

Revealing the Complexity of Customer Communication in Distance Shopping: A Socio-Pragmatic Conversation Analysis

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Abstract

In order to find the most appropriate fit between media to use and density of interaction in distance shopping, a thorough analysis of the customer communication is needed. In this paper the authors present two examples of such analysis, based on a socio-pragmatic communication framework. The result uncovers deep complexities in the communication process between employees of distance selling companies and their customers. This complexity includes a number of different areas, such as the change of topicalization of a conversation and context-dependence.

Keywords: Customer communication, electronic commerce, conversation analysis, communicative action, social action

1. Introduction

Shopping at distance is not a new phenomenon. For more than 100 years customers have purchased products from mail order companies. Traditionally communication between customers and companies in distance selling settings was managed by mail, later also by telephone and fax. Now, distance selling companies are increasingly making use of new communication technologies. With the advent of information technology (IT) new ways of communication are adopted, e.g. e-mails and electronic forms on the companies' websites or voice response systems, where the buttons on the telephone are used to transmit information. Many mail order companies are adopting the new technologies to communicate with their customers and many companies are even totally web based.

The focus of this study is distance selling companies and their customer communication. Companies in distance selling settings do not meet their customers face-to-face. As all communication is performed through different communication media the communication media portfolio these companies offer to their customers is vital for their business processes. Some of the communication media in use are manually attended by employees and some allow the customers to interact directly with the information system of the company, without any intervention from employees. Depending on the purpose of the communication situation there are, advantages and disadvantages associated with each communication medium (cf. Johansson, 2003). A company's communication media portfolio affects, among other things, the employees' tasks, the number of employees, the need for investments in new technology, the costs of communication and customer satisfaction.

Communication between companies and their customers is known to be a complex interaction when using different media. There are both scientific and practical needs to clarify the complexities of customer communication in distance shopping. There are many possible

approaches for analysis of such communication; confer Schiffrin (1994) for an overview of different candidates. Some approaches, like conversation analysis (Sacks, 1992) have been used with success for different purposes. We claim, however, that there is a need to adapt such communication frameworks, like conversation analysis and others, to the special characters of customer communication. Conversation analysis, although powerful, needs to be supplemented with further categories and guidelines in order to be sufficiently powerful for the current purpose. Conversation analysis is a strict inductive approach. We acknowledge the power of such an inductive approach, but claim that there is a possibility to supplement an inductive way of analyzing communications with the support of some general pre-defined categories, thus arriving at a mixed inductive and theory-informed approach. Confer Alvesson & Sköldbberg (1999) and Goldkuhl & Cronholm (2003) for arguments concerning combined approaches like that.

In this paper we suggest the use of an approach, an emerging framework, to uncover the complexity of customer communication that could eventually be of help in explaining why different communication media are more suitable in different communication situations. We will use socio-pragmatic conversation analysis (SPCA) framework to analyze the complexity in e-mail and telephone conversations between customers and employees in distance selling.

The purpose of the paper is twofold; firstly, to uncover the rich complexity of customer communication, and diagnose its causes by using a SPCA framework, secondly to empirically ground and refine the framework being developed and used. Thus the SPCA framework is both an instrument used to focus on communication complexity, and an instrument evaluated. In the following section a theoretical background is given. This is followed by a presentation of the methodology used. This section also presents the empirical data. In the subsequent section, which constitutes the main body of the paper, the results from the analysis are discussed. The conclusions are presented in the last section. They include an evaluation of the benefits from using the framework as well as evaluating the framework itself. Finally, some ideas about future research are presented.

2. Foundations for a socio-pragmatic conversation analysis

In the following section we briefly introduce conversation analysis. In section 2.2 we describe a socio-pragmatic communication framework and arguments for the use of a socio-pragmatic conversation analysis approach.

2.1 Conversation analysis

Conversational analysis (CA) has its roots in ethnomethodology (Garfinkel, 1967). Thus, it is a study of the participants' own methods for production and interpretation of social interaction. The sociologist Harvey Sacks (1992) is the originator and key constructor of this research approach.

Sacks argues for an analytic tool to reveal how people, through some kind of procedural rules, engage and succeed in conversations. To be able to do this, Sacks emphasises the need for data and for detailed data. "Sacks' work is always driven by data. Rather than sit in his armchair and construct grand theories of society, he preferred, like the early ethnographers, to get 'his hands dirty' with some data" (Silverman, 1998, p. 60). The importance of working with observational data and transcripts depends on the focus in CA on utterance sequences and the organisation of such sequences and not on single sequences. "It is in these sequences, rather than in single turns of talk, that we make sense of conversation" (Silverman, 1998 p. 62). A primary concept in CA is turn-taking. This means that one participant talks and then stops and another participant talks and stops and so on. CA problematizes how turn-taking is performed. In doing this other constructs are inferred as e.g. next-speaker selection and

transition-relevance places (e.g. Sacks, 1992; Levinson, 1983). In understanding sequencing of conversations Sacks has introduced the concept of adjacency pair. An adjacency pair is besides being adjacent, an ordered pair of utterances (a first and a second) produced by different speakers. A first requires a second, and not everything counts as a second. Examples of adjacency pairs are question – answer, greeting – greeting, offer – acceptance, request – acceptance, complaint – excuse. The clear linkage to communication patterning in the language action perspective should be recognised (e.g. Winograd & Flores, 1986).

Different functions of adjacency pairs are described within CA. They are used for e.g. starting and closing conversations, for moves in conversations, for remedial exchanges. Adjacency pairs can also be “separated” due to different reasons (e.g. clarifying obscurities) by the aid of so-called inserted sequences. This means that adjacency pairs can be embedded in other adjacency pairs.

The concept of adjacency pair has been further used and developed in dialogue theory (e.g. Linell, 1998; Schiffrin, 1994). The first is categorised as initiative and the second as a response. However most utterances can be classified as both initiative and response. This is due to the principle of double contextuality of utterances in conversations. An utterance is both context-shaped (i.e. dependant on prior utterances) and context-renewing (i.e. creating conditions for possible next utterances). Utterances are linked actions. An utterance is linked to prior utterances as being a possible response to what has been said earlier. An utterance is linked to succedent utterances as being an initiative to what might be said. This means that an utterance should be both new (offering something new, making a difference) and linked to what already has been given (being an understandable continuation of the prior utterances). An utterance is made in the present, but with (implicit or explicit) references to the historical given and to the projected future.

CA has had a great influence on sociological and linguistic studies of language-based social interaction. Levinson (1983 p. 287) claims that “the strength of the CA position is that the procedures employed have already proved themselves capable of yielding by far the most substantial insights that have been gained into the organisation of conversation”.

2.2 A socio-pragmatic communication framework

Conversation analysis has had some, but limited influence on IS research (e.g. Holm & Ljungberg, 1996; Aakhus, 2004; Larsson, 2004, Goldkuhl & Larsson, 2004). Rather, communication and semiotic theories have had much more influence in the IS domain, e.g. Austin (1962), Searle (1969), Bühler (1934) Habermas (1984), Jakobson (1960) and Allwood et al. (2000). There are also several attempts within IS to combine communication theory (i.e. speech act theory) with conversation analysis (e.g. Holm & Ljungberg; 1996; Steuten, 1998; Goldkuhl, 2003; 2005; Aakhus, 2004).

Based on the above mentioned theories (and some additional theories) Goldkuhl (2005) has presented a socio-pragmatic communication framework. He claims that this framework (as a synthesis of different theories) is especially adapted for information systems studies. This framework can be seen as an emerging *practical theory* with the purpose of informing inquiries and management of practical affairs (Cronen, 2001; Goldkuhl, 2006). The functions of practical theories can be described as follows: “Its use should, to offer a few examples, make one a more sensitive observer of details of action, better at asking useful questions, more capable of seeing the ways actions are patterned, and more adept at forming systemic hypotheses and entertaining alternatives” (Cronen, 2001, p 30).

One important insight from the communication theories that have influenced the socio-pragmatic framework is the principle of multi-functionality of messages, e.g. “Although we distinguish six basic functions of language, we would, however hardly find verbal messages that would fulfil only one function” (Jakobson, 1960). A message does not only serve one

purpose or function. Rather, a message has several functions, depending on if the focus is put on any of the messaging participants (sender/receiver), the information content or the context in which the message is given. Goldkuhl follows the semiotic idea of different functions of linguistic utterances. He has identified nine such functions that might be useful in inquiries of communication. These functions are: trans-situationally compliant, situationally responsive, expressive, referential, accountable, directed, relational, projected and mediational. These functions are explained in table 1.

Table 1: Explanations of communicative functions (from Goldkuhl, 2005)

Code	Communication function	Explanation	Corresponding question
CF1	Trans-situationally compliant	The message is in accordance with general institutions and norms and specific trans-situational grounds, which may be brought into the situation as a social background for the communication.	Why? What reasons there?
CF2	Situationally responsive	The message may be a response to prior messages in the communication situation and other situational features.	Why? What reasons here?
CF3	Expressive	The message is an expression of the locutor's subjectivity (intentions, desires, skills, emotions, values, understandings, commitments etc).	By whom?
CF4	Referential	The message says something about something in the world; objects and processes talked about.	About what?
CF5	Accountable	The message needs to be comprehensible, which means that it must to some degree be self-contained and include sufficient self-references and arguments to explain its role in the communication process.	What is meant?
CF6	Directed	The message is directed towards one or more addressees. There may also be secondary recipients (an audience).	To whom?
CF7	Relational	The message establishes certain action relations (expectations, commitments, states) between locutor and addressee, and sometimes socially broader.	What is done?
CF8	Projected	The message may be an initiative for further actions.	For what?
CF9	Mediational	The message is expressed in some medium (channel, carrier) and thus utilizing the particular features of this medium.	How? By what means?

To further explain this nine-fold multi-functionality of a single message, from one sender to one receiver, the following figure (figure 1) and example are given. The codes in the parentheses refer to the communicative functions (CF) in the figure.

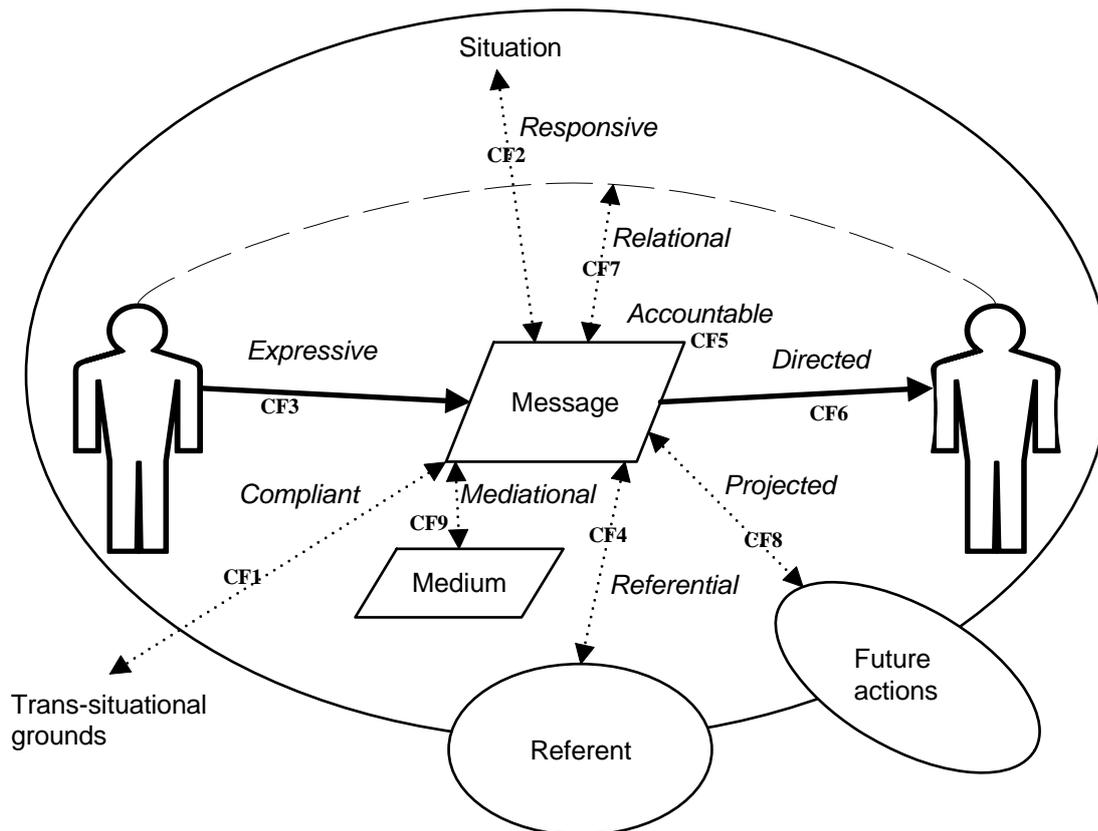


Figure 1: Nine facets of communication - a socio-pragmatic model (modified from Goldkuhl, 2005)

The example is of a customer who directs an order to a supplier for delivery of products. The order is a message expressed by the customer (CF3) and directed towards the supplier (CF6). The customer order can be an oral utterance or a written message. Information systems can be used as a mediator in this communication. The communication of the order message implies that a relationship has been established between the customer and the company (CF7). Commitments and expectations are created. When issuing an order, the customer clearly also expresses a commitment to general regulations for a purchase (CF1).

The order contains information about what should be delivered. Hence it says something about objects in the world (CF4). Furthermore, this order message is explicitly related to future actions (CF8), in this case, expected actions of delivery by the supplier.

Messages in distance selling settings are always transferred through some kind of media (CF9). If the order is mediated through a commercial web site, it must be possible to identify the sender of the message and if there is a sincere buyer behind the order and that the order is expressed in an intelligible way. Accountability is an important part of the message (CF5).

The order is probably not produced out of nothing. There is some kind of history that anticipates the order. If the customer (represented by a purchaser) uses a web site, he might first study the product catalogue. These offers will then function as initiatives to the order. The order is a response to these preceding offers (CF2).

The order example above is used to, rather tacitly, introduce the nine functions in the communication framework. Expressing these facets or functions more explicitly the customer order should at the same time be:

- Trans-situationally compliant, i.e. complying to general purchase regulations and contingent requests preceding the order situation
- Situationally responsive, i.e. responsive to what has been said earlier in the actual situation (e.g. offers) and other decisive features

- Expressive, i.e. to be a sincere expression of the desire and intention to buy products and hence to be an obligation for future payment
- Referential, i.e. specifying the products and quantities to be delivered
- Accountable, i.e. being comprehensible to the communication parties in the contracting process
- Directed, i.e. the recipient (the supplier) is made explicit through the order and the order is expressed in ways that it is probable that it will reach the supplier
- Relational, i.e. a clear order relation between customer and supplier is established
- Projected, i.e. expected future delivery actions are accounted for
- Mediational, i.e. utilising the features of the web site for its formulation and handling

One of the background theories/approaches for this framework is conversation analysis with the concepts of initiative and response; especially the categories situationally responsive (CF2) and projected (CF8). The framework consists of several other communication functions with origin from other communication theories. The socio-pragmatic framework, as such, does not contain any specific guidelines for use in analysis of conversations. It seems therefore appropriate to combine the framework with a conversation analysis approach for a communication analysis of customer – supplier communication in distance shopping. This means that we do not propose a classical inductive conversation analysis (Sacks, 1992). We propose an inductive approach of conversational analysis character supplemented with the use of the communicative functions from the socio-pragmatic framework. We propose the use of a *socio-pragmatic conversation analysis*. This means a combined approach with inductive parts and also theory-informing parts; a kind of abductive approach (Alvesson & Sköldberg, 1999; Goldkuhl & Cronholm, 2003). We claim that the use of the communicative function categories make the analysts see things that otherwise might be missed; confer the motives for use of practical theories in practical inquiries (Cronen, 2001; Goldkuhl, 2006).

3. Method

We have performed two qualitative, interpretive case studies (e.g. Walsham, 1995) in distance selling businesses in order to analyze the complexity of communication using different communication media in a customer communication setting. The two companies are mail order companies. One of the companies sells mainly garment and the other company sells photo services and products. As the companies collaborated on the condition of anonymity they are named by their main product, i.e. the Garment Company and the Photo Company. Both case studies were conducted during 2004.

The methods used to collect data about the companies, the way they communicate, their experiences, and opinions of customer communication, etc. are interviews, observations, and the examination of different documents such as data stored in databases, e-mail communication, marketing documents, and policy documents. This is elaborated further in Johansson (2007).

In the paper two complex conversations between customers and the companies' employees are presented. One is an e-mail conversation at the Garment Company. The other is a telephone conversation at the Photo Company. Both conversations were chosen because they represent complex dialogues between a customer and representatives from each company.

In the telephone conversation the researcher is sitting next to one of the employees attending the telephone, overhearing the conversation. The employees' utterances were recorded and transcribed and the customer's utterances were taken notes of, as we did not, for validity reasons, want to ask the customers for their consent to record the conversation.

We have analyzed the two conversations in the form of a group work where we made a detailed analysis utterance by utterance. This analysis is inspired by the procedures of conversation analysis. In the analysis work we have used the communicative functions of the social-pragmatic framework presented in the previous section as a screen.

The analysis work was done in three different parts, though not entirely separated in time from each other. We started by dividing the utterances into meaningful parts according to the type of communicative act (cf. the relational communication function) we interpreted to be performed. Thus, an utterance performed by one communication party consists, according to our analysis, of (usually) several different communicative acts. Each such communicative act (sub-utterance) has a distinctive communication type (relational type) which differentiates it from other sub-acts of the same composite utterance. In the second part of the analysis (which went much in parallel with the first) we identified the initiative-response characteristic of each utterance part by deciding what other part of the conversation a certain utterance part was a response to. This refers to the situationally responsive function. Additional to responses to parts of previous utterances, this also includes internal responses to parts within a composite utterance, as well as responses to immediately preceding acts. The third and final part of the analysis was to assess the seven remaining communication functions. The detailed analyses were documented in a comprehensive matrix that is included as appendix. In the next section we summarize the main findings of the analyses made.

4. Analysis

As mentioned in the previous section, we have analyzed two conversations that originate from two separate companies in different business contexts. Below follows the two conversations. We divided the respective turn of each locutor according to meaningful segments. Thus, each composite utterance (turn) has been divided into utterance parts (identified communicative acts). The numbers in superscript precede the start of each utterance part. In the analysis we will refer to the text of the conversations with the number of the utterance and of the utterance part, e.g. GU2.1 and PU3.4, where G stands for the Garment Company and P for the Photo Company.

4.1 Conversation 1: Garment Company (E-mail)

The context: The conversation starts with the customer entering an order in an electronic form on the company's web site. The entering of the order triggers an auto generated message from the IT-system.

GU1: ¹No order is registered. ²Payment option is not available. ³Choose "cash" when register order. ⁴Call 012-12345 for more information about this message.

GU2: Customer: ¹Thanks for the answer. ²I wish to pay by invoice – ³how do I do to register my order ⁴????
⁵Kind regards, Ana.

GU3: Employee: ¹Hi! ²If you are not registered for invoicing you can not apply via internet. ³You have to call our customer service at 012-12345 and apply for invoicing ⁴at the same time as placing your order. ⁵Kind regards, Betty, Customer service dept.

GU4: Customer: ¹Hi Betty! ²About the order. ³My customer's number is 111111 ⁴and I am almost sure I have paid by invoice before ⁵...or? ⁶Kind regards, Ana.

GU5: Employee: ¹Hi! ²When checking your customer's number ³I see you are an invoice customer, ⁴maybe the order amount exceeded your credit limit. ⁵Your limit is \$ 500. ⁶Kind regards, Betty, Customer service dept.

[GU6: After this e-mail the customer has probably attempted to place a new order but this is not evident in the communication]

GU7: Customer: ¹Is it ok so far? ²Have you received my order? ³Kind regards, Ana, ⁴customer's number 111111.

GU8: Employee: ¹Hi, ²No, there is no order registered. ³Kind regards, Betty, Customer service dept.

4.2 Conversation 2: Photo Company (Telephone)

The context: A customer has received a delivery of pictures from the Photo Company. However, the product received does not wholly correspond to the product expected by the customer. The envelopes mentioned in the dialogue are photo envelopes provided by the company in which their customers' send their films or CDs to be developed.

PU1: Employee: ¹*Welcome to customer service* ²*this is Jane.*

PU2: Customer: ¹*Hi,* ²*I received my pictures yesterday.* ³*They were fine* ⁴*but I miss the copies.*

PU3: Employee: ¹*OK.* ²*What's your customer's number?*

PU4: Customer: ¹*Where do I find it?*

PU5: Employee: ¹*On the invoice.* ²*It is a yellow box.*

PU6: Customer: ¹*222222.* ²*I have received a CD* ³*but I do not need it.*

PU7: Employee: ¹*No,* ²*you probably sent a CD envelope instead of an ordinary envelope.* ³*In the CD packet, double copies are not included.* ⁴*Instead a CD is included.* ⁵*That is why –* ⁶*but if you do not have any CD or a PC you can, of course, send the CD back,* ⁷*together with the negatives* ⁸*and the invoice* ⁹*and we will, simply, change it for a plus package.* ¹⁰*We make double copies for you and a new invoice.*

PU8: Customer: ¹*How do I send them?*

PU9: Employee: ¹*You can send them in an ordinary photo envelope.*

PU10: Customer: ¹*I'll put in the CD and the invoice, then.*

PU11: Employee: ¹*Yes,* ²*and the negatives.* ³*And you'll have to make a note on the invoice that you do not want the CD package but the ordinary plus package with double copies.* ⁴*Tell me your last name so I can fill it in here.*

PU12: Customer: ¹*Jones.*

PU13: Employee: ¹*And you postal code?*

PU14: Customer: ¹*111 11.*

PU15: Employee: ¹*I make a note that it will be sent in.*

PU16: Customer: ¹*Thanks for your help.*

PU17: Employee: ¹*Thank you!*

The aim of this analysis is not to make a comparative study of the two communication media used. Rather, we will present the analysis done with the two conversations separately. In order to facilitate the comparison with the framework used when analyzing, the analysis will be presented according to the communication functions identified in the socio-pragmatic framework that was presented above in section 2.

4.3 Trans-situationally compliant (CF1)

One of the main communication insights emphasized in conversation analysis is that utterances depend on each other in initiative – response patterns [CF2]. What is said later in a conversation depends on what has been said earlier. However, what is said is also dependent on situation outside the communication situations. That is what is emphasized through the function of trans-situationally compliant communication. It is important for the conversations to comply with the external context in conversations. In the telephone conversation we can see the compliance with the external context on several instances. When the customer in PU3.2 is asked to identify herself with customer number this has a trans-situationally compliant function of referring to the procedure for customer identification. A similar compliance with the customer identification procedure is seen in PU11.4 and PU13.1. Although these two instances are given at two opposite ends of the conversation sequence they belong to the identification procedure used when searching for a customer in the information system. Thus one can identify a search procedure that includes three steps:

1. Ask for customer number
2. Ask for customer surname
3. Ask for postal code of customer postal address

Another trans-situationally compliant function can be identified in PU7.2 where the employee's statement is complying with the product repertoire offered.

In the e-mail conversation there are also some instances of the trans-situationally compliant function. Most of them pertain to norms and regulations concerning payments and order registrations. These can be differentiated as partly the rules of the company, and partly the “rules” of the customer, i.e. her own experiences. Some are also compliant with the error messaging standard.

4.4 Situationally responsive (CF2)

A message (in the terminology of this paper: an utterance or utterance part) is contextual and responds to previous messages in a meaningful conversation. In order for the two conversations studied in this paper to be meaningful, this implies that the communicative action prior to the first utterance needs to be identified. Thus, the auto-generated e-mail from the Garment Company in Conversation 1, GU1.1-1.3 responds to a failed attempt to place an invoice order (GU0). This communicative action, in turn, responds to a presentation of a product repertoire (GU-3) and a presentation of order placing media (GU-2) by the Company. In the Conversation 1 most of the responses of utterance parts pertain to (parts of) the previous utterance. However, GU5.5: “Your limit is \$500” interestingly forms an internal response to GU5.3 “I see you are an invoice customer”. One reason why the responses of the utterances generally follow such an orderly form could be that the history of the previous e-mail conversation within the same topic is included in each e-mail sent. This gives each locutor the opportunity to review the conversation so far and remind herself of the issues already discussed. This would mean that each locutor is “up-to-date” with the previous utterances and their implicit rationale and thus will address only the utterance at hand. There is no need to remind the addressee of previous arguments or statements as she can see for herself by going back in the accumulated conversation record.

In the telephone conversation in Conversation 2 there are also some communicative actions that need to be added, prior to the first utterance, in order to make the sequence meaningful. Generally, the responses do not follow an orderly form, i.e. that one utterance part is a response to part of the previous utterance. Rather, the responses are often traced back to utterances several turns previously. Two probable reasons for this wider turn-taking could be that neither do the actors in the dialogue have the history of the conversation readily at hand except in their memories, nor do they have the time to reflect on what has been said between each utterance. The responses appear to be given once an actor’s memory and reflections have caught up, and lead to a wider turn-taking where responses do not follow symmetrically utterance by utterance but rather asymmetrically to initiatives produced earlier on in the conversation.

4.5 Expressive (CF3)

E-mail as a communication media is not as expressive as a dialogue face-to-face or via telephone. However, several mechanisms can be used to accentuate feelings and other expressions. In, for example, GU2.4 of the e-mail conversation question marks are used to amplify uncertainty. One typical expressive function of the e-mail conversation is identification. It recurs as part of greeting phrases.

In the telephone conversation a recurring expressive function is complaints from the customer on an order that was not satisfactory delivered.

4.6 Referential (CF4)

In most utterance parts of the two conversations the referential communicative function is one of the most obvious, and easily identified. Because it is so common and broad it would be meaningful to create sub-functions in order to diversify its meaning. Based on the analysis

done in this paper we suggest the following three categories as different referential sub-functions:

- Reference to objects, e.g. orders, products, identification values
- Internal reference to parts of the conversation
- Reference to actions, e.g. order placements, order registering, returning of products

By constructing these sub-functions we want to provide a better structure for analyzing this function of communication.

References to the three categories mentioned can also be seen in terms of a topicalisations of the conversation, i.e. certain issues are put in the foreground (and other topics discussed earlier are put in the background) and are the focus of the discussion. In the telephone conversation PU2.1-2-4 sets the topic of the conversation generally as a complaint issue. However, in PU3.1-U6.1 the topic is altered to that of identifying the customer according to the identification procedures used in the company. Then in PU6.2 the topic is changed back to the complaint but more specified. This change of topics can be discovered throughout the conversations and adds to the complexity of the communication.

A further sub-categorization of referential functions of communicative actions is that they may refer to past, present or future actions. For example, in the e-mail conversation GU1 we can trace both a reference to a past action (GU1.1) and to a future action (GU1.4)

4.7 Accountable (CF5)

We can derive a few instances of the communicative function of accountability from the analysis. In each instance, the message of an utterance is made accountable either by clarifications or by deepened argumentation, see e.g. e-mail communication GU1.2, GU3.2 and GU5.4. In the GU3.2 the employee explicates that a customer cannot apply to become an invoice customer over the internet. Through such an explication, the intention seems to be that the addressee should understand the earlier communication. It is a way of making the communication more accountable.

4.8 Directed (CF6)

Unlike the other communicative function, the directed function does not pertain to the specific utterance parts of the two conversations, but rather to the utterance as a whole. This is because both sequences constitute dyadic dialogues where one locutor and one addressee are engaged in the conversation. The e-mail conversation commences with a directed message (GU1) to any customer committing a payment option error when ordering on internet. The remaining utterances are directed to a specific person. The customer, however, directs her messages sometimes to any customer service employee and sometimes to a specific employee. In the telephone conversation all utterances are directed to the person who the locutor is speaking to.

4.9 Relational (CF7)

We see the relational function as a typification of the communicative acts of the utterance parts. One important observation is that each utterance is multifunctional in terms of the relations established between locutor and addressee, i.e. each utterance can be divided into utterance parts based on the type of communicative act they express. This communicative function was our starting point in making the analysis. By asking the question “What is done?” when analyzing an utterance we discovered that several action relations are usually taken in one utterance, thus the need for dividing the utterances into parts.

Additional to the three action relations mentioned in Goldkuhl (2005), expectations, commitments and states, we have also defined others, e.g. recommendations, greetings and clarifications. There is a need to find suitable general categories to use to characterize the

relational function. Analysis such as the one we have made here can help in defining such categories.

4.10 Projected (CF8)

The projected function supports the analysis in revealing commitments made of future actions and expectations expressed of future actions. In the telephone conversation in PU7.6-7.10 the employee instructs the customer how to proceed in returning unwanted pictures. By analyzing the projected functions in these sentences we find the rationale behind some of them, e.g. in PU7.7 the customer is asked to send back the negatives. Why is this needed? The company does not store the negatives of each order received. The Photo Company transfers the responsibility of storing the originals to the customer when the order is sent to the customer. Thus, the return of the negatives from the customer to the Photo Company triggers the production of new pictures, i.e. it functions as a commitment to fulfill the order. Furthermore, in PU7.8 the employee asks the customer to enclose the invoice when returning the photo negatives. We see that this has two projected functions. Firstly, it triggers the accounts department to send a new invoice, and secondly it ensures that the customer won't pay the "old" invoice.

4.11 Mediational (CF9)

The media used in the conversations analysed are of course easy to identify as e-mail and telephone. However, in both cases references are being made to other media used in the interaction between the customer and the company. In the e-mail conversation telephone is suggested as a means to short-cut the ordering process and in the telephone conversation the topic of the conversation concerns communication via ordinary mail between the customer and the company.

5. Conclusions and future research

The purpose of this paper has been to uncover the complexity and the causes of communication between customers and sales companies in distance shopping. As a tool for this a SPCA framework has been used. As part of the purpose an assessment of the framework has also been done. Below we have listed the main contributions of the paper:

5.1 Complexity of customer communication

- By doing a detailed utterance-by-utterance analysis, we find that apparently simple pieces of conversation between customers and representatives from sales companies are discovered to be complex. This is a warning not to make premature assumptions of communicative actions based on a too shallow analysis.
- Through this SPCA, we have revealed some of the complexity in these kinds of distant customer communication. Both parties must engage in a joint problem solving and give their contributions to have the communication to progress towards a problem resolution. It is not easy to replace the customer service employee by an automaton, such as a "digital assistant".
- By including a trans-situational aspect in the framework, complex, often implicit, work procedures can be disclosed and identified. The uncovering of such work procedures when using a particular communication media can be of support in assessing the effective use of the media as well as assessing the varied work practice needed if changing communication media.

5.2 The causes of complexity

- By focusing on the context of the conversations we can trace preceding utterances needed in order to perform the action proposed. This entails a “walking back” of the conversation to decide on what actions a certain utterance is the response to. Also, the context implies a meta-level of (trans-situational) rules, norms and regulations which govern the specific actions in the conversation.
- One important cause of the complexity is the continually changed topicalization of the conversation. New referents are brought when necessary, and some referents are latent for a period of time, and then being activated again.
- Generally speaking, the analysis in this paper clearly underlines the need to view utterance parts as being multi-functional. This is probably one of the main causes for the complexity of the communication. This emphasizes the need for an analytical tool that incorporates a multi-functional approach, such as the framework used in the paper.

5.3 Empirical grounding and refinement of the framework

- By using a framework which is not only linguistically oriented but rather socio-pragmatic, we have a detailed tool when focusing on the action aspects of using a communication medium. The analysis has given further evidence that SPCA is a useful tool for analyzing IS-based communication. It has been possible to use the different communicative functions in the analysis, and the different functions have all contributed with complementary understanding of the two conversations studied.
- There are occurrences when communicative functions defined in the framework appear to be too “blunt” a tool to use for doing a sharp analysis, which suggest a (further) sub-categorization of such functions in order to be useful in uncovering part of a complexity of communication. This can be said about both the relational and the referential communicative functions.
- Some communicative functions in the framework were found to have a limited use in the analysis. The directed communicative function seems to have a limited use in dyadic communication, which both conversations used in the paper subscribe to. The mediational communicative function is simple to identify as a singular media is used.

The SPCA framework can be further empirically grounded. The communication media analyzed in this paper are e-mail and telephone. Further studies of these two communication media and others are needed to evaluate the benefits of applying the framework. This could be done by comparative studies of different communication media, to test the capability of the framework to be general enough in finding common criteria in order to gauge the appropriateness of a certain media for complex communication. This could lead to both refined and new communicative functions in the framework, as well as revealing relationships between the different functions.

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Appendix

Detailed conversation analysis of e-mail conversation at the Garment Company

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
-3	(Company)	Presenting product repertoire	
-2	(Company)	Presenting order placing media	
-1	(Customer)	Previous ordering	CF2: -3, -2
0	(Customer)	Failed attempt to place an invoice order	CF2: -3, -2
1	Auto generated e-mail (from web based order system)		CF1: Error signalling – Order not placed in accordance with given payment options CF6: Any customer committing this payment option error
	1. No order is registered.	Error alerting	CF2: 0 CF4 (1.1-1.2): Failed order
	2. Payment option is not available.	Characterizing	CF2: 0 (invoice) CF5 (1.2-1.3): Argumentative underpinning of 1.1 – Shows the reason why an order wasn't registered.
	3. Choose “cash” when register order.	Recommending	CF2: 0 (invoice) CF4: Registering an order CF7: expected action CF8: Register of specific cash order
	4. Call 012-12345 for more information about this message.	Recommending	CF3: Identification CF4: Internal reference to 1.1-1.3; Customer telephone service CF8: Phoning Consumer Service
2	(Customer)		CF2: 1 CF6: Any customer service employee
	1. Thanks for the answer.	Courtesy	CF2: 1, 1.3 CF4: Responds and refers to U1
	2. I wish to pay by invoice	Rejection Desire	CF1: The customer has performed the action previously CF2: 1.1 searching alternative action options “how do instead” CF3: Intention (Thematic; starts with “I wish”) CF4 (2.2-2.3): Order placement CF8: Future order placement
	3. – how do I do to register my order	Question Desire?	CF1: Inquiring company norms CF8: (2.3-2.4): written order procedure instructions CF7 (2.3-2.4): expecting answer
	4. ????	Amplifying	CF3: Showing uncertainty CF4: Internal reference to 2.3
	5. Kind regards, Ana	Courtesy	CF3: Identification
3	(Employee)		CF2: 2 CF6: Customer Ana
	1. Hi!	Greeting	
	2. If you are not registered for invoicing you can not apply via internet.	Rule of action (alt. Regulating)	CF1: (3.2-3.3) Referring to payment norms CF2: 2.2 CF4 (3.2-3.3): application proceeding for payment by invoice CF5: (3.2-3.3) Clarifying norms
	3. You have to call our	Rule of action	CF1: Refers to Payment/Registration norms CF8: (3.3.-

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
	customer service at 012-12345 and apply for invoicing	(alt. Regulating)	3.4): Registration & order placement by phone CF2: 2.2 CF3: Identification CF7 (3.3.-3.4): Expecting registration & ordering
	4. at the same time as placing your order.	Facilitating advice	CF1: Referring to facilitating procedures CF2: 2.3 – 2.4 CF4: Order placement
	5. Kind regards, Betty, Customer service dept	Courtesy	CF3: Identification
4	(Customer)		CF2: 3 CF6: Employee Betty
	1. Hi Betty!	Greeting	CF2: 3.5 CF6: Betty
	2. About the order.	Directing attention to	CF2: 0, 3.4 CF4 (4.2-4.5): Order placement CF8: New order
	3. My customer's number is 111111	Identifying	CF1: Earlier customer registration CF2: -1 (implicitly), 3.2 CF3: Identification CF8: Makes control possible
	4. and I am almost sure I have paid by invoice before...	Claiming Rejection	CF1/CF4: Referring to prior purchase CF2: -1, 3.2 (rejects earlier recommended actions) CF3 (4.4.-4.5): Showing uncertainty
	5. or?	Inquiring	CF2: 4.4 CF4: Internal reference to 4.4 (implicit) CF7: expecting answer CF8: control of customer's order history
	6. Kind regards, Anna	Courtesy	CF3: Identification
5	(Employee)		CF2: 4 CF6: Customer Ana Up to this point there is no consensus in the dialogue
	1. Hi!	Greeting	
	2. When checking your customer's number	Informing of performed check	CF2: 4.3, 4.4 CF3: Conveying commitment CF4 (5.2-5.5): Error analysis
	3. I see you are a invoice customer,	Acknowledging customer claims Changing customer status in this conversation by recalling factual customer relation	CF1: Customer status CF2: 4.4 CF4: Customer status CF8: (5.3-5.5): Placement of an invoice order
	4. maybe the order amount exceeds your credit limit.	Tentative error characterization	CF1: Credit norms CF2: 0, 2.2 CF3: Soft suggestion CF6: New order placement CF4: The failed earlier order CF5: Explains order error CF5: (5.4-5.5) Explains customer status
	5. Your limit is \$ 500.	Stating (recalling) customer status	CF1: Customer status CF2: 5.3, -1

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
			CF4: Credit limit CF6: New order placement CF3: Identification
	6. Kind regards, Betty, Customer service dept.	Courtesy	
6			
	(Customer)		CF6: Any customer service employee After this e-mail the customer has probably attempted to place a new order but this is not evident in the communication
	1. Is it ok so far?	Soliciting affirmation	CF2: 6, 5.5 (implicitly) CF3: Showing uncertainty CF4 (7.1-7.2): New order attempt
	2. Have you received my order?	Informing (new order) Inquiring (received order)	CF2: 6 CF5: Clarifying 7.1 CF7: Expecting answer CF8: A Yes/No reply
	3. Kind regards, Anna,	Courtesy	CF3: Identification
	4. customer's number	Identifying	CF2: 7.2 CF3: Identification CF8: Enables order control
8	(Employee)		CF2: 7 CF6: Customer Ana
	1. Hi,	Greeting	
	2. No, there is no order registered	Negation	CF2: 7.2, 7.4 CF4: New order attempt CF8 (implicit): Disclaiming further action
	3.		

Detailed conversation analysis of the telephone conversation at the Photo Company

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
-3	(Customer)	Ordering development and printing of a roll of film	
-2	(Photo Company)	Development, printing and sending of photo order	
-1	(Customer)	Received photo order with paper prints from the Photo Company	
0	(Customer)	Placing a phone-call to the Photo Company	
1	(Employee)		CF3
	1. Welcome to customer service,	Greeting, Identifying	CF2: 0
	2. this is Jane.	Identifying	
2	(Customer)		CF2: 1
	1. Hi,	Greeting	
	2. I received my pictures yesterday.	Reporting, Topicalization (focus setting)	2.2-2.3:CF4 (-1 received pictures)
	3. They were fine	Assessment of 2.2 and -2.	

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
	4. but I miss the copies.	Complaining, Deviation from expectations	CF3 (complaint) CF4 (-1 missing part, -3)
3	(Employee)		
	1. OK.	Simple confirmation (could be paraphrased: "I hear what you are saying")	CF2: 2 CF4 (customer id) CF8 (awaiting answer)
	2. What's your customer's number?	Question of identification (out of a need for problem solving)	
4	(Customer)		
	1. Where do I find it?	Counter-question, Request for help (to answer the question)	CF2: 3.2 CF4 (customer id) CF8 (answer)
5	(Employee)	Answering	
	1. On the invoice.	Answering on a general level	CF2: -1 CF4 (customer id available on the invoice) CF5 (do) CF8 (How to find)
	2. It is a yellow box.	Answering on a detailed level, based on 5.1	CF5 (accountable to 5.1)
6	(Customer)		
	1. 1111111.	Identifying	CF1 (system for customer identification) see 14.1 CF2: Answering the question in 3.2 CF4 (customer id)
	2. I have received a CD	Reporting, Refocusing back on the problem, Addressing the customer's problem	CF4 (the consignment)
	3. but I do not need it.	Assessing, Complaining, Error characterization	CF2: -1 CF3 (complaint – doesn't need it) CF4 (CD)
7	(Employee)		
	1. No,	Confirming "No"	CF2: 6
	2. you probably sent a CD envelope instead of an ordinary envelope.	Tentative error characterization	CF1 (compliant with the product repertoire offered, and the routines for production, delivery and invoicing) CF2: -3 (response to the incorrect action made in the order); 2.2 & 6.3 (applies to the sequence 7.2-7.10) CF4 (-3)
	3. In the CD packet, double copies are not included.	Clarifying the company's products, Normative function	CF2: 2.4 CF4 (refers to a type level of rules that a customer needs to comply with, see CF1-comment in 7.2)
	4. Instead a CD is included.	Expanded product specification	CF2: 6.2 CF5 (elucidation of the CD packet product mentioned in 7.3)
	5. That is why	Response to complaint, Metalinguistic comment	CF2: Summing up argumentation and defining 7.3-7.4 as an explanation CF5 (7.3-7.4 makes this accountable and rational)
	6. – but if you do not have any CD player or a PC you can, of course, send the CD back,	Argumentative exhortation to action	CF2: 6.3 CF4 (Customer's capability) CF8 (Sending back the CD) CF4 (7.6-7.7 refers to -2. Sending back what has already been received)
	7. together with the	Exhortation to action	CF2: 2.4

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
	negatives		CF8 (The customer needs to send the original in order to be able to produce double copies)
	8. and the invoice	In order for the customer not to pay the old invoice: Don't pay!	CF2: -2 CF8 (The customer sends in the invoice for two purposes: a) So that it is not paid; b) in order to trigger the company to send a new)
	9. and we will, simply, change it for a plus packet.	Commitment to deliver a product	CF2: 2.4, 6.3, 7.7 CF4 ("it": The previous shipment, -2, and the new constitutes the Plus Packet) CF8 (The new product)
	10. We make double copies for you and a new invoice.	Clarification of commitment in 7.9, Reference to earlier invoice discussion in 7.8	CF2: 2.4 CF4 (The new product) CF8 (The new product and the revised invoice)
8	(Customer)		
	1. How do I send them?	Question, Request for clarification of the solution proposal made in 7.6-7.8	CF2: 7.6-7.8 CF4 (Sending back procedure) CF8 (Answer to the question; The sending back of the previous shipment)
9	(Employee)		
	1. You can send them in an ordinary photo envelope.	Action recommendation to 7.6-7.8	CF2: Answer to 8.1 CF4 (Sending back) CF8 (Sending back)
10	(Customer)		
	1. I'll put in the CD and the invoice, then.	Repetition of 7.6-7.7, Implicit request for a final confirmation/acknowledgement,	CF4 (Sending back) CF8 (wonder at procedures; Sending back)
11	(Employee)		
	1. Yes,	Affirmed confirmation	CF2: 10.1 (Affirming)
	2. and the negatives.	Addition, Repetition of 7.8	CF2: 10.1 CF4 (Sending back) CF8 (Implicit promise to send requested copies)
	3. And you'll have to make a note on the invoice that you do not want the CD packet but the ordinary plus packet with double copies.	New action recommendation, Builds on 7.8-7.9, Exhorts the customer to submit a written order (ombeställning).	CF2: 10.1, 7.8-7.9 CF4 (The sending back; Note; Re-ordering via invoice) CF8 (The sending back procedures; The re-ordering)
	4. Tell me your last name so I can fill it in here.	Identification, The customer is asked to identify herself again in order to facilitate the filling in of information.	CF2: 6.1 (Presumed failed identification search) CF4 (Customer ID) CF8 (Customer: Identify him/herself; Company: Make a note in the system)
12	(Customer)		
	1. Jones.	Identification, But not fully identifying information	CF2: 11.4 CF3 (Identity)
13	(Employee)		
	1. And you postal code?	Question	CF1 (Procedure for customer identification)
14	(Customer)		
	1. 111 11.	Identification, Complementary addition for identification	CF3 (Identity)
15	(Employee)		
	1. I make a note that it	Confirmation: "Now I can do what I	CF4 (The sending back; Notification; Confirmation)

U	Utterance parts (Actor)	Type of Communicative Acts = CF7	CF 1-6, 8, 9
	will be sent in.	said (in 11.4) I should do” A dual confirmation: 1. What has been said (Assuring) 2. Customer’s invoice information Part of the action memory	CF8 (Customer: Assuring of what’s been said; Company: Confirmation for responsible personnel of a new delivery)
16	(Customer)		
	1. Thanks for your help.	Closure function	CF3 (Courtesy) CF4 (16.1 & 17.1 = Conclusion agreed on)
17	(Employee)		
	1. Thank you!	Closure function	CF3 (Courtesy)