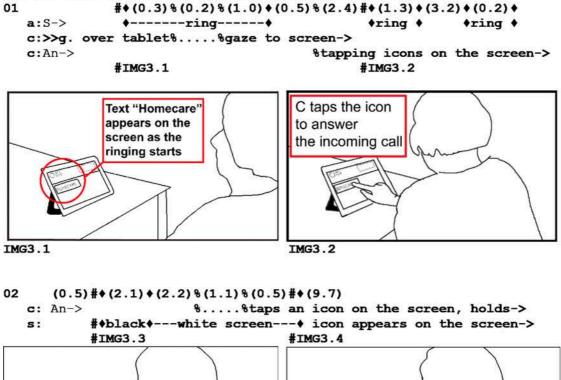
The first adjacency pair, summons-answer, occurs in lines 1-2, when the nurse initiates the call (line 1) and the client appears on the screen (line 2, IMG 1.2, see also Licoppe, 2017). As the video mediation offers the nurse visual access to the client, there is no need for the client to produce a verbal answer, and the participants achieve this part of the opening without talk. In addition to answering the summons, the client's visual appearance also serves as the first-pair part for an appearing-noticing adjacency pair. The nurse produces noticing both bodily and verbally, by turning her head and gaze to the screen (line 2, IMG1.3) and then producing a verbal greeting (line 3). The appearing-noticing adjacency pair is thus achieved both verbally and through bodily conduct (by becoming visible on the screen and observably turning to the screen). The nurse's verbal turn also functions as the first pair part for a greeting-greeting adjacency pair (lines 3 and 5). By producing the noticing via both visual and verbal conduct, the nurse can manage the limitations that the technical mediation brings to intersubjectivity. While she cannot know for certain whether the client has noticed her, or if the client can recognise her gaze shift as noticing, verbalisation makes the noticing salient. Furthermore, the first greeting projects a reciprocal greeting from the client, thus allowing for a testing of the connection – if the client does not produce the greeting, the nurse can imply that the client has not heard her (c.f. Stommel et al., 2019). When the client produces the forecasted greeting, the participants establish that they can both hear each other and proceed to the HAY question (lines 7 and 9), followed by an answer by the client (line 11).

As is observable in Extract 1 (and in Licoppe, 2017), the participants manage the openings not only through talk, but also through visual conduct, monitoring each other's visibility and adjusting their conduct to that visibility. Compared to telephone conversations, in which the summons–answer adjacency pair is achieved via a combination of technology use (calling and picking up the phone) and talk (verbal answer), in our data both the summons (the nurse calling the client) and the answer (answering the call and appearing on the screen) are achieved without talk. Furthermore, the appearing–noticing adjacency pair is based on the visual appearance of the summoned participant (the client, line 1, IMG 1.2), followed by both participants establishing gaze towards the screen (line 2, IMG1.3), and the nurse verbally noticing this visual appearing when initiating the greetings–adjacency pair (line 3).

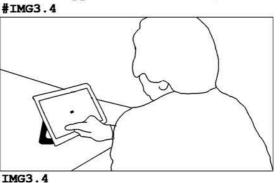
Treating visibility as essential in managing the opening is also observable when either of the participants fails to appear properly in the opening. This is exemplified in Extract 2, which shows the client answering the call in her home. The nurse has called the client twice, and the client has tried to answer. However, for some reason, the call has not connected. The client is sitting in front of the tablet in her living room. In the transcript, the letter *a* refers to the non-human sounds from the tablet, while *s* indicates screen changes.

Extract 2: Postponing the HAY question until visual appearing is achieved

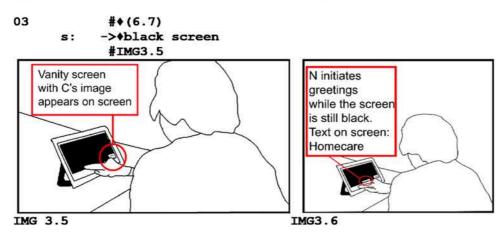
((The client is sitting in front of the tablet. The tablet has rung twice before, the last time, 71 seconds ago. The client has answered, but for some reason, the connection has not started.))





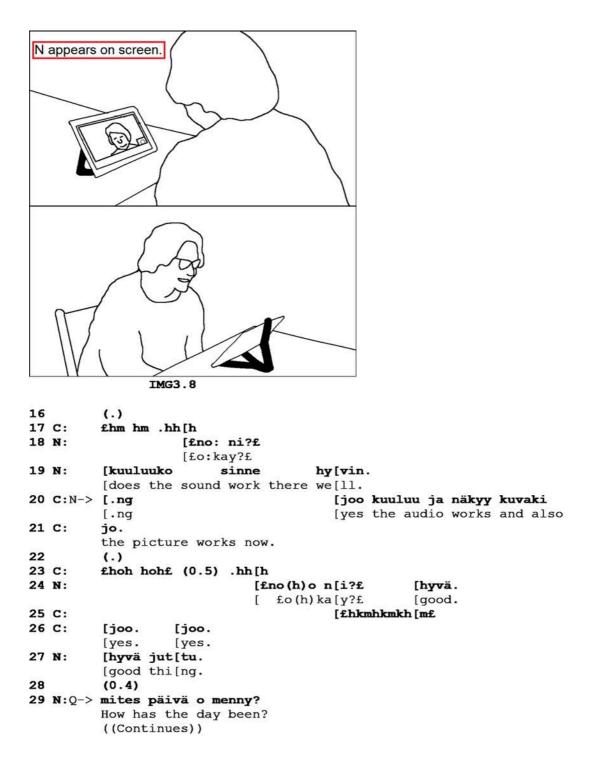


IMG3.3



04 N:G-> #♦iltaa Ann[a. good evening Ann[a. s: ♦text on screen appears #IMG3.6

```
05 C:G->
                               [no ehtoota %ehtoota.#=
                               [well good evening.=
                                         ->%withdraws hand->
  c:
                                                    #IMG3.7
                           C withdraws hand
                           after the audio
                           connection
                           has started
     IMG3.7
06 C:
            =on%ko ongelmia?
            =is there some trouble?
             ->%both hands on lap->
  c:
07 N:
         (no:=o[n.)
         (well:=yes.)
08 C:
               [fhehe[hahhahf.
                                                  [fhehhehf]
09 N:
                           vähän
                                     tuntuu
                                               ole[van >ei näy,< (.)
                     [no
                     [well it feels a bit like th[at >the picture,<(.)
 (.)
10 N:N-> kuvaa
                 >(jaa no) mutta
                                     nyt<
                                            näkyy
                                                       [kuva ja ääniki
         doesn't show >(well oh) but now< the picture [shows and sound
11 C:
                                                       [jaaha?
                                                       [well then?
12 N:
         [kuu(luu.)
         [(works) as well.
13 C:
         [no nii?
          okay?
14
         (.)
15 C:
         £(h)jo#+o.£
          £(h)yes.£
  s: Ap->
               $Screenchange: N appears
               #IMG3.8
```



During the third attempt to answer the call, the technical difficulties remain. Only after the client has tapped different icons on the screen for several seconds (lines 1–2) does the screen finally change to encounter mode (line 3, IMG3.5). However, at this stage, the nurse's visual appearance is still inadequate. The nurse's image remains black, and only the client's vanity screen is visible. Almost seven seconds after establishing this configuration, the nurse launches the first pair part of greetings (line 4), and the client answers in a last item overlap (line 5). So far, the nurse's visual appearance has been inadequate, and the participants have only established an aural connection. Compared to Extract 1, it

is noteworthy that the dual function of visual appearing is not present from the client's perspective. For the client, the call-taker, the nurse's appearing serves solely as the first-pair part in an appearing–noticing adjacency pair, and the first greeting solely as the first pair part in reciprocal greetings. Thus, these actions, visually appearing on the screen and verbal greeting, appear differently from various perspectives of VM interaction (c.f. Ruhleder & Jordan, 2001).

The client treats the lack of the nurse's visual appearance as relevant by, asking a polar question about the VM technology immediately after the greetings (line 6), thereby starting an insert expansion in the basic structure of the opening. The question focuses on problems in general, embedded with an assumption that some problems do exist. This turn design enables the nurse to handle both the recurrent difficulties in establishing the connection and the inappropriate visual appearing, i.e. the black screen. The nurse produces a type-confirming answer (line 7) and, partly overlapping with the client's laughter, elaborates the answer by first topicalising the inappropriate visual appearing of the client (the picture doesn't show / ei näy kuvaa), and then cutting off her turn and explicating the change in the client's visual appearance with now the picture shows (nyt näkyy kuvaki, lines 9–10, 12). Furthermore, in her response, the nurse treats visibility as shared by presuming that the problem has been resolved. In her turn (lines 9-10, 12), the nurse states the changes in what she can see without adding modifiers that would emphasise the difference in perspectives (such as now your *picture shows*). Nor does she explicate the client's perspective by, for example, asking whether the client can see her. The client receives the nurse's turn (lines 11, 13, 15), and during the last turn, the nurse's image finally appears on the client's screen (line 15, IMG3.8).

The nurse asks the client about the quality of the audio (line 19), which further shows her treating the problems with the visual connection as being resolved. However, in her answer (lines 20-21), the client retopicalises visibility by adding *and also the picture works now (ja näkyy kuvaki jo*) after answering the nurse's question about the audio connection. In her response, the client makes salient the dissimilarity of their visual perspectives. As the nurse visually appears only after she has explicated that she sees the client (lines10–13), it is apparent to the client that there is some level of incongruity regarding what they can visually perceive. By retopicalising visibility at this point, and explicating that she can see the nurse, the client confirms that a mutual visual appearance has been achieved, and that the participants can now proceed with the encounter. It is only after the participants have established that both have adequately visually appeared that they move on to the HAY question (line 29).

In the tele-homecare setting, the HAY question serves the institutional purpose of preparing for the transition to the actual business at hand. This is apparent from two features: the nurses routinely insert the question after the greetings (c.f. Stommel et al., 2019), and can repeat the question if the client does not answer it in a proper way. This is exemplified in Extract 3. The nurse and the client have opened the connection and briefly talked about the connection problems.

```
Extract 3: Treating the HAY answer as inadequate
01 C:
          fno [nii.f]
                             [fhehf]
          £ o[kay?£]
                            [fhehf]
02 N:Q1->
              [.hhh ] mitäs [
                                Ar]ja.
             .hhh what's up [
                                Ar]ja.
03 C:
         .hhh [mitä-]
         .hhh [not-
                     1
04 N:Q1->
              [mite' ] päivä o'=men[ny.
                                           1
              [how's ] the day=be[en.
                                           ]
05 C:
                                    [(no)
                                           ] menny oikei hyvi,=
                                    [(well)] it has been really good,=
         ja mulla on tää, ö- ö- tää- m-=m- (.) mikä tää nyt on? (0.2)
06
         and I have this, eh-eh-this-m-=m-(.) what is it again? (0.2)
07
         .hhh (0.6) hhhh täällä, ↓hmh (.) sa[n:=ny?
                                                           1
         .hhh (0.6) hhhh here, ihmh (.) wh:a[t's that=now?]
08 N:
                                                       vähä] video-
                                             Г
                                             ſ
                                                       some] video-
09
         (0.6)
10 C:
         joo? (.) videoimassa.
         yeah? (.) video recording.
         ((6 lines omitted, N and C talk about the recording.))
17 C:
         †juu sa[atii-
                            1
         tyeah we[ got it-
                            1
18 N:02->
                 [(no) mite'] sun päivä on menny.=
                 [(well) how] has your day been.=
19 C:An->=.hhh toikei hyvi.
         =.hhh treally good.
20
         (0.9) ((Continues))
```

After the client has closed the talk about the connection problems (line 1), the nurse initiates the HAY adjacency pair (lines 2 and 4). The client answers, in a co-produced turn, that the researcher is visiting to record the encounter (lines 3–17). While the client treats this as a noteworthy event, the nurse doesn't take an answer to her previous question to have been produced, as it does not provide information about the client's wellbeing, as a recounting of daily activities would. The nurse therefore repeats the question, focusing on the client's day in particular, with the addition *your day* (line 18). Thus, as in medical consultations, where the HAY question is used for gathering information on the reason for the visit (Heritage & Robinson, 2006), here it appears to be gathering knowledge on the wellbeing of the client, rather than merely functioning as a vehicle for small talk, other attentiveness or testing the connection (c.f. Stommel et al., 2019).

Extracts 1–3 show the participants' orientations to the four adjacency pair structures (summons-answer, appearing-noticing, greeting-greeting, HAY-question-answer) when managing the openings. Parts of this structure are achieved without talk, and other parts with the co-use of talk, bodily conduct and

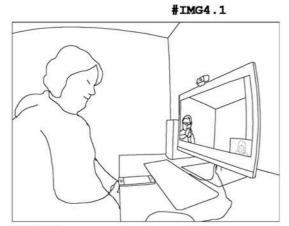
technology. This basic structure can be expanded when the participants need to manage technical problems to produce a proper visual appearing (Extract 2) or when the clients answer the HAY question in ways that are not institutionally relevant (Extract 3). Thus, the openings are organised around the close coordination of verbal and bodily practices and the monitoring of another participant's visibility.

3.3 Closings in tele-homecare

The closings in our data are organised in a stepwise manner (c.f. Schegloff & Sacks, 1973), often primed with the nurses' positive evaluations (E), talk about future arrangements (F), either about the prospects of the care or merely the nurse mentioning that they will leave the client to continue their evening, preclosing tokens (P) and the client's service appreciation (A), resulting in the terminal exchange (T) accompanied by mutual visual disengagement (D). Extract 4 exemplifies this stepwise progression towards the closing. Before the extract, the nurse has asked whether the client has already taken her medicine. The client has answered that she will take it after she has eaten, and the nurse has received this answer with *okay (no nii)*.

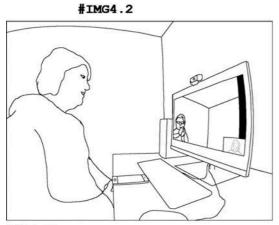
Extract 4: Stepwise progression to closing 01 #+(0.2)+(0.9)

n: >>g. to phone+....+gaze to screen /C->
c: >>gaze to screen/N->



IMG4.1

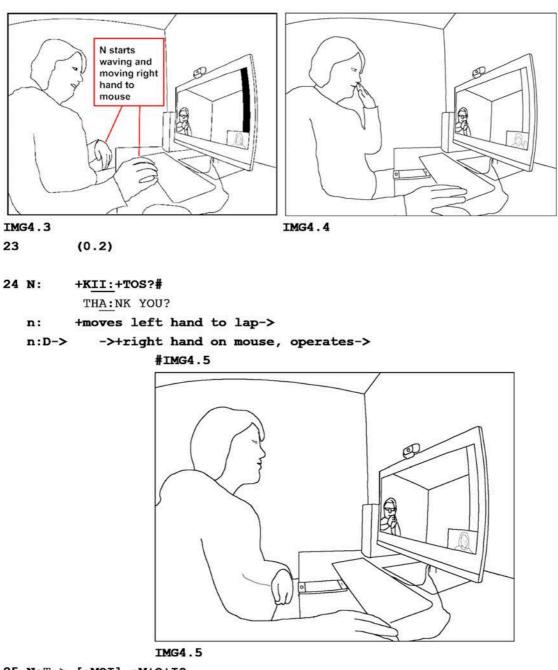
02 N:F-> #sää [voit si]itä=sitte ruveta syömään kohta iltapalaa ja you [can]=then start eating soon that supper and 03 C: [(-)] ((possibly kyllä /yes))



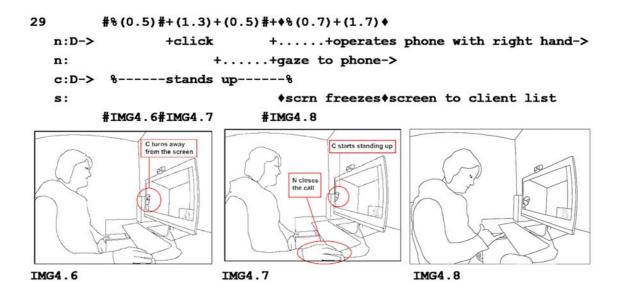
IMG4.2

```
(--) and I'll go watch the telly as well.
c: ->%..%gaze to screen /N->
n: +nods->
```

08 N: no: ni.+ o:kay. ->+nod finished n: 09 (.) 10 N:E-> kuulostaa hyvältä. sounds good. (0.9) 11 12 C:P-> joo: joo. ye:s yes. 13 (.) 14 C:P-> kyllä. right. 15 N:P-> selvä. okay. 16 (0.2) 17 N:F-> ei kuule muuta ku mukavaa illajatkoo ja taas so%itellaa.% nothing else then than have a nice evening and let's call again. %--nods--% c: 18 (0.7) % (0.2) %nods twice->18.22 c: 19 C:A-> kiitos, thank you, +(0.2) 20 +nods-> n: 21 N:E-> hy+v[ä.+] goo[d.] ->+nod finished n: +moves right hand to mouse-> n: 22 C:A-> [s]a%moi ja #+kii- (.) + soitosta.# + [t]oo and #tha- (.) for calling.# ->%nods finished c: +....+waves with left hand+ n: #IMG4.3 #IMG4.4



25 N:T-> [↑MOI] ↑M+O+I? [↑BYE] ↑BYE? n: ->+left hand on lap-> n: +moves cursor-> 26 C: [(-)] 27 %(0.3)%(0.2) c: %nods %

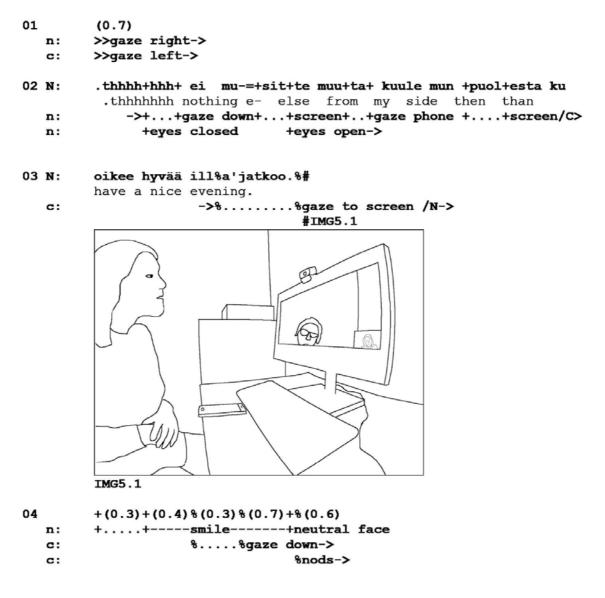


Throughout the extract, the nurse and the client approach the closing in a stepwise fashion, through various verbal practices. First, the participants produce future-oriented talk, both when the nurse directs the client to take their medicine and the client aligns (lines 2-7), and then when the nurse wishes the client a pleasant evening and says they will be in contact in the future (line 17). Second, the client produces a service appreciation in response to the nurse's futureoriented turn (lines 19 and 22). Third, the nurse produces an evaluation (line 21) as a response to the client's service appreciation. Fourth, the participants produce various pre-closing tokens when closing the central task of the call (lines 12–15). These practices, especially the reciprocal thanks in this case, ensure that neither of the participants has any unmentioned mentionables before closing the encounter. The participants proceed to the terminal exchange (lines 25 and 28), which is accompanied by their disengagement - the client by physically withdrawing from the screen (lines 27-29, IMG4.6-4.8) and the nurse by closing the connection, thus digitally disengaging from the encounter (line 29, IMG4.3 and IMG4.7).

The ways in which the participants treat visibility as meaningful for organising the closings are apparent in how they closely coordinate their disengagement with the terminal exchange. During the evaluation and pre-closing tokens, the nurse projects the closing by waving and operating the computer to close the encounter (lines 21–22, IMG 4.3-4.4), and the client withdraws from the screen, in coordination with the terminal exchange (lines 27–29, IMG4.6). While the nurse could close the connection immediately following the terminal exchange, she postpones the closing for 0.5 seconds and waits for the client to start disengaging from the encounter by turning and standing up (line 29, IMG4.7). The client's withdrawal from the screen is therefore treated as meaningful in organising the closing.

Extract 5 further demonstrates the importance of the client's disengagement, the interplay between verbal and bodily conduct and the sequential organisation of the closings. Before the extract, the nurse has explained that another nurse will visit later in the evening, and the client has received this information with a token *yes, okay (joo selevä)*. During this exchange, the client's gaze has wandered around her apartment, and she has appeared to look at the screen only briefly during the service announcement.

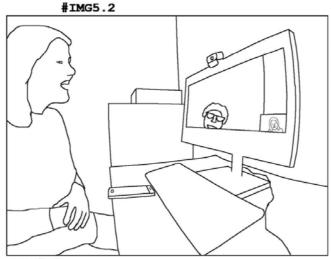
Extract 5: Orienting to disengaging as sequentially relevant next action in the closing sequence



- 05 C: ja työn%iloo. and enjoy your work. c: ->%nod finished, gaze to screen /N->
- 06

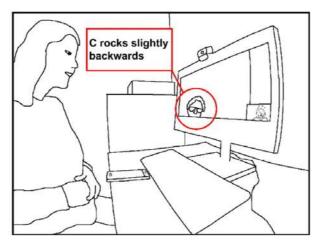
%(0.3)+# +smiling-≻

n: +smiling c: %smiling->6.9

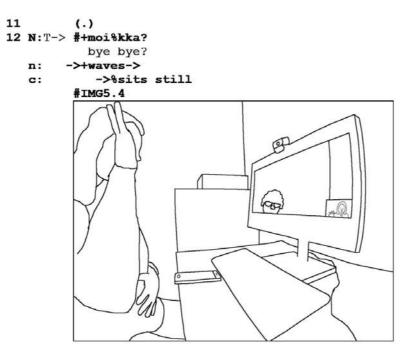


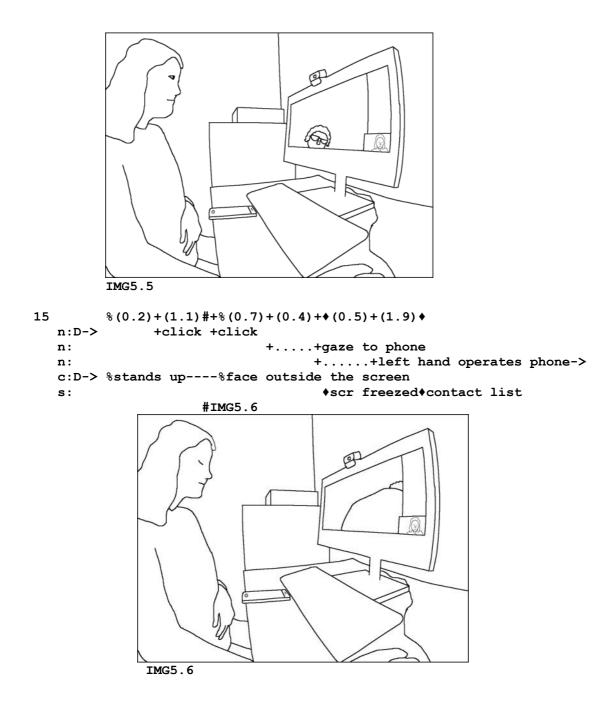
IMG5.2

- 07 N:F-> [kiitos. nähd]ää' +huomenna. [thank you. see] you tomorrow. n: +straightens posture-> 08 C: [£heh heh heh£] 09 (0.8)%(0.6)% (0.7) % c: ->%stops smiling c: potential D->%rock bwd% ((potential disappearing)) 10 N:E-> #+hy%vä.
 - good.
 n: +lifts right hand->
 c: %rocks fwd->
 - #IMG5.3



IMG5.3





The participants manage the closing through the coordination of verbal and bodily practices in various ways. First, the nurse keeps her gaze fixed on the screen throughout the sequence, and the client gazes at the screen, thus appearing to be gazing at the nurse, in a sequential location in which the participants negotiate that no unmentioned mentionables will arise (lines 1–6). First, the nurse wishes the client a pleasant evening (lines 2–3). During the nurse's turn, the client turns her gaze to the screen, thus appearing to be gazing at the nurse, and during the following pause responds bodily by nodding (line 4), and then verbally by saying *and enjoy your work (ja työniloo*), enabling her to produce reciprocal wishes (line 5), thus confirming that there are no unmentioned issues left to be dealt with. As the client's gaze reaches the screen, the nurse starts to smile (line 4), and the participants share a moment of mutual smiling (line 6, IMG5.2).

Second, the nurse does not treat the client's lack of response to her farewell (line 7) as accountable, and proceeds towards the closing based on the sequential features of the turns and the bodily practices of the client. The nurse's thanks and farewell (line 7) are followed by a 2.5-second pause, during which the client rocks backwards slightly (line 9), after which the nurse produces an evaluation (line 10). While the nurse's farewell makes a response a relevant next action, two features explain why the verbal response from the client is not mandated. First, from the perspective of the sequential organisation of closings, this farewell is a somewhat superfluous addition: the participants have already established the prospects of the care and that neither of them has any unmentioned mentionables. Second, given that the client's rocking (lines 9-10, IMG5.3) takes place in a sequential environment in which the terminal exchange and disengagement are relevant actions in the near future, the nurse might interpret it as preparation for standing. Thus, while not responding verbally, the client is seen to align bodily with proceeding towards the closing (see Licoppe, 2017, 382 on "noticing whatever may count as an appearance" in openings). Thus, proceeding to the closing is possible even without the client's response to the nurse's turn, as the client's bodily action does not appear as misaligning with the closing (c.f. Stommel et al., 2019, 286–287) – rather, she appears to be expecting and preparing for the closing.

Third, the participants achieve closing not only through talk, but also through reciprocally visually disengaging from the encounter. The nurse first produces a bodily farewell, waving (lines 10-12, IMG5.4), which is accompanied with a firstpair part of the terminal exchange (line 12). As the verbalisation ends, the nurse starts to move her hand towards the mouse and then operates it (line 13, IMG5.5), hence observably preparing for the closing. This, however, stays unavailable to the client due to the limited visual access afforded by the webcam (c.f. Luff et al., 2003). After 1.3 seconds, the client produces the second-pair part of the terminal exchange (line 14), which is immediately accompanied by her disengaging from the screen (line 15). The nurse carefully adjusts her digital disengagement (closing the connection) to the client's physical disengagement. While the nurse has started preparing the closing immediately after the first-pair part of the terminal exchange (line 13), it is only after the client starts withdrawing from the screen that the nurse closes the connection (line 15). The second click, which closes the connection, only appears as the client's face and gaze observably abandon the encounter (line 15, IMG5.6). While the client does not operate the connection, the nurse does not treat her merely as a passive disconnectee, but instead treats her disengaging as an integral part of organising the closing. Thus, mutual disengagement consists of the close coordination of verbal and bodily practices, which make the closing intersubjectively understandable.

4. Discussion

The participants achieved the openings and closings in VM tele-homecare through coordinating their verbal and bodily conduct with the visibility of each other in recurrent sequential structures. Openings consist of four subsequent adjacency pairs: summons-answer, appearing-noticing, greeting-greeting and HAY-question-answer. This structure resembles mundane telephone conversation openings (Schegloff, 1968, 1986), rather than the prompt advancing to the central issue of many institutional telephone encounters (see, e.g. Leydon et al., 2013; Whalen & Zimmerman, 1987; Zimmerman, 1992). The visual appearing, and the noticing of that appearing, is a central part of the opening sequence. Furthermore, the participants treat each other's visual appearance as an accountable part of the openings and proceed only after a proper visual appearing has been produced (Extracts 1 and 2). This is in line with findings from mundane Skype conversations (Licoppe, 2017; Licoppe & Morel, 2012). However, contrary to Licoppe's (2017) findings, the participants simplified the openings, and it is always the nurse who greets first. This may relate to the adjacency pair organisation of the openings and the participant's orientation to the institutionality of the interaction. From the client's perspective, both the summons-answer and appearing-noticing adjacency pairs are initiated by the nurse, thus encouraging the client to give the floor to the nurse in order to initiate the next action (see Femø Nielsen, 2013). Compared to tele-consultations, in which participants routinely proceed to the reason for the encounter after the opening and the HAY sequence is used to test the connection and display otherattentiveness (Stommel et al., 2019), in tele-homecare, a HAY question is routinely inserted after the greetings. When the answer does not provide carerelevant information, the nurses repeat the guestion. Thus, the HAY guestion serves to establish not only that both participants can see and hear each other, but also to gain institutionally relevant information.

Closings in our data are approached step by step with evaluations, futureoriented talk, service appreciations and pre-closing tokens, resulting in terminal exchange and mutual disengagement. The stepwise transition towards closings resembles mundane telephone calls (Schegloff & Sacks, 1973), compared to a straightforward closing through service appreciation (e.g. Kevoe-Feldman, 2015). Our analysis adds to the earlier body of EM/CA research on VM interaction by showing how visuality is of the utmost importance in the organisation of closings, not just openings. In closings, the participants' visual disengagement, either by withdrawing from the screen or closing the connection, is expected. Furthermore, the participants coordinate disengagements with ongoing talk, especially with terminal exchanges, and with each other's visual disengagements (see Extracts 4 and 5). One could say that there are both verbal and visual terminal exchanges in VM tele-homecare. This resembles mobile interactions, in which walking away is closely coordinated with talk and functions as both forecasting and doing closing (Broth & Mondada 2013, 2019). Similarly to openings in which "recognizing and noticing whatever may count as an appearance ... becomes a powerful resource in the process of achieving, collaboratively, a proper joint interactional frame" (Licoppe, 2017, 382), in closings the participants may interpret whatever appears in the sequential location where disengagement is relevant as doing preparing for disengagement (see Extract 5). Thus, both the openings and closings of VM tele-homecare encounters are multimodal collaborative achievements in which the participants adjust their actions to each other's conduct and the technological affordances of the medium (Hutchby, 2001).

Some practices of openings serve double functions. As mentioned, the client's appearing has two functions. In order to work through the limitations that technical mediation brings to intersubjectivity, the nurse's greeting serves as both a verbal noticing and the first greeting. These double functions relate to the different projects they achieve as parts of adjacency pairs. A summons-answer achieves the opening of the overall connection; appearing-noticing, the visual connection; and greeting-greeting, the aural connection. Managing these projects demands the use of different semiotic fields (Goodwin, 2000). In the opening phase of VM encounters, the participants need to establish both the social relationship between the interactants and the medium for the encounter, which produces these distinct yet connected interactional projects. Managing both the medium and the social relationship seems to result in different interactional projects and multiple temporalities in interaction (Mondada, 2018, 104). It can be said that "responsive actions can be produced [not only] during initiating actions" (Mondada, 2018, 104), but also as initiating actions in managing these different projects.

The ways of achieving openings and closings mirror each other in two ways. First. the encounter progresses from reciprocal adjacency pairs of visual appearings and greetings to the terminal exchange adjacency pair and disengagement. While adjacency pairs are a central way of organising both openings and closings (see also Schegloff & Sacks, 1973, 297), the possibility of a missing second-pair part in closings (see Extract 5) emphasises how these practices acquire importance as parts of broader sequences of action and interactional projects. Second-pair parts are mandatory when opening the connection, as they ensure that the other interactant can hear, but in closings, their absence can be tolerated if the participants have otherwise established that they can proceed towards the closing. Second, openings and closings mirror each other with regard to time. The opening ends with talk about the client's life in the past, while the closings start with talk about the client's life in the future. The fact that not everything from the client's past counts as institutionally relevant, combined with the recurrence of talk about the prospects of the care, seems to suggest that a certain kind of time-oriented talk is a fundamental aspect of managing these boundaries in the context of tele-homecare. Through time-oriented talk, the participants enable the flow of care-relevant information from the client to the nurse and vice versa, thereby building the relationship between the nurse and the client as continuing and personal. Through these practices, the participants achieve and manage the sequential organisation of the boundaries of the encounter, and establish and dissolve a shared digital space for a certain kind of encounter.

This study has at least two clear limitations. First, due to the small dataset, some findings, especially regarding the potential disengagement, remain somewhat speculative. However, the central objective of institutional CA is to describe what practices are possible in a particular context, and the generalisability stems from comparisons between the settings (Peräkylä, 2004). We have hopefully demonstrated this. Second, we were only able to attain data from one location of each encounter. Thus, we could not study the non-mutual interactional realities (Ruhleder & Jordan, 2001) that technological mediation produces, nor the ways in which the distant participant received the turns. However, as pointed out by Olbertz-Siitonen (2015, 211–212), the participants do not have access to both ecologies, and adopting this "God's-eye view" might distance the analyst from the members' perspective. In our analysis, we have concentrated on phenomena that are available for the participants in their respective local ecologies. An analysis of openings and closings in VM settings with larger data sets and data from two perspectives (or more in multi-party settings) would offer important elaborations to the findings presented here.

In this article, we have described the sequential and multimodal features of openings and closings in Finnish tele-homecare encounters. These boundaries are managed through practices familiar from both mundane and institutional settings, and thus tele-homecare appears as an interesting hybrid of institutionality and informality. The centrality of visual appearings and disengagements suggests that, when available, visuality is an important element in the management of interaction and the relationship between the interactants in technologically mediated interaction. As it is envisioned that interpersonal contacts will be increasingly digitalised in the future, understanding how technology becomes sequentially consequential (Arminen et al., 2016) in the management of institutional tasks, the flow of interaction and intersubjectivity remain key questions for EM/CA.

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