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INVOLVEMENT PRACTICES IN PERSUASIVE SERVICE ENCOUNTERS: THE CASE OF HOME SECURITY ADVICE

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Research paper

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Abstract

Advisors providing non-commercial service encounters are neither trained nor explicitly incentivized to persuade the advisee. However, a whole range of encounters may benefit from enhanced persuasiveness to prevent the advisee from taking counterproductive decisions. Persuasion literature from the field of social psychology points to the persuadee's involvement as a central factor of persuasive effect. Nevertheless, little is known on how persuader addresses persuadee's involvement and how those efforts can be supported by means of modern technology, especially in the non-commercial service encounters. Based on a detailed analysis of experimental service encounters and supported by the in situ studies of real advisory sessions, this study identifies a set of involvement practices, i.e., conversational practices that advisors engage in when trying to improve the advisee's involvement and illustrates how these practices can be afforded with modern multimedia technology. Thereby, the manuscript proposes to bridge the notions of involvement from the conversation studies and from the persuasion literature. By pointing to the influence of IT on persuasive behaviour in service encounters, it brings together the concept of persuasive technology and service support as a subfield of IS. The manuscript offers novel perspective for framing the conversations and the practices in service encounters.

Keywords: non-commercial service encounters, advisory services, persuasion, involvement, home security, conversational practices

1 Introduction

Non-commercial service encounters, including doctor-patient, teacher-student, or home security advisory encounters, often benefit from enhanced persuasiveness (Dubov, 2015; Swindell et al., 2010). Advisors, who provide such encounters, are not explicitly trained to persuade the advisees, as opposite to sales personnel in commercial service encounters, who receive dedicated training on selling. Nevertheless, advisors in non-commercial encounters intuitively engage a range of practices, which enhance the persuasive character of the encounter – they engage in persuasive practices (Dolata et al., 2016): they address advisee's emotions, discuss reasons for the participation in the advisory service, or suggest next steps to follow upon the advisory encounter. Among others, they often address advisee's *involvement*, i.e., the advisee's engagement in the ongoing interaction as a product of her[1] perception on the personal relevance of the issue under consideration and her potential impact thereon (Petty and Cacioppo, 1986a). Involvement has been traditionally presented as one of the central antecedents of persuasion effect in direct communication (Johnson and Eagly, 1989; Petty and Cacioppo, 1986a, 1986b). This study aims at the identification of involvement-related persuasive practices while following a multi-method approach using observations of real, in-situ interaction and video-recording of realistic home security advisory encounters. Therein, a policeman visits people at their homes to provide advice on how to secure their property against burglary. Since only a fraction of the advice provided in such

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[1] Throughout the manuscript, we refer to the advisor as a male (he, his) and to the advisee as a female (she, her). This shall guarantee for an equal distribution of both gender forms in the paper, while securing the clarity and simplicity of the text.

encounters gets implemented by the advisees, enhancing the persuasiveness of the encounters has an essential, practical relevance. Recently, the policemen observed in the current study have been equipped with modern tablet PCs running a dedicated application that gives them easy access to the multimedia features of the tablet for use during their encounters (e.g., capturing pictures, playing videos, showing relevant illustrations, on-the-go note taking). The current study reports on the routines advisors employ to maintain the advisee's involvement and discusses how those routines alter due to the introduction of the IT.

Various life situations make people seek external help to understand and frame their standpoint and to specify an adequate course of action. They look for external advice and engage in advisory service encounters, i.e., voluntary meetings with service providers, to receive guidance and recommendation on how to approach a particular issue. From this perspective, an advisory service encounter can be seen as a collaborative, problem-solving process between the service provider and an advisee (Schwabe et al., 2016). This definition embraces such situations as doctor-patient or teacher-student encounters, nutrition counselling, and home security advice. Often, a service encounter is just the beginning of a complex decision process: thereafter, the advisee decides on whether to tackle the issue under consideration (e.g., to fight or not to fight the obesity) or which solution to choose (e.g., exercise therapy or diet). Obviously, not all applicable solutions lead to the same effects – in fact, advisees were shown to take counterproductive decisions given their declared goals (Klein and Stefanek, 2007) and to discount the received advice (Tzioti, 2010; Yaniv and Kleinberger, 2000). To prevent an advisee from contravening her long-term goals, it may be in her best interest to *persuade* her to take a specific course of action (Dubov, 2015; Swindell et al., 2010). Effective persuasion can prevent the advisee from taking decisions based on detrimental biases and heuristics, which value quick wins over long-term enhancement and prejudice over new information (Chaiken, 1987). Consequently, we claim that most advisory encounters embrace a persuasive as well as problem-solving elements – we refer to them as persuasive service encounters.

Persuasion during a service encounter is neither an easy nor an uncontroversial topic. There exist commercial service encounters conducted by sales personnel who is incentivized and trained to persuade the client (e.g., investment advice at a bank) – persuasion and sales-orientation dominates over the actual problem-solving in such encounters, which has already been criticized (Geiger and Kelly, 2014). However, a whole range of encounters are conducted by domain experts acting as advisors, such as doctors or policemen. They are neither prepared nor externally incentivized to convince the advisee to anything. Additionally, as official representatives, they are expected to be unbiased in their opinion and to act accordingly (Dubov, 2015). In fact, if the advisee develops the feeling of being in a sales encounter, the risk of falling back to the ineffective heuristics may rise (Swindell et al., 2010). Consequently, persuasive practices in this category of non-commercial persuasive service encounters will have a different nature than in the traditional sales encounters. Consequently, understanding how advisors ensure that the advisee engages in the examination of the issue and the potential solution may open opportunities for design efforts oriented at the persuasiveness in non-commercial encounters.

Involvement has been long identified as one of the central antecedents of persuasiveness in direct communication (Johnson and Eagly, 1989). At the same time, it is an important variable describing interpersonal interaction (Coker and Burgoon, 1987) – perceived involvement of one interaction partner rules the behaviour of the others (Burgoon et al., 1999). In a persuasive service encounter, an optimal level of involvement allows the advisee to systematically process the issue- and consequence-related merits of the recommendation (Chaiken, 1987; Petty and Cacioppo, 1986a). If the advisee is not involved, she may fall back to heuristics, biases, and prejudice (Chaiken, 1987). This paper builds upon the claim, that the advisors, even if not trained to persuade, identify and react to the missing involvement in the advisees. Thereby, they moderate the persuasion success and the advisee's subsequent actions (Johnson and Eagly, 1989; Petty and Cacioppo, 1986b). Nevertheless, we miss a comprehensive description of practices employed by the advisors to address advisee's involvement. Consequently, we ask:

What involvement practices do advisors engage in when using an IT system equipped with multimedia?

Answering this question shall help the designers and engineers in the field of service encounters: they will benefit from insights into the essence of persuasion in IT-supported encounters and will learn how various features of the IT, including the multimedia, can be employed to engineer the interaction between the advisor and the advisee to become particularly involving. Also, the study contributes to the traditional, qualitative-behavioural IS research on adoption and appropriation of technology, while showing how specific media gets appropriated by practitioners in their daily work environment and presents a case explicating how functionalities and features of IT can be employed to induce specific practices. In a broader sense, this research aims at building a bridge from the areas of persuasive technology and persuasion support to the IS community while pointing to novel research opportunities.

2 Related Work

2.1 Involvement in Persuasion

Persuasion has been extensively studied in the field of psychology leading to several models. Information-processing models characterize persuasion from the perspective of persuadee (Chaiken, 1980, 1987; Petty and Cacioppo, 1986a): If the persuadee processes the true merits of the information, while considering consequences of a decision, systematic information processing (Chaiken, 1980) and elaboration (Petty and Cacioppo, 1986a) take place. If the persuadee relies on prejudice, peripheral cues, and simplistic biases, heuristic information processing dominates (Chaiken, 1980, 1987). Principally, systematic and heuristic processing are better or worse depending on situation (Chaiken, 1980). In a service encounter where a domain expert meets a layperson, the advisee will benefit from focused consideration of the arguments and information provided by the advisor. Consequently, this study claims that persuasion resulting from elaboration (Petty and Cacioppo, 1986a) better fits the model of a service encounter.

Three dimensions delineate the systematic and heuristic processing, they are: the persuadee's ability to produce a response (i.e., take a decision or make a statement in the conversation), the opportunity to respond, and the persuadee's motivation to respond (Chaiken, 1987; Petty and Cacioppo, 1986a). *Ability* describes persuadee's knowledge about the issue under consideration and her ability to produce an informed response (Batra and Ray, 1986). *Opportunity to respond* defines whether the persuadee is anyhow limited to make a response (Batra and Ray, 1986). Finally, *motivation* describes the extent to which a persuadee has the feeling that the issues under consideration are important (Batra and Ray, 1986; Chaiken, 1987; Petty and Cacioppo, 1986a). If the ability, opportunity, and motivation to respond are in suboptimal states, the persuadee will follow heuristic path and will not provide an elaborated response. While the above models originate from the 1980-ies, they are considered an accurate description of the persuasion effort and are cited, among others, in IS literature (Oinas-Kukkonen and Harjumaa, 2009). However, as the models evolve, new criticism emerges (Petty, 2013; Petty et al., 1993).

If the persuadee exhibits involvement with the issue, her motivation increases and she is more likely to engage in systematic processing of the information. In the context of persuasion, involvement has been defined as a person's engagement in the ongoing interaction as a product of her perception on the personal relevance of the issue under consideration and her potential impact thereon (Petty and Cacioppo, 1986a). The involvement rises if (1) the persuadee has the feeling that the issue under consideration has particular, personal importance to her (personal involvement) and if (2) the persuadee sees her response as impactful to her, her environment and other parties (response involvement) (Chaiken, 1987). While psychology studies involvement in information processing, they hardly ever approach this as a communicational resource. One can rhetorically ask: how do persuaders address the involvement of the persuadees? What practices are successful in this regard and how they can be supported by means of IT?

2.2 Involvement in Communication

Whereas psychology discovered involvement as an antecedent of systematic processing in persuasion, communication science has studied involvement for decades and puts in positive relation with cooperation and convention sharing (Gumperz, 1982), positive emotions (Warner et al., 1987), and credibility (Burgoon et al., 2001). Furthermore, receivers (listeners or readers) who exhibit strong involvement, achieve greater understanding than passive observers, such as eavesdroppers or over-hearers, despite access to the same information (Krauss and Fussell, 1990). This resembles the positive nature of involvement as presented in persuasion models (Chaiken, 1980): the more involved the listener, the higher the chance of systematic processing of received information.

Communication sciences define *involvement*, generally, as a sense of presence, of "here and now" in an interaction (Burgoon et al., 2000). However, existing concepts stress various aspects of involvement and frame it in a whole variety of ways: as a personality trait (Cegala, 1981), as an attribute of a situation (Burgoon et al., 2000, 2002), or as an individual or a group characteristics (Burgoon et al., 2000, 2002; Oertel, 2013). This paper chooses a conceptualization which overlaps with the notion of involvement in persuasion: it treats *involvement* as a situation-dependent characteristic of the advisee, which may vary during an interaction and reflects her current mental stance towards the interaction. Changes of involvement get (un)intentionally expressed through a variety of verbal and non-verbal micro-behaviours: proximity, gesticulation, pitch and intonation, eye gaze, wording, pacifying behaviours, intention cues, etc. (Burgoon et al., 2000; Mehrabian, 1971). While the communication studies describe the nature and effect of involvement in conversation, they pay little attention to involvement as a situational, context-dependent characteristic. Questions arise: how do tools used by one person influence the involvement of the other? how does involvement occur in an interaction between two humans and a computer?

2.3 Home Security Advisory Encounters and Technology

Communities fear burglary and demand effective protection of their properties. Public authorities have interest in making their municipalities more secure and establish units for burglary prevention: Policemen, equipped with the necessary technical know-how on home security, visit homeowners at their properties and inform them on methods to improve the home security through specific upgrades on windows, doors, lightning, or alarms. The service has existed for years, but the authorities see modern IT as opportunity to improve the quality of the service through, e.g., personalized and persistent documentation for the homeowners or through use of multimedia to support information transfer (Comes and Schwabe, 2016a; Giesbrecht et al., 2015; Schwabe et al., 2016). Since the authorities estimate that only 20-30% of the recommendation gets utilized by the homeowners (Schwabe et al., 2016), IT has been also considered a way to improve the persuasiveness of the encounters: the advisors are not trained to persuade the homeowners, but focus on status-quo's assessment and information provision. A recent study shows how IT may enable and enhance a set of some general persuasive practices in face-to-face interaction (Dolata et al., 2016). Still, we know little about hot to improve persuasion with IT.

Going beyond the case of home security advisory encounters, the literature provides a more comprehensive picture on the role of IT in persuasion. In particular, the community gathered around the concept of *persuasive technology* (PT) has worked extensively on designing tools to persuade people, i.e., to change their behaviour or attitude (Fogg, 2009). Their design studies focus, primarily, on direct influence between a computer and a human, as well as computer-mediated and computer-moderated influence between humans distributed across space and time (Stibe, 2015). Despite recent tries to leverage those results to support persuasion in conversation between humans (Dolata et al., 2016), PT still lacks commitment and consideration of the case where two people collaborate in a face-to-face setting. Also studies on persuasion which originate in the community of IS (Kaptein, 2011; Lehto et al., 2012; Yu et al., 2011) or computer-supported cooperative work - CSCW (Baumer et al., 2012; Fritz et al., 2014) omit the topic of persuasion in the most natural, conversational setting. This study addresses

a central feature of the natural conversation, the involvement, which essentially influences the effect of persuasion.

3 Methodology

The current study forms a specific part of a research program established as a collaboration between police authorities in parts of Germany and Switzerland and the authors' institute. The goal of the research program was to improve the quality and effectiveness of the home security advisory service: the idea was to develop and roll-out a dedicated prototype system to support the home security advisors during their routine advisory sessions. By now, we can report on the successful completion of the project: 16 different advisors used the prototype for at least 4 months up to 2 years in the pilot phase – it got applied in overall 1250 advisory sessions. A working system which uses the design and interaction concept of the prototype will be shortly rolled out to the whole of Switzerland and parts of Germany. During the project, we were shadowing the advisors before the development and during the pilot phase, we conducted multiple workshops, and collected their feedback in formal and informal settings. We, also, ran several evaluation tests to record realistic advisory sessions and collect opinions from the advisors and potential advisees. Overall, the data backing up the current study has multimodal character and was collected in various settings including direct observation, feedback rounds, workshops, etc.

This paper focuses on the basic level of the activities conducted by the advisors – the conversational practices and resources. This goes in line with the practice-turn in HCI research (Kuutti and Bannon, 2014). Practice-oriented research discusses how, why, and where practices get applied (Nicolini, 2012). We focus on practices applied on the conversational level, in the talk-in-interaction, but see conversation as a multimodal happening involving use of mediational resources. Consequently, to respect the multimodal and object-dependent nature of conversation (Nicolini, 2012; Wooffitt, 2005), we choose a method based on mediated discourse analysis (LeVine and Scollon, 2004; Scollon, 2001) that proposes to use single actions as units of analysis for the study media and technology use in human-to-human interaction. According to Scollon (2001), practices define the milieu of actions and describe types of actions, that singular actions share in and intersect with. Humans directly and routinely engage in practices but do not attend to them in an analytical, conscious manner (Mortensen, 2012; Nicolini, 2012). Consequently, while studying conversation as a set of singular actions, we aim at identifying routines advisors intuitively engage in to maintain the involvement of the advisees.

To study the ongoing interaction, we focus on two data sets originating from the research collaboration with the authorities mentioned above. The first data set comprises 24 videos of advisory encounters collected during evaluation experiments (Mettler et al., 2014) – this is the main source of knowledge. The second data set comprises notes and recordings collected during observation of 24 real home security advisory sessions conducted by 9 different home security advisors – this is the supporting source of knowledge for the current study. While the main data was used to elicit and describe the practices, observations from the real encounters confirms that the practices exist and no other involvement practices were found in the field.

3.1 SmartProtector

We call the IT system developed during the research program with authorities in Switzerland and Germany SmartProtector. We designed the tool in a user-centred process under consideration of the requirements from the authorities, advisors, and the advisees. For us, researchers, it was important to keep the high rating of the service and the advisee's satisfaction comparable to the previous, pen-and-paper setting. Therefore, we wanted to enable for as natural conversations as possible. At the same time, SmartProtector shall support the advisor at persuading the client through provision of additional, externalized information and multimedia and by supporting individual problem and solution finding. Comes and Schwabe (2016b) describe the design rationale and the detail of the resulting system.
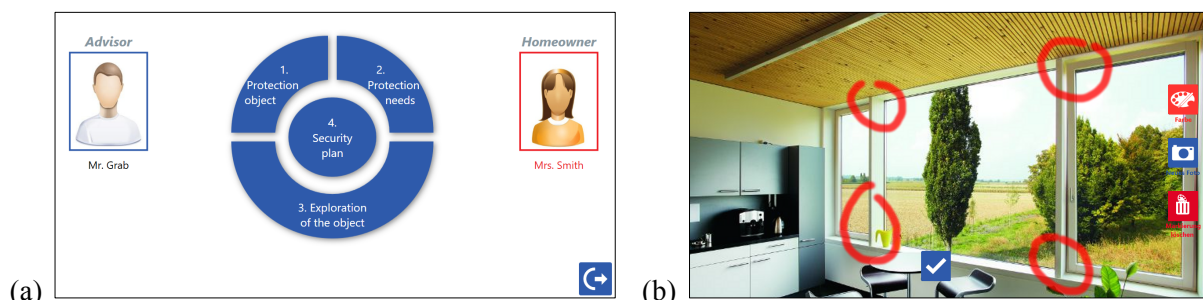
Figure 1.   Exemplary screens from the SmartProtector: process (a), marking of weak points (b).

As presented in Figure 1a, the process implemented in the tool follows the conventional practice – it consists of four steps, but there are no constraints that enforce the order of steps. Figure 1b exemplifies how multimedia features were used to individualize the process: with the SmartProtector, the advisor can take a picture and seamlessly mark important points thereon. The tool gives access to brochures and print-outs advisors know. The software was deployed on a 10" MS Windows tablet and put in a solid case with a bend such that it was easy to carry around the device and to hold it while gesticulating.

3.2   Main Data – Collection and Analysis

As a main data we use video recordings of advisory sessions collected during the evaluation of SmartProtector, i.e., it is experimental data generated and collected in a simulated environment. This data was then used in accordance with secondary data analysis rules for design research (Dolata et al., 2015) to study behavioural conduct of the service encounter participants as described below. During the experiment, we put much effort in making the setting as realistic as possible: The advisors were policemen who provide home security advisory services as part of their normal work. The advisees were a convenience sample acquired through different channels such as social media – their age, status, and gender varied; they received inexpensive gifts (approx. 10 USD), beverages and meals on the day of their participation. The experimental advisory sessions took place at a pre-fabricated houses exposition: the houses presented in there reflect the housing standards in central Europe. We run a realistic, consistent scenario during the experiment: The advisees were asked to put oneself in a position of a homebuyer who visits two different houses with a home security advisor to receive advice on how to make their future property more secure. No advisor and no advisee visited the same property twice. Overall, 12 advisees and 6 advisors participated in the experiment. Each advisee participated in two advisory sessions provided by the same advisor: one supported with the SmartProtector and one conventional. Each advisor advised two different advisees. We alternated the conditions order to prevent any order effects. The experiment took place in March 2015, in Germany, on three consecutive days.

The turn-by-turn analysis of verbal and non-verbal conduct relies on selected episodes including a sequence where the advisee first gets visibly dis-involved and then involved again. To identify such episodes, all recordings in their full length were annotated with involvement-information: A trained helper, who did not participate in the experiment, used video annotation software ELAN (Brugman and Russel, 2004) to encode information on the advisee's involvement based on the non-verbal cues such as: pacifying and discomfort behaviours, intention cues, and proxemic behaviours (Navarro and Karlins, 2008). A sample containing 20% of the so encoded data was discussed with two supervising researchers in a workshop to guarantee for consistency of coding and internal validity. Importantly, involvement coding by an observer is well accepted in the involvement research (Coker and Burgoon, 1987). In the current study, the procedure deals solely as a selection criterion for the relevant episodes: namely, the ones where a significant, visible drop in involvement (signalized by a set of minimum four negative behaviours and cues on the advisee's side) and a visible rise in involvement occurred within a five-minute period. Based on these heuristics, we identified 72 potentially interesting episodes. Each episode was transcribed and annotated. The annotation includes all actions conducted by the conversation partners, with special focus on the gesticulation, mimics, use of artefacts, pitch, and eye gaze. In the

results section we present a representative set of excerpts from the annotated data annotated according to the standard notation known from conversation analysis (Jefferson, 2004). We followed the three-step analysis process (Hutchby and Wooffitt, 1998) to approach the transcripts in a CA-like manner: we identified regularities occurring across the whole set, formally described them, and revised them according to the data.

3.3 Supporting Data – Collection and Analysis

To triangulate the observations, we conduct additional analysis of notes and partial recordings collected in real advisory sessions. Full recordings were not possible for security reasons: such a recording would include lots of private details and information about the weaknesses of the house. All real sessions were conducted by policemen who provide advisory service on the daily basis. The advisees who participated in those encounters were real homeowners, who requested a home security advisory service at their home. The researchers had no influence on the selection of the advisees, the homes, or the time and date of the service. In fact, in style of a workplace study (Luff et al., 2000), a researcher followed the advisors throughout the day, while taking notes and recording parts of the formal and informal communication after agreement from the advisors. This data was collected in June and August 2016. During that time, the observer participated in 24 advisory sessions conducted by nine various advisors in Germany and Switzerland – in 22 cases the advisor used the SmartProtector. All nine advisors who participated in the study had essential experience with the tool: they had used it for at least 2 months and had conducted at least 10 (but normally many more – up to 100) advisory sessions with it before the observation. The notes included details regarding the conversational practices of the advisors and the advisees – special attention was paid to signs of disinterest (in a single case, the advisee even left the room for a moment) and to the reaction of the advisors thereon. The analysis of the notes was oriented at the reconstruction of those situations and their comparison with the practices identified in the main data.

4 Results

In line with the mediated discourse analysis (Scollon, 2001), our observations rely on excerpts transcribed in a very exact manner. As non-verbal communication is crucial for involvement-related cues, we include extensive comments on the behaviour of the involved parties: the homeowner (H) and the advisor (A). We use standard written rather than phonetic representation of words. Still we provide information on pauses ("(.)", "(0.8)"), absence of pauses ("=="), long vowels ("*wo:rd*"), strong emphasis ("*word*"), loudness ("WORD"), and overlapping speech ("[*word*"). Due to the page limits we do not provide full transcripts in German – instead, for each episode, we provide excerpts translated to English. We provide a translation that is as adequate as possible, thus leading to constructions that may be ungrammatical in English. In the commentary, we describe the identified practices and assign them codes (Pℵ). Overall, the presentation of the results follows standards applied and widely accepted in the CA community in linguistics, communication sciences, and in sociology (Gülich et al., 2008; Hutchby and Wooffitt, 1998; Mondada, 2012; Svinhufvud and Vehviläinen, 2013).

4.1 Episode 1: Conventional Advisory Session

In the first episode, we encounter a quite active homeowner and an advisor who is known for being an expert of mechanical issues. We join the participants directly after the advisor has inspected the main door to the building. During the inspection, he looks at particular elements of the door and the doorway: door hinges, locking mechanism, and materials used and counts numerous things that could be done.

((A comes in through the door into the house while looking at the doorway left and right; H supports herself by leaning towards the open door))

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1    A: one could do that (.) and then you would get the door (.) in a good sha[pe
2    H:                                                                    [mhm
3    A: of course we must now also look [at the door
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4	H:		*[at the windows*	*[we must look*	
5→	A:			*[we will arrive at [it*	
6	H:				*[yeah*

(0.8)

((A closes the door while looking at it; H moves back))

7   A: *it is important at this door (.) too (.) that you lock it (.) thats actually the alpha and omega of doo: (.) of this [door*

8   H: *[when I'm at home (.) key inside and turn?*

((A moves while looking at H, A nods; H stands in the same place, makes a short gesture and wrings her hands on the torso))

9   A: *Normally yes (.) Because we do have to look (.) This door here has indeed a [latch bolt*

10   H: *[mhm*

((A opens the door uses his right hand to manipulate the latch bolt of the door and his left hand to press down the handle – it causes a mechanic sound from the door; A leans forward and looks down at the locking mechanism; H stands in the back and looks at A))

11   A: *and this latch bolt hooks practically in the striker plate here*

12   H: *mhm*

(0.6)

13   A: *now I will try something (.) ⤳ACK (.) so: (1.0) now it's open*

((A leans forward, very subtly presses the handle; H stands with crossed armes tightly gripping the arms and observes A and the handle))

The above excerpt shows how the homeowner's involvement breaks down – while she adds some words to what the advisor is saying, the non-verbal signs signalize dis-involvement – she normally gesticulates actively while talking and mostly stands with open hands. Here, especially after the somehow strict reaction of the advisor at line 5 (i.e., that they will move to discussing the windows later), the homeowner physically signals dis-involvement: she moves back, wrings her hands and, finally, crosses arms on the chest. The following sequence occurs: (1) advisor focuses on an object (door) and (probably unintentionally) discourages the homeowner to contribute, (2) homeowner exhibits signs of dis-involvement, and (3) advisor realizes it and makes efforts to repair her involvement. In lines 11-13 the advisor tries to make the technical details interesting to the homeowner, i.e., establish it as the common object of interest (P2) despite constantly referring to it (P1). At first it does not change much in the advisee's non-verbal behaviour. Advisor starts telling a story with a prominent role of the homeowner (P5) – in doing so, he focuses again on the personal relevance of the issue. However, this also does not have an effect:

20   A: *if there's now an offender (0.4) let's assume (.) you are in bed because you're tired or a bit sick⸗*

21   H: *mhm*

((H nods while looking down at the door, posture as before; A gesticulates with both hands))

22   A: *⸗and lie down an hour or two*

The advisor repeats the attempts in the next turns and after opening and closing the door a few times, knocking on it, and gesticulating with both hands, he eventually reaches the goal and repairs the involvement of the homeowner:

32   A: *That's why one should [always remove the key*

33   H: *[lock up then*

34   A: *one has to always double-turn the key that is important (.) that the locks extend the bolt correctly*
        [and hook in

35   H: *[ye:s understand*

(0.4)

((A gesticulates and imitates the movement of latches that move into a strike plate; H moves his head up and looks at A while nodding))

36   A: *only then they can really give security [to you*

37   H: *[yea:h*

(1.0)

38→   H: *and the key is also important (.) that one pulls it out (.) if somebody (0.8) so if my wife comes back home (.) I have locked (.)*

((H gesticulates with both hands, imitates the movement of locking the door and keeps eye gaze with A; A nods very intensely, looks shortly at the door, then back at H; A smiles and nods, then continues the topic))

39   H: *then she stands in front of the door (0.6) and so she has the possibility to unlock and get in*

In the above excerpt one sees a practice that occurs many times across the data set – the advisor imitates a movement, a non-present event with his hands (P3) – alike pantomime. In doing so, he illustrates what may change if the advisee responds properly to the advisor's persuasion and takes respective actions after the encounter – this stresses the relevance of advisee's response and supports response involvement. Interestingly, in line 38 the advisee actually adds to the story the advisor tries to initiate in line 22 and addresses the issue of removing the key mentioned in line 32. Her reaction proves her rising response involvement – she explicates her concerns and her awareness of the consequences her response will have on her and her environment. The involvement of the homeowner rises gradually and requires a lot of effort from the advisor. His smile towards the end of the episode is almost symbolic.

4.2 Episode 2: IT-supported Advisory Session

In this episode, we encounter a very reserved homeowner and an advisor, who clearly wants to involve her into the ongoing conversation. They are at a balcony door.

1→   A: *Here at the balcony doors (1.5) let's call them balcony doors=*
    ((A interacts with the door and tablet; H looks away))

2   A: *=so there are patio doors here=*
    ((A feels the lock rods on the door with his right hand and gazes at them, tablet in the left hand; H gazes in the same direction, hands strained in the back))

3   A: *=you come here accordingly (.) you could convert the locking mechanism [into anti-burglary [lock*

4   H: *[mhm*   *[mhm*
    (0.5)

5→   A: *Excuse me (.) I am taking a picture as you see (.) of your balcony door*
    ((A takes picture while talking: holds the device up and clicks, H leans back, looks away for a moment))
    (1.2)

6→   A: *Yes (.) of those (0.8) So: (.) there I got the locking points (.) and the differences on it (0.8) Excellent (0.5)*
    ((A changes his position closer to H, holds the device in front of them so that both can look on the screen, A uses his finger to make marks on the screen; H looks at A and at the screen, moves her head towards it))

7   A: *Basically (.) this is not [recommended=*

8   H: *[o:kay*

9   A: *=and that's [for now better than [nothing*

10   H: *[yes*   *[yeah (.) yesye:*
    (1.2)

11   A: *und that's basically the same thing again (.) here (.) of those (.h) of the balcony door (.)*
    ((A holds the device even higher while H starts talking, then A moves towards the door and touches the handle))

12   H: *Also: [non-locking handle*

13→   A: *[the handle (.) non-locking (.) no drilling protection (.) I could also here (.) [suggest*

14   H: *[mhm*

The above excerpt indicates lessening involvement of the homeowner: looking away, hands strained behind the back, leaning away. We can see two reasons for that: at the beginning the advisor inspects the door (line 1), then he tries to make a record of it on the tablet (line 5). The homeowner tries to send basic signals of interest ("mhm" which she contributes only at transition relevance places, i.e., where transition between speakers would naturally occur), but does not take the opportunity to take her turn at line 4. At line 5 the interaction character changes rapidly: The tablet is positioned in a way such that the homeowner and the advisor can easily see it; they move nearer to each other, and the advisor starts pointing to things on the tablet. The responses of the homeowner become more involved and occur more frequently, in line 12 she even makes an informed contribution on the type of the door handle. Thereafter (not present in the transcript) she asks a complex question and points to and touches the door.

In the above, we can identify a sequence of the following steps: (1) advisor focuses strongly on an object (balcony door) and documentation (tablet), (2) homeowner exhibits signs of dis-involvement, and (3)

advisor returns to the homeowner and makes efforts to repair her involvement. In this particular case he applies the following practices: (P6) he establishes a collaboration sequence with the tablet as a common artifact – marking a picture and putting notes, and (P1) he makes a physical reference to a security-relevant feature of the house (= handle; lines 11-12-13). Both practices in this episode address the personal involvement – the advisor turns the door into common work artifact, i.e., something that automatically becomes personally important. In line with that, he stresses the belongingness of the door through direct and possessive pronouns. Interestingly, in the subsequent turns, the advisor employs even more verbal and non-verbal practices to further encourage the involvement of the homeowner: he (P1) makes lots of physical references to the door, and also (P2) exerts work on it while closing, opening it, and knocking on the glass, and (P5) he makes statements that represent a hypothetic course of action:

33   A: *if you'll say (.) Mister Policeman (.) I would also like it be:re (.) Then, there is a suggestion (.) eghm (.) that ground-level elements*

In this case, he again imposes issue relevance on the homeowner and addresses personal involvement. His efforts are successful – the homeowner reacts by trying to take her turn, thus generating a lot of overlapping speech, by various pacifying behaviours (e.g., scratching), intensive gesticulation, and physical reference to the door. Finally, towards the end of the episode, we observe a course of action leading to an intense and very involved conversation.

50   A: *Good (0.6) No:w of course (.) I can show you a _video_ (.) about a burglary*
      ((Video starts on the screen, video music plays))
      ((H looks at the screen, nods; A moves the tablet towards the H's face and looks at H))
51→   H: *oh*
52   A: *just (.) how easy it is for many people (.) how one [can break in*
53   H: [*mhm*
54   A: *Over ninety percent of flats and houses are unsecured (.) so burglar-resistant (1.0) you see just with a [screwdri[ver-*
55→   H: [*yeah* [*ya: YEAH*
56   A: *-accordingly arm[ed*
57   H: [*he-*
58→   H: *-[has not a big tool at all (.) nay?*
59   A: [*he levers (.) he does*
60→   A: *could you hear it? (.) it does once [clack-*
61   H: [*yes yes*
      ((H nods while looking at the tablet; the video finishes; H looks up to A; A simulates breaking something with his right hand at the door))
62   A: *-and the thing is open (.) and so it does not make just (.) clack (.) again but* BAMM BAMM BAMM *(.) he has to be working hard*

When focusing on the behaviour of the advisor, it stands out that he introduces the activity of video watching pretty straight forward (line 50). When the video starts playing, he is starring at the homeowner, so he can observe her reaction. As there is no comment recorded in the video, but some music for introduction and then only the sounds of burglary, he provides additional information while the video is playing. In particular, he uses a question (line 60) –a rhetoric one, that works as an involvement question. In the last turn, after the video has finished, he builds upon and illustrates how security works (so that it sounds like "BAMM BAMM BAMM" instead of "*clack*"). In doing so, he stresses the

potential impact of the advisee's decision. In summary, in the above excerpt, the advisor employs the following: (P4) involvement question, (P1) physical reference to object of interest, (P3) gesticulation and onomatopoeic words to represent non-present objects or events, (P7) collaborative watching of a multimedia.

If we consider the reactions of the homeowner, the advisor succeeds: the homeowner reacts to the video with an "oh" (line 51) – a sign of "change in his or her locally current state of knowledge, information, orientation or awareness" (Heritage, 1984, p. 299). She intensely confirms what advisor is saying (line 55) and, finally, gets involved in the commenting of the video (line 60). Her body posture changes from leaned away to leaned forward. This is outstanding given her very reserved and cautious baseline.

In those episodes, we can observe how the advisor uses mobile IT as a moderation tool to support his effort of enhancing homeowner's involvement. While those practices can be very effective, not in each relevant episode IT was used. Just to give a gist of statistics: out of 36 episodes considered for the IT-supported advisory sessions, in 12 episodes the device was not used at all (including 3 cases in which the device was even put aside), and in 7 further cases, the device was used simply as documentation support – the advisor took a picture or made notes, but did it integration of the advisee. In those cases, the device was actually contributing to involvement drops, that were later repaired in a conventional way (P1-P5). In 17 further cases, the device was used to repair the advisee's involvement (P6 and P7).

4.3   Summary

Figure 2 summarizes the general involvement repair pattern we observed in the considered episodes. Importantly, while the previously mentioned models of persuasion stress its psychological or personal dimension, this one presents persuasion as a sequential communication process, thus providing a practical view on persuasion (or, particularly, on involvement maintenance in persuasion).

Across the 72 episodes as well as in the data collected during workplace study, we identify 7 major practices that advisors employ for maintaining advisees' involvement during the advisory session:

> *P1: physically referring to an object of interest*
> *P2: applying physical action to an object of interest*
> *P3: representing non-present objects via gesticulation*
> *P4: asking questions or asking to do something*
> *P5: telling a hypothetical story about the homeowner*
> *P6: collaborative action on media (pictures)*
> *P7: collaborative consumption of media (videos, schemata)*
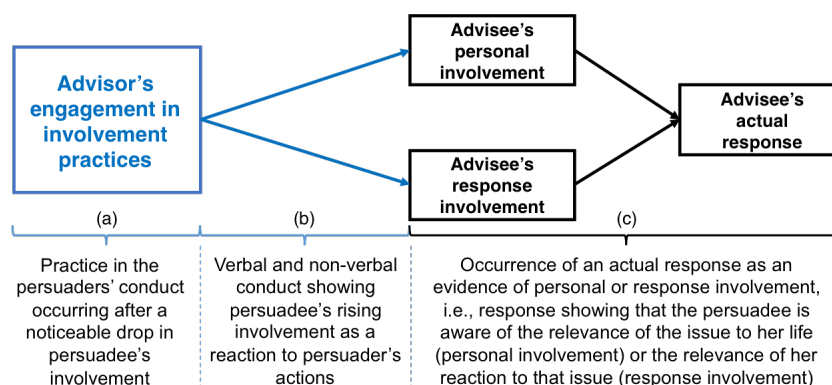

Figure 2.   *Involvement repair/maintenance sequence: after a noticeable drop in advisee's involvement, the advisor engages in conversational practices (a), which address persuadee's personal and response involvement (b), which then contribute to persuadee's motivation to respond as expressed by the advisee's actual response (c).*

P1 and P2 are accompanied by verbalized invitation to look at something, P5 often comes with direct speech quotations, P6 and P7 are being introduced by reference to the action being taken ("I will show you (later) a video"). P6 and P7 are of very special interest to the current study: they emphasize the role of modern IT in maintaining involvement. As presented above, the use of IT and the occurrence of multimedia-based practices is not coincidental – if an advisor tries to repair involvement of an advisee, he uses a whole sequence of practices and IT forms an important part of his arsenal. The practices overlap and intersect with each other – a choreography of gests, talk, and use of artefacts and multimedia emerges. However, P6 and P7 turn out to outperform the other practices with regard to effectiveness – comments to videos and pictures mostly include such statements like "oh!" or "ah!", or words like "frightening", while reactions to the others do not. Obviously, showing multimedia makes the advisees

particularly involved, so that they feel incentivized to express their enhanced involvement. In this regard, the features of IT (video, picture taking) contribute to establishing effective ways of involvement management: while in the conventional case, the advisor repeatedly puts a lot of effort to re-involve the advisee, in the IT-supported setting simply positioning the device at the right place catches the attention of the homeowner. The video or picture in combination with the conversation make this effect even more sustainable – there was not a single case in which the video or collaboration with pictures would not cause a longer follow-up discussion.

Thanks to the advisors' statements during conversation, we can divide the practices as follows: P1, P2, P6 support personal issue relevance and result in enhanced personal involvement: advisors use the artefacts to explain why a feature is important. P3, P5, P7 address response involvement while stressing the impact of the decision that the advisee will take, e.g., impact on the appearance of windows or doors, family's life, and, finally, security. The character of P4 strongly depends on the content of the question.

To recapitulate, we identify the following differences between the IT-supported and conventional setting: First, the involvement practices with use of multimedia cause emotionally loaded reaction, as opposite to conventional case where standard confirmatory devices are used ("mhm" or repetitions at transition relevance places). Second, the involvement practices with SmartProtector lead to more immediate and earlier non-verbal reaction to the stimulus than in the conventional case, where gesticulation starts later. Third, the involvement practices with IT cause readiness to talk (as visible through overlapping sequences) and lively discussions. Fourth, the IT-based involvement practices demand less interactional resources from the advisor to reach the same goal as in conventional case.

5 Discussion

5.1 Involvement in Persuasion and Conversation

Results enumerate and illustrate a set of practices, in which advisors engage when they maintain the advisees' involvement. Importantly, most of the practices involve use of external objects or the SmartProtector – only P4 and P5 have purely rhetorical or argumentative character. While the psychological take at persuasion conceptualizes the involvement in abstract terms, the current study shows the material nature of involvement practices. This is in line with the general intuition: for instance, whenever a teacher wants the class to listen carefully, he may point to the blackboard. P4 and P5, while not being essentially material practices, also introduce a dose of "tangibility" – the stories presented by the advisors and questions they ask involve hypothetical, but very down-to-earth scenarios. When following the psychological notion of involvement as an antecedent for persuasion, one would define the maintenance of involvement in a persuasive service encounter as actions oriented at stressing the relevance of an issue's true merits to the advisee (Chaiken, 1980, 1987; Petty and Cacioppo, 1986a). This study makes clear how much the availability of objects and tangible illustrations influences those actions. Consequently, we see the involvement maintenance and persuasion as material practices, thus extending the previous notion of personal and response involvement (Chaiken, 1987; Johnson and Eagly, 1989). The persuasion models from social psychology address the information processing and, thereby, provide grounded explanation of the processes behind persuasion effects (Chaiken, 1980; Petty and Cacioppo, 1986b, 1986a). However, we postulate that they do not capture the highly practical nature of persuasion. This study forms an early step in this direction while presenting specific material practices.

In parallel, this study makes clear, how the sense of presence, of "here and now" as a situational and individual feature in conversation (Burgoon et al., 1999, 2002; Coker and Burgoon, 1987) depends on the material. Objects which enter the conversation, be it a real window or a simulation showing how easy it can be broken, form an additional link to the situated action – using visual and acoustic channels, the sense of presence in this situation becomes more vivid. This study makes clear how the advisee's involvement, as expressed through a set of non-verbal behaviours, depends on the use of material by the advisor. Specifically, it points to the potential of modern media in this regard. When designing for

potentially long service encounters, the designer should consider inclusion of vivid multimedia to give the advisor a tool to enhance the advisee's involvement with the click of a button. Furthermore, even positioning the tablet – or any other tool – in a specific way can make the advisee more involved: this element shall be transferred to the advisors during training as a specific technique. Beyond that, clarifying the advisors about the roles of stories and storytelling may be central, especially, when they often experience disinterest from the advisees. Overall, providing specific materials and teaching specific techniques to the advisors may enhance the quality of the encounter and lead to elaboration of the discussed issues.

We claim, that supporting the advisors by providing effective material to involvement maintenance may contribute to the overall experience of a persuasive service encounter. In particular, offering material that illustrates how important, urgent, or unsafe an issue is to the advisee and what is the impact of her reply, e.g., by simulating the future (appearance, usage routines), can lead to better motivation to tackle the issues and consequently reduce the risk of advice discounting (Bonaccio and Dalal, 2006; Klein and Stefanek, 2007; Swindell et al., 2010). This offers new possibilities to the IS design research: IS can propose similar involvement maintenance techniques in other service encounters and are those applicable also to self-advice or robo-advice recently finding lots of interest from the community.

5.2   Involvement and Technology

Based on the above discussion, this paper proposes to bridge the notion of involvement from the social psychology (Johnson and Eagly, 1989; Petty and Cacioppo, 1986a) and the one propagated in conversation and communication studies (Burgoon et al., 2002; Coker and Burgoon, 1987). Specifically, we propose to see involvement as the extent to which a person, in our case – the advisee, considers an issue or her response thereto personally relevant as expressed by her behaviour. Consequently, involvement maintenance is work which another person, in here – the advisor, does to make the conversation partner more involved, i.e., to make her express signs confirming that she considers issues or her response thereto personally relevant. So far, involvement maintenance was nothing more than an implicit and inherent element of the setting characteristic for persuasive service encounters, i.e., face-to-face conversation. Framing involvement maintenance as part of the service provision opens possibilities for effective support through modern technology and, especially, through multimedia.

This study shows how simple use of multimedia supports involvement maintenance. The episodes illustrate the effectiveness of a video or a schema, as well as the positive role of collaboration on a common virtual artefact, such as a sketch or a picture. Those tools get intuitively applied by the advisor when needed, as confirmed by the observation in the field. We propose to take advantage from the basic technologies, such as presentation of graphics, and to provide them to advisors in non-commercial persuasive service encounters. However, the occurrence of P3 and P5 point to yet another potential of modern IT: advanced simulation capabilities. We envision a tool that uses augmented reality to simulate how a window or door can be enhanced with security elements attached to it or to visualize how additional lighting may elucidate a dark exterior, thus adding expressivity to advisor's gesticulation (P3). Also, the story telling efforts (P5) would benefit from additional support, such that the stories advisors tell can be turned into lists of routines and guidance how to behave securely when being at or leaving home. Efforts in the proposed direction can benefit from combining approaches known from PT (Dolata et al., 2016; Fogg, 2009; Stibe, 2015) as well as IS, HCI or CSCW (Baumer et al., 2012; Comes and Schwabe, 2016a; Fritz et al., 2014; Giesbrecht et al., 2015; Kaptein, 2011; Lehto et al., 2012; Yu et al., 2011). While PT research focuses on a single user scenario provides design guidance therefore, it has not looked much into how the systems get used. Also, it has so far ignored the role of single-user or collaborative practices which make the persuadee follow the recommendation. This study does not only points to the concept of persuasive practices (Dolata et al., 2016), but also illustrates them with involvement maintenance examples. Those practices and the ways of supporting them presented in this manuscript can get adopted to other fields both by practitioners (police people or doctors) and observed by researchers in the fields of CSCW, communication research, and, finally, IS service researchers. The

practices perspective popular within IS (Nicolini, 2012) and in HCI/CSCW (Kuutti and Bannon, 2014), contributes to the understanding of persuasion as a real happening. Particularly, it emphasized that service research in IS shall incorporate the notion of persuasion into its agenda: commercial and non-commercial encounters embrace persuasive character. Understanding the persuasive practices and how to incorporate them into the service, be it on-line or face-to-face, may provide essential inspiration for the design of novel service models and redesign of existing ones. While the current study focuses on home security service encounters, its results may be applicable in other areas where problem-solving character of an encounter can be enhanced with additional persuasion (Dolata and Schwabe, 2017).

5.3   Limitations

The current study exhibits several weaknesses characteristics for qualitative studies of conversation, but tries to balance them out by considering results from a workplace study. The external validity of results is compromised by the focus on localized patterns (internal validity) and the interpretation of events. While we summarize the results from two separate data sets and account for their reliability, this study does not claim the standards of quantitative inquiry (no falsifiable hypothesis, no generalization beyond the described scope). Also, main data includes data collected in experimental context, which may de-naturalizes the conversations and the behaviour of the involved parties.

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