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Abstract

In this paper, we compare two methodological approaches – *Conversation Analysis (CA)* and the *Communication Deviance (CD) Scale* – in detecting confusing family interaction, which is considered one of the risk factors for schizophrenia. CA is a method for identifying and describing actions in interaction, whereas the CD Scale presents the criteria for identifying communication defects in the field of schizophrenia research. Our aim is to determine whether the approaches resonate with and could complement each other in analysing the same interactional data, i.e. a total of 10.5 hours audio-recorded Finnish family interaction in a psychological test in which the participants negotiate on mutual Rorschach inkblot interpretations. The data include 585 proposals by the family members. Here we focus on three types of proposal sequences (140 in all), where a proposal is not followed by an acceptance or a rejection. We have earlier shown that from the CA perspective, the family members orient to the discontinuity of these sequences by pursuing an explicit response to a proposal, but very rarely make the “problematic” nature of the interaction visible to each other or the analyst. In the present paper, we will show that the CD Scale finds communication defects in the sequences under analysis but that the defects do not primarily involve the discontinuity of the sequence. Thus CA and the CD Scale look at interaction from different perspectives and disagree on what is considered an interactional problem.

Keywords: Conversation Analysis, Communication Deviance Scale, cross-method comparison, interaction, proposal sequence.

1. Introduction

In this paper, we compare two methodological approaches by applying both of them on a set of interactional data that have been collected for a schizophrenia study in Finland between the late 1970s and early 1990s (see e.g. Tienari *et al.* 2004). As part of the previous study, which focused on schizophrenia risk factors, two psychologists used the Communication Deviance (CD) Scale to score the data for problems in family interaction. In our previous studies (Siitonen *et al.* 2012, Siitonen and Wahlberg 2015a, 2015b), we have analysed the data through Conversation Analysis (CA) without knowledge of the original CD scoring, i.e. in order to enable unbiased comparison between the methodologies.

The data consist of audio recordings of family-interaction tests in which the task is to seek consensus on Rorschach inkblot interpretations. Intrinsicly, the task prompts family members to propose inkblot interpretations and respond to each other's proposals. Such an activity may be considered a type of negotiation, that is, a form of social interaction which seeks an agreement or a compromise and is based on a proposal sequence (e.g. Arminen 2005: 169). As a social action, a proposal initiates a course of action that projects an acceptance or a rejection as a sequentially relevant next action (Davidson 1984: 102). Thus a proposal presents the issue at hand as contingent on the commitment of both the proposer and the recipient (Stevanovic and Peräkylä 2012: 302). In a canonical proposal sequence, A makes a proposal, B accepts the proposal and A confirms the unanimity (Arminen 2005: 169). In our previous studies, however, we have focused on proposal sequences in which the course of action initiated by a proposal is not straightforward. We focused on such sequences in the CA-based part of the study in order to account for as many potentially problematic sequences as possible for the comparison between CA and the CD Scale, the latter of which is used to score deviant communicative features.

In our previous studies, we have thus examined sequences where a proposal 1) receives no verbal response (Siitonen *et al.* 2012); 2) is followed by a response particle that does not take an explicit stand on the proposal (Siitonen and Wahlberg 2015b); or 3) is followed by an evasive response (Siitonen and Wahlberg 2015a). We have shown that the participants in the test orient to an acceptance or a rejection as a hearably-next-action because after a silence, a particle response or an evasive response, they pursue a more explicit stand-taking on the proposal. In spite of this, they hardly ever initiate a repair (Schegloff *et al.* 1977; see Section 2) or bring into question the delay or absence of an acceptance or a rejection. In other words, they do not make the “problematic” nature of interaction visible to each other or the analyst. Under the circumstances, a conversation analyst cannot refer to these sequences as problematic because the participants themselves do not orient to them as such. Instead, the sequences show subtle and consummate interactional practices which the participants use to evade the explicit rejection of a proposal or to manage their orientations to different courses of action.

In this paper, we approach the same proposal sequences from the perspective of the Communication Deviance Scale in order to analyse whether the methods of CA and CD resonate with and could complement each other (see Chou *et al.* 2011). After presenting our conversation analytic observations about the sequences, we will demonstrate how the CD Scale assesses the sequences on the premise that family interaction comprises an enduring environment for the growth and personality development of a child and significantly influences the development of his or her thought processes and mental health (Wynne and Singer 1963a). Hence, the CD Scale evaluates “the impact that certain forms of communication hypothetically would have upon the listener, and especially upon a growing child” (Wynne *et al.* 1977: 266). We shall show that the CD Scale finds communication defects in sequences in which a proposal receives no verbal response or is followed by an evasive response. Yet

the grounds for the defects do not necessarily involve the discontinuity of the proposal sequence. Furthermore, we shall show that while CA analyses interaction at the level of action sequences and activity, the CD Scale typically assesses interaction at the level of separate utterances or two consecutive turns. Indeed, we shall show that the approaches differ fundamentally from each other in terms of their methodological solutions and their views on interaction.

In what follows, we will first present the CA and CD Scale methods (Sections 2 and 3) and then our data (Section 4). Thereafter, we will analyse three examples, representing three types of proposal sequences, using both methods (Section 5). We will conclude the paper by discussing the similarities and differences between the two analytical methods, as well as the limitations of these methods in complementing each other.

2. CA – a method for analysing social interaction

Conversation Analysis is a qualitative, empirical research method for identifying and describing actions in interaction. It uses audio or video recordings of naturally occurring activities as research data. Conversation analysts see interaction as contingently connected sequences of turns that are designed to ‘do’ something (e.g. Schegloff 2007: 3; Drew 2013: 131). Turns, or actions, are not, therefore, interpretable as isolated units but are both context-shaped and context-renewing (Heritage 1984: 242). In other words, an action’s contribution to an ongoing activity is understood only by reference to the context. Moreover, each action forms the context for the next action in the sequence. Indeed, such progressivity is a default feature of interaction, evidenced by the fact that participants orient to it. Progressivity enables participants to both produce their own actions and understand the actions by others (Schegloff 2007: 15). CA analysis as well as its reliability are based on analysing

and evidencing these features to the reader by providing access to the details of the interaction through careful transcriptions.

The starting point for CA is the participants' orientations, which are displayed in their own conduct. That is, in studying social interaction, the analyst examines what participants do and relies on the same features of interaction that the participants use in producing and understanding interaction (Sidnell 2013: 79). This methodological resource – the next turn proof procedure – is intrinsic to the data themselves and is provided by the interactional nature of conversation, the turn-taking organization of conversation (Sacks *et al.* 1974: 728–729).

Mutual understanding in interaction is not axiomatic, and different problems in speaking, hearing and understanding may undermine intersubjectivity. However, language use in social interaction has an intrinsic mechanism for maintaining or restoring intersubjectivity and thus ensuring the progressivity of interaction, namely the set of practices referred to as “repair” (Schegloff *et al.* 1977; Schegloff 2007: xiv). Thus repair is a device that enables a participant to make interactional problems visible to the other participants, and importantly, to the analyst as well. Consequently, conversation analysts have been able to point out specific problems in everyday interaction and resources participants use in managing the problems, when studying talk by family members or friends involving at least one participant who suffers from, for example, impaired hearing, Parkinson's disease or aphasia (see Pajo 2013; Saldert *et al.* 2014; Barnes 2016, respectively).

3. The CD Scale – a tool for scoring interaction

The Communication Deviance Scale is a method for quantitatively assessing (family) interaction for the purposes of schizophrenia research. The scale stems from a study focusing on links between

family interaction and types of thinking disorders¹ in offspring that was run by Wynne and Singer in the early 1960s. The original study arose from the clinical observation that the interaction in families with young adults with schizophrenia frequently appeared to differ from the interaction in other families (Wynne and Singer 1963b: 193). In their study, Wynne and Singer (1963a, 1963b; Singer and Wynne 1965a, 1965b) saw an individual and a family as subsystems which are intimately and complexly interrelated. They considered communication a sequential process and found that certain parental forms of *focusing attention, communicating* and *relating to others* were associated with specific forms of schizophrenic ego impairment in offspring (Singer and Wynne 1966: 260, 264). These forms of interaction were then called “communication deviance” (CD) and, later, frequent parental CD have been shown to be connected to thought disorders and schizophrenia-spectrum disorders in the offspring (e.g. Wynne *et al.* 1977; Wahlberg *et al.* 1997; Wahlberg *et al.* 2000; Roisko *et al.* 2014; de Sousa *et al.* 2014).

According to Singer and Wynne (1966: 263):

“a meaningful communicative transaction is one in which a person is able to share with another person a focus of attention (- -); he is able to communicate clearly and efficiently (neither too wordily nor too cryptically), to convey a point to the listener, and to indicate that he, the speaker, is committed to what he is saying”.

The inverse of this, talk with frequent CD, confuses the listener and makes him or her wonder whether he or she heard or understood correctly (Wahlberg 1998: 522). The CD scorer intends, therefore, to assess the impact on the listener: the scorer positions him- or herself as a “generalised other” who tries to grasp “the meaning, flow and closure” of the speaker’s talk (Wahlberg *et al.* 1997: 357). Singer and Wynne (1966) define particular features of parental behaviour for a reliable and efficient scoring of CD. Since the earliest CD studies, interactions have been evaluated most commonly within the framework of projective techniques in which a testee is requested to disambiguate an ambiguous

stimulus (see e.g. Miklowitz and Stackman 1992: 3; Roisko *et al.* 2014; de Sousa *et al.* 2014). Such a stimulus may comprise a Rorschach inkblot card or other test pictures. Singer and Wynne (1965a: 190) emphasise, however, that in the CD Scale the Rorschach test is not used in the usual fashion, i.e. to elicit expressions of intrapsychic projections. Rather, the test is used to encourage interaction between a testee and a tester (Wynne *et al.* 1977: 261).

Because clinical observations of family interaction have shown that the degree of disturbance in family interaction is greater and is qualitatively different from that found in the contributions of any individual family member, projective techniques for evaluating family members together were developed (Wynne and Singer 1963b). The Family Rorschach method studies family interaction directly; in the test, the interaction is centred on family members interpreting the cards to each other and seeking consensus on their interpretations (see Loveland *et al.* 1963). Furthermore, a CD scoring manual for Spouse and Family Rorschachs (Singer *et al.* 1986; see also Singer and Faunce 1977) containing 42 criteria and respective examples was established by Singer and Wynne and a Finnish schizophrenia study team. In Section 5, we will scrutinise five of the criteria, namely 1) Concrete-Set Responses; 2) Abstract, Global Terms and Technical Phrases; 3) Inconsistent and Ambiguous References; 4) Conversation Stoppers; and 5) Odd, Tangential, Inappropriate Responses to Questions and Remarks.

4. Data

The data come from the *Finnish Adoptive Family Study of Schizophrenia*, which proposes an association between high genetic risk of schizophrenia-spectrum disorders, confusing family communication and severe mental disorders in offspring (e.g. Tienari *et al.* 2004). Altogether 382 families² took part in the study between the late 1970s and early 1990s. The data of the present paper

consist of audio recordings of Spouse and Family Rorschach tests performed by 22 of the original families that had children aged between 13 and 16 years.

The test is performed at home and only the family members take part in the test. In the beginning of the test, the psychiatrist instructs the family that the inkblots on the cards do not represent anything specific and that there are no right or wrong responses to them. The psychiatrist instructs the family members to look at the inkblots together and to attempt to reach consensus on as many responses as possible.

The recordings, approximately 10.5 hours, were originally transcribed by the research assistant of the Adoptive Family Study. Thereafter, these verbatim transcriptions were analysed and scored by two psychologists from the Adoptive Family Study in the 1990s. In other words, the psychologists did not have access to the actual recordings. For our CA studies, we have re-transcribed the relevant parts of the data according to the more narrow CA transcription technique developed by Gail Jefferson (see Seppänen 1997). The examples also contain a morpheme-by-morpheme gloss and a free English translation (see Appendices A and B for keys to transcription and glossing symbols).

The selection of the sequences under examination was based on the CA understanding of interaction as sequentially unfolding activity. We focused on three types of proposal sequences that do not proceed along the typical course of action initiated by a proposal. The entire data contain 585 sequences where a new inkblot interpretation is proposed and responded to for the first time. Of these, we focused on the sequences in which a proposal 1) is not verbally responded to (Siitonen *et al.* 2012); 2) is initially responded to with a stand-alone particle (Siitonen and Wahlberg 2015b); or 3) is initially responded to with an evasive turn (Siitonen and Wahlberg 2015a) (see Table 1).

[Insert Table 1 about here.]

In the data the particle responses (which do not openly resist the course of action projected by the proposal) are a more frequent means to respond to a proposal compared to an evasive response or withholding a response. The category “Other” in Table 1 includes explicit acceptances and rejections and other responses yet to be analysed further.

5. Two views on interaction

In this section, we will show that the CD Scale finds communication defects in the proposal sequences under examination but also that the defects are not with respect to the discontinuity of the sequences. The reason for this is that the CD Scale relies on pre-defined criteria and assesses interaction at the level of individual utterances or two consecutive turns. CA, in turn, analyses interaction at the level of sequences and activity, and the analyst focuses on the participants’ orientations in the interaction.

5.1. A proposal receives no response – sequence vs. separate utterances

In the field of CA, Davidson (1984: 104, 1990: 152) has highlighted that a silence following a proposal is taken by the proposer as a display of the recipient’s finding the proposal troublesome or problematic in some way. Furthermore, the next turn by the proposer after the silence is the product of his or her analysis of the possible problem with the proposal (Davidson 1990: 153). Should the proposer choose to clarify the content of the proposal, he or she treats the silence as a display of an understanding problem of a sort. The proposer’s orientation to a post-proposal silence as a display of a problem concerning access to the interpretation proposal is shown in Example 1.

(1) Family 17, spouse Rorschach test, Card III (M = mother, F = father)

01 (3.4)
02 M: .hh †hei mää saa-n viälä kaks
hey I get-1sg too two
.hh †hey I see two bears
03 kar:hu-a.
bear-PAR
also.
04 (.)
05 M: .hhhh
06 (.)
07 M: toss-on karhu ja
there be-3sg bear and
there is a bear and
08 silmäripse-t,
eyelash-PL
the eyelashes,
09 (0.7)
10 M: ja tota noin,
and PRT PRT
and err,
11 (.)
12 M: mä en tiiä mitä niiden
I NEG-1sg know what their
I don't know what they
13 pää-ssä on.
head-INESS be-3sg
have on their heads.
14 (1.5) ((a sound of friction:
15 shows with a pen))
16 M: ne on karnevaale-i-s.
they be-3sg carnival-PL-INESS
they're at a carnival.
17 tää-hä on las-ten
this-CLI be-3sg child-PL-GEN
this is
18 kuv-i-a kaik[ki.]
picture-PL-PAR all
all children's pictures.
19 F: [he] he [he
20 M: [he
21 F: he l(h)as-ten k(h)uv-i-a
child-PL-GEN picture-PL-PAR
he all children's
22 M: he he he he he he
F: kaikki.]
all
pictures.]
23 M: he he] he
24 (0.3)
25 F: joo.
PRT

yeah.
 26 (1.9)
 27 F: se on ni.
 it be-3SG PRT
 that's right.
 28 (7.9)

The mother's proposal *two bears* (l. 2–3) does not receive any audible response, and after inhaling, she herself takes the next turn. In lines 7–8, she indeed considers the silence a problem with access to the recognition of the interpretation as she indicates the location of the interpretation in the inkblot and adds the detail *silmäripset* 'the eyelashes' to the description. Despite the more detailed version of the proposal, yet another silence ensues (l. 9). Consequently, the mother further elaborates on the interpretation (l. 10–13), but a third silence follows. After that, the mother continues to pursue the father's participation by describing the interpretation further (l. 16). Between her utterances in lines 16–18, however, she changes her own position from describing the particular inkblot interpretation (*the bears*) to assessing the inkblot on a general level (see Pomerantz 1984: 159–161). This tactic of pursuing a response is eventually successful, and the father starts to laugh in overlap with her last syllable and recycles her words *lasten kuvia kaikki* 'all children's pictures'. As for the actual interpretation proposal, *two bears*, it is never responded to and thus is never explicitly accepted or rejected.

From the perspective of the CD Scale, the "no-response" sequences in the data typically involve three types of scores, which is also the case in Example 1. Firstly, the mother's utterance in lines 7–8 receives the score "Concrete-Set Responses" because of the noun *silmäripset* 'eyelashes'. Concrete-Set Responses refer to the speaker's "incorrect" orientation to the test task. In other words, in the Spouse and Family Rorschach test, the task requires a family member to relate to the others what the inkblot looks like to him or her, or what it resembles. However, if they talk at an overly concrete level, for example if they identify their own dog in the inkblot, they divert their own and also the others' orientation away from the task (Singer and Wynne 1966: 276).

In the example, the CD score is due to the fact that people do not ordinarily talk about such concrete things as a bear's eyelashes, and the eyelashes are not visible in the inkblot. Secondly, the mother's utterance *ne on karnevaaleis* 'they are at a carnival' (l. 16) receives the score "Abstract, Global Terms and Technical Phrases". The score refers to an abstract term or form of expression when a simpler, more specific term would convey far more information. Because very little is visualised or made explicit with such a term, the recipient cannot share meaning with the speaker. Consequently, the recipient does not know what to look for in the inkblot (Singer and Wynne 1966: 280). In the example, the ground for the score is that the utterance describes the interpretation at an excessively general level, because there are many different types of carnivals. Consequently, the recipient may not be able to understand what the proposer sees in the inkblot. Thirdly, the mother's utterance *täähän on lasten kuvia kaikki* 'this is all children's pictures' (l. 17–18) receives the score "Inconsistent and Ambiguous References", which means that the intelligibility of the talk declines if (within a series of related statements) the speaker shifts tense, gender or number, or uses an ambiguous reference point. The speaker may, for example, shift from the present to past tense or from singular to plural. Such references distract attention and make the recipient confused about whether to attend fully and consider what he or she is hearing (Singer and Wynne 1966: 270). In the example, the score is due to the fact that the singular subject and the plural predicative complement of the utterance are not congruent. The recipient may not know whether the speaker is talking about the picture at hand or all the pictures of the test. In conclusion, the mother gets three CD points due to the problems with the content of her utterances. More specifically, she either describes the interpretation at an excessively concrete or abstract level, or there is a mismatch between a singular and a plural sentence constituent.

It is noteworthy that the CD Scale finds communication defects in the "no-response" sequences, while from the CA perspective these sequences involve discontinuity. From the CA perspective it is notable

that, despite many pursuits to elicit a response, the initiating action – the proposal – is never responded to. Consequently, the activity in the sequences appears ineffective in terms of the primary task, i.e. arriving at mutual interpretations. The CD Scale, in turn, looks at individual utterances regardless of the context and typically is drawn to inappropriate expressions or ungrammatical syntax in the utterances by the proposer who is pursuing a response.

5.2. A stand-alone particle response to a proposal – implicit rejection vs. non-problematic response

Conversation analytic research has shown that a proposal may be responded to with only a stand-alone particle (e.g. Davidson 1984; Houtkoop 1987; Sorjonen 2001; Siitonen and Wahlberg 2015b). Even though some response particles have been identified as “weak agreement tokens” that the proposer may take as a possible pre-rejection (see Davidson 1984: 112; Houtkoop 1987: 76, 81), a stand-alone response particle is not an explicit rejection of a proposal. In terms of the acceptance of a proposal, on the other hand, a mere response particle is not sufficient on its own and the participants typically continue to collaboratively elaborate on it in order to reach acceptance of the proposal (Siitonen and Wahlberg 2015b). That is, if a particle is the only response to a proposal, the proposal is left hanging in the air, so to speak. In practice, this kind of a *non-acceptance* indicates that the proposal has been implicitly rejected (Siitonen and Wahlberg 2015b: 78; see also Stevanovic 2012: 799). This is indeed something that happens in Example 2.

(2) Family 7, spouse Rorschach test, Card III (M = mother, F = father)³

01 M: ja tä-st >tule-e< ihan, (.)
 and this-ELA come-3SG just
 and here >it's< just, (.)
 02 (m-) tämä on
 this be-3SG
 (l-) right here
 03 =ihan muistutta-a perhos-ta.
 quite resemble-3SG butterfly-PAR
 =it looks just like a butterfly.

04 (.)
 05 F: mm,
 06 M: tämä punanen.
 this red
 this red part.
 07 (0.7)
 08 F: mm.
 09 (1.8)
 10 M: tai sit ne muistutta-a ihan
 or then they resemble-3SG quite
 or then these might resemble
 11 mitä ↑vaan se voi muistutta-a
 what just it can-3SG resemble-INF
 it might resemble anything at all
 12 [kuul-e.]
 hear-IMP-2SG
 [you know.]
 13 F: [(mm.)]
 14 (1.7)

In lines 1–3, the mother proposes a new interpretation, *butterfly*, and the first response to it is the father's *mm* (l. 5). The mother takes the particle *mm* as a display of the father's trouble with access to and hence acceptability of the interpretation because in her next turn she indicates the exact position of the *butterfly* in the inkblot (l. 6). Despite her clarification, the father repeats the *mm* in line 8. Consequently, after a 1.8-second silence, the mother abandons the *butterfly* interpretation and indeed withdraws from giving any candidate interpretation, saying that the inkblot can resemble anything at all (*ihan mitä vaan*; l. 10–11; Siitonen and Wahlberg 2015b: 78). Moreover, by using the turn-initial *tai sit* 'or then' she clearly offers an alternative. She, therefore, indicates that she does not consider the father's *mm* responses a display of acceptance nor the *butterfly* as accepted. In sum, the father's non-acceptance of the proposal, on the one hand, and the mother's withdrawal from it, on the other, are subtle and consummate interactional practices which are used to evade the explicit rejection of the proposal (Siitonen and Wahlberg 2015b: 78).

Notwithstanding the ideal of clear and effective communication (Singer and Wynne 1966: 263), the CD Scale does not take into account the implicitness in Example 2. Indeed, in the data, there are 92

mm's, *jaa*'s and *joo*'s as the first response to an inkblot-interpretation proposal and none of them is scored as deviant by the psychologists of the Adoptive Family Study. In summary, neither of the methods considers a stand-alone particle response to a proposal an interactional problem. CA sees it as a practice to implicitly reject a proposal, whereas the CD Scale sees it as a non-problematic response.

5.3. An evasive response to a proposal – orientation to activity vs. two consecutive turns

From the CA perspective, examples 1 and 2 showed that a silence or a particle response following a proposal may be treated by the proposer as a display of the interlocutor's problem with access to the inkblot-interpretation proposal. In these cases, the proposer attempted to help the recipient to gain access to the proposal by explicating the interpretation in the inkblot. However, post-proposal silence or a delayed response can be received in different ways. If the proposer pursues a response but does not expand on the interpretation, he or she effectively treats the silence as a problem of taking a stand on the proposal. Turn design resources for mobilising a response include, among others, interrogative morphosyntax and explication of the recipient's epistemic expertise on the topic relative to the speaker (Stivers and Rossano 2010: 8). Despite the increased pressure to respond, the recipient may remain unwilling to take a stand on the previous proposal. Should this be the case, the recipient may produce an evasive response that halts the course of action initiated by the proposal and focuses on something else. The recipient may, for example, produce an account for not answering the proposal and thus reject the whole test task.

Whether such an action is appropriate or permissible in the Family Rorschach test is hardly ever explicitly negotiated (Siitonen and Wahlberg 2015a). Rather, the family members display, with subtle means, their orientation to the task and their understanding of what constitutes appropriate conduct

in the test. It is along these lines that in Example 3 the proposer pursues a response by pressuring the recipients and a recipient withholds a stand-taking response by producing an account (see Siitonen and Wahlberg 2015a). In the example, the test has already lasted over one hour, and the mother, the father and the 15-year-old daughter are interpreting the last inkblot of the test. Even though they have found several joint interpretations for the final card by this point, the mother proposes yet another interpretation in lines 3–5.

(3) Family 13, family Rorschach test, Card VIII (M = mother, D = daughter, F = father)⁴

01 (2.2)
 02 ?: ((a sniff))
 03 M: †on tässä vähän #o:# †on
 be-3SG here slightly be-3SG
 †here it's kind of #e:# †this
 04 tää vähän niinku semmonen-ki
 this slightly like such-CLI
 is slightly like kind of
 05 niinku täss-o-is liekki-t.
 like here be-3SG-COND flame-PL
 like this could be flames.
 06 (2.4)
 07 M: on-ko teidä-n miele-stä.
 be-3SG-Q you-PL-GEN mind-ELA
 do you think so.
 08 (1.2)
 09 D: .hhh (.) °#mää jaksa ennää ees
 I can anymore even
 .hhh (.) °#I can't even think
 10 ajatel-la.#° ((exhausted))
 think-INF
 anymore.#° ((exhausted))
 11 (3.2)
 12 F: .hh tuo-sta löyty-y
 that-ELA be found-3SG
 .hh there's also that
 13 myös-ki se eläime-n pää.
 also-CLI it animal-GEN head
 animal head.
 14 M: mm.
 15 (0.5)
 16 F: hhhhhh
 17 (1.0)
 18 M: †ol-i-ko siinä teiä-n
 be-3SG-PST-Q there you-PL-GEN
 † did you think there were

19 *miele-stä ne niinku liekki-t.*
 mind-ELA they like flame-PL
 like flames there too.

20 (0.5)

21 F: *tästä näin nämä*
 this-ELA PRT these
 right here these

22 *o-is liekki-t*
 be-3SG-COND flame-PL
 could be flames

The mother's cautious interpretation proposal *liekit* 'flames' is met with only a 2.4-second silence. After that, she pursues a response by designing her next turn as an interrogative and by shifting from a turn that focuses on her impressions (l. 3–5) to a turn that focuses on the recipients' impressions (l. 7; see Stivers and Rossano 2010; see also Rauniomaa 2007: 228–230). Consequently, after another silence, the daughter produces – as the first response to the proposal – an account for not answering the question (l. 9–10). By saying that she can no longer think, she reveals that she is tired of the test. This is something that the parents consider inappropriate or not permissible: Firstly, the daughter's turn is followed by a long silence (l. 11). Secondly, the father changes the topic and totally ignores her previous action(s) (l. 12–13). In his turn, he resumes the inkblot interpretation *eläimen pää* 'animal head' which the family members had earlier agreed on (not shown in the example). In so doing, he re-orientes to the test task and inkblot interpretations even though he does not explicitly discuss the previous interpretation *flames*. Nonetheless, he uses the inclusive particle *myöski(n)* 'also' and thereby implies that he sees something – possibly the *flames* – in addition to the *animal head*. The mother does not take his turn as a sufficient acceptance of her interpretation *flames* but only acknowledges the turn with the particle *mm* (l. 14), which receives the informing (i.e. the *animal head* is no longer a proposal) as understood and unproblematic. Moreover, she pursues a stand-taking response to the original proposal by running her interpretation by the others once again (l. 18–19). It is only at this point of the conversation that the father and the daughter specifically orient to discussing the interpretation *flames* (l. 21–22, the daughter's turn is not shown in the example). In conclusion, the course of action initiated by a proposal is halted by the daughter, who responds to it with an

evasive turn. The proposer works hard, using three turns in all, in order to convince the others to discuss the particular proposal.

From the perspective of the CD Scale, the “proposal – evasive response” sequences in the data typically receive two types of scores, which is evident in Example 3. Firstly, the daughter receives the score “Conversation Stoppers” in line 9–10 due to her complaint about being tired and the implication that she does not want to continue. The score refers to utterances that break the continuity of the task and force the recipient to stop and ponder what the speaker said or meant (Singer and Wynne 1966: 263). Secondly, the father receives the score “Odd, Tangential, Inappropriate Responses to Questions and Remarks” (l. 12–13) because he does not react to the daughter’s prior turn, instead resuming an old interpretation. The score relates to another way of breaking the continuity of the task, i.e. responding tangentially or inappropriately to other participants’ questions or remarks, or responding to a different issue than that which the other participant was raising (Singer and Wynne 1966: 275). Thirdly, the mother receives the same score for her turn in lines 18–19 because she ignores the previous turn (by the father; l. 12–13) and resumes her own proposal. Even though this could be considered an attempt to create cohesion in negotiating the interpretation *flames*, the resumption is not explicated to the daughter, who may, therefore, find it confusing. In summary, all the family members receive one CD score for ignoring the immediately preceding turn in the conversation.

In the analysis of the sequences in which a proposal is followed by an evasive response, CA and the CD Scale agree with each other at a certain level. More specifically, both approaches highlight some sort of trouble with the continuity (progressivity) of the actions. However, CA sees the disaligning actions as resources that the participants use to manage their orientations to different courses of action. In the analysis, CA underlines the entire sequence and the participants’ orientation to the

context, i.e. the test task in these examples. The CD Scale, in turn, assesses an individual turn in relation to its prior turn. Disaligning consecutive turns, therefore, are seen as confusing and disruptive and as a type of communication deviance.

6. Discussion

In this paper, we have used *Conversation Analysis* and the *Communication Deviance Scale* side by side to analyse interactional data originally collected and scored for the Finnish Adoptive Family Study of Schizophrenia (e.g. Tienari *et al.* 2004). In the data, the families negotiate for consensus on Rorschach inkblot interpretations, and the elementary actions in the activity are proposals and responses to proposals. We have earlier approached the data from the CA perspective and have scrutinised the proposal sequences that did not progress along the typical course of action initiated by a proposal. More specifically, we focused on the sequences in which a proposal was responded to with a silence (Siitonen *et al.* 2012), a stand-alone response particle (Siitonen and Wahlberg 2015b) or an evasive response (Siitonen and Wahlberg 2015a). For the purposes of this paper, we then acquainted ourselves with the CD Scale and the CD scores that the sequences had received as part of the Adoptive Family Study. Thereafter, we carried out a comparison between these two approaches to interaction.

In the data, the proposal sequences often end without a clear acceptance or rejection. Yet the delay or absence of an acceptance or rejection is somewhat reasonable given the activity under examination: finding joint inkblot interpretations is not necessarily a straightforward task and it may require time to comprehend what the other person is describing in the inkblot. Consequently, the participants may not be able or willing to immediately form an opinion with respect to the interpretation. As we have

shown earlier, this is oriented to by the family members: they orient to the discontinuity of the sequence by pursuing an explicit response to a proposal but very rarely make the “problematic” nature of interaction visible to each other or the analyst, e.g. by initiating a repair or questioning the delay or absence of the hearably-next-action. Under the circumstances, we as analysts do not refer to these sequences as “problems” because the participants themselves do not orient to them as such. However, one may ponder whether a pursuit of a response constitutes a display of a problem in interaction. As pursuing or mobilising a response is an interactional practice found in talk by “normal”, non-diagnosed people (see Pomerantz 1984, Stivers and Rossano 2010), to consider this practice as a possible indication of a problem in interaction would necessarily depend on its prevalence (for the sake of comparison, see the pervasiveness of repair in aphasic conversations in Antaki and Wilkinson 2013: 535).

The CD Scale, on the other hand, finds communication defects in sequences where the progressivity of the activity is halted or suspended and the proposer expends several turns in pursuit of an acceptance or rejection – in some cases to no avail. Yet these defects do not involve the discontinuity of the activity but the content of an individual turn or the relation of two consecutive turns. The defect may be related to whether something is expressed with too abstract or concrete words, whether a speaker uses syntactically incongruent constituents, or whether a turn ignores the immediately preceding turn (regardless of the ongoing sequence or activity). Some of the estimates are “based on a value judgment made by the rater” (Singer and Wynne 1966: 268), and Wynne *et al.* (1977: 262) emphasise the importance of establishing and maintaining sufficient inter-rater reliability. Indeed, by using the criteria in the scoring manual, two raters may obtain a high intra-class correlation (0.92, see Roisko *et al.* 2011: 67) for CD scores in spouse and family Rorschach transcripts. Nevertheless, although a high inter-rater reliability indicates that the raters are able to score according to the CD

criteria, it does not guarantee that the communication defects described by the criteria are interactional problems in a CA sense.

The methods of CA and the CD Scale also differ from each other in terms of who is to be responsible for problems of interaction. Naturally, the difference originates from the different aims of the methods. CA describes in detail the practices used in social interaction, and when analysing a challenging interactional situation, CA explicates the resources the participants use for managing the situation *together* (see e.g. Antaki and Wilkinson 2013). The CD Scale, in turn, represents criteria for identifying communication defects. Even though each CD criterion is qualitative by nature, the criteria serve the purpose of tabulating participants' *personal* communication defects for the purposes of quantitative psychiatric research. It is also noteworthy that in order to receive a CD score, a participant must produce something. For example, in sequences in which the recipient does not respond to a proposal, it is the proposer pursuing a response who receives a CD score, not the silent recipient. As for CA, it sees interaction as mutually negotiated and constructed activity, and has no a priori answer, e.g. to the questions of what constitutes an appropriate or sufficient number of pursuits of a response and who is to blame if a proposal eventually receives no response.

As we have addressed only certain proposal sequences and touched on 5 out of the 42 communication defects in the CD Scale, this paper only scratches the surface of how CA and the CD Scale compare in analysing interaction. Nevertheless, our comparison shows that in practice CA and the CD Scale analyse interaction at different levels. This difference together with the different understandings of participants' contributions to interaction (collaboratively negotiated vs. personal), and the analyst's perspective in interpreting interaction (participants' vs. the view of a generalised other), are so fundamental that the methods cannot concede each other's methodological solutions and complement one another (cf. Chou *et al.* 2011). Under the circumstances, it is still most interesting that the CD

Scale finds communication defects in proposal sequences in which the course of action initiated by a proposal is halted or suspended. This highlights the wider questions of what “communication deviance” indeed is and how it should be measured. These same questions have been discussed from time to time since the first papers by Wynne and Singer (see e.g. Miklowitz and Stackman 1992: 35). Our study does not have a direct answer to these questions, but it does offer CD researchers a new perspective on analysing interaction in terms of progressivity, as a mutual accomplishment, at the level of sequences and activity.

Appendix A: Symbols used in transcription (adapted from Seppänen 1997).

.	falling intonation
,	level intonation
↑	rise in pitch
<u>underlining</u>	emphasis
[utterances starting simultaneously
]	point where overlapping stops
(.)	micro pause
(0.4)	pause (length in tenths of a second)
=	latching of turns
> <	talk inside is done with a faster pace than the surrounding talk
:	lengthening of a sound
◦ ◦	quiet voice
.hhh	inhalation
hhh	exhalation
he he	laugh
w(h)ord	within-speech aspiration, usually indicating laughter
# #	creaky voice
-	truncation
(word)	uncertain hearing
(())	researcher's comment

Appendix B: Symbols used in glossing.

1SG	first-person singular ending
2SG	second-person singular ending
3SG	third-person singular ending
ELA	elative
GEN	genitive
INE	inessive
PAR	partitive
CLI	clitic
COND	conditional
IMP	imperative
INF	infinitive
NEG	negation
PL	plural
PRT	particle
PST	past tense
Q	question marker

Notes

¹ According to current knowledge, thought disorders are common in schizophrenia and other severe psychiatric disorders. However, they are not totally absent among subjects without any psychiatric disorder, especially in connection with acute distress and anxiety. For a summary of the topic, see e.g. Roisko (2014).

² The Ethics Committee of the Medical Faculty at the University of Oulu has approved the Finnish Adoptive Family Study of Schizophrenia. The testee families have given their informed and free consent before taking part in the study.

³ The same extract has been analysed in the previous study by the first and the third author (Siitonen & Wahlberg 2015b: 78). The analysis focused on three Finnish particles as responses to a proposal in negotiation activity.

⁴ The same extract has been analysed in the previous study by the first and the third author (Siitonen & Wahlberg 2015a: 576–577). The analysis focused on the responses that deviate from the course of action projected by a proposal.

References

- Antaki, C. and Wilkinson, R. (2013) Conversation analysis and the study of atypical populations. In J. Sidnell and T. Stivers (eds) *The Handbook of Conversation Analysis*, 533–550. Chichester: Wiley-Blackwell.
- Arminen, I. (2005) *Institutional Interaction. Studies of Talk at Work*. Aldershot: Ashgate.
- Barnes, S. (2016) Aphasia and open format other-initiation of repair: Solving complex trouble in conversation. *Research on Language and Social Interaction* 49 (2): 111–127.
- Chou, W.-Y. S., Han, P., Pilsner, A., Coa, K., Greenberg, L. and Blatt, B. (2011) Interdisciplinary research on patient-provider communication: A cross-method comparison. *Communication & Medicine* 8 (1): 29–40.
- Davidson, J. A. (1984) Subsequent versions of invitations, offers, requests, and proposals dealing with potential or actual rejection. In J. M. Atkinson and J. Heritage (eds) *Structures of Social Action. Studies in Conversation Analysis*, 102–128. Cambridge: Cambridge University Press.
- Davidson, J. A. (1990) Modifications of invitations, offers and rejections. In G. Psathas (ed) *Interaction Competence*, 149–179. Washington: University Press of America.
- Drew, P. (2013) Turn design. In J. Sidnell and T. Stivers (eds) *The Handbook of Conversation Analysis*, 131–149. Chichester: Wiley-Blackwell.
- Heritage, J. (1984) *Garfinkel and Ethnomethodology*. Cambridge: Polity Press.
- Houtkoop, H. (1987) *Establishing Agreement. An Analysis of Proposal-acceptance Sequences*. Dordrecht: Foris Publications.
- Levinson, S. C. (2013) Action formation and ascription. In J. Sidnell and T. Stivers (eds) *The Handbook of Conversation Analysis*, 103–130. Chichester: Wiley-Blackwell.
- Loveland, N. T., Wynne, L. C. and Singer, M. T. (1963) The Family Rorschach: A new method for studying family interaction. *Family Process* 2 (2): 187–215.

- Miklowitz, D. J. and Stackman, D. (1992) Communication deviance in families of schizophrenic and other psychiatric patients: Current state of the construct. In E. F. Walker, R. H. Dworkin and B. A. Cornblatt (eds) *Progress in Experimental Personality and Psychopathology Research*, 1–46. New York: Springer Publishing Company.
- Pajo, K. (2013) The occurrence of ‘what’, ‘where’, ‘what house’ and other repair initiations in the home environment of hearing-impaired individuals. *International Journal of Language & Communication Disorders* 48 (1): 66–77.
- Pomerantz, A. (1984) Pursuing a response. In J. M. Atkinson and J. Heritage (eds) *Structures of Social Action. Studies in Conversation Analysis*, 152–163. Cambridge: Cambridge University Press.
- Rauniomaa, M. (2007) Stance markers in spoken Finnish. In R. Englebretson (ed) *Stancetaking in Discourse*, 221–252. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- Roisko, R. (2014) *Parental Communication Deviance as a Risk Factor for Thought Disorders and Schizophrenia Spectrum Disorders in Offspring. The Finnish Adoptive Family Study*. Oulu: University of Oulu.
- Roisko, R., Wahlberg, K.-E., Hakko, H., Wynne, L. and Tienari, P. (2011) Communication deviance in parents of families with adoptees at a high or low risk of schizophrenia-spectrum disorders and its associations with attributes of the adoptee and the adoptive parents. *Psychiatry Research* 185: 66–71.
- Roisko, R., Wahlberg, K.-E., Miettunen, J. and Tienari, P. (2014) Association of parental communication deviance with offspring's psychiatric and thought disorders. A systematic review and meta-analysis. *European Psychiatry* 29: 20–31.
- Sacks, H., Schegloff, E. A. and Jefferson, G. (1974) A simplest systematics for the organization of turn-taking for conversation. *Language* 50 (4): 696–735.

- Saldert, C., Ferm, U. and Bloch, S. (2014) Semantic trouble sources and their repair in conversations affected by Parkinson's disease. *International Journal of Language & Communication Disorders* 49 (6): 710–721.
- Schegloff, E. A. (2007) *Sequence Organization in Interaction*. Cambridge: Cambridge University Press.
- Schegloff, E. A., Jefferson, G. and Sacks, H. (1977) The preference for self-correction in the organization of repair in conversation. *Language* 53 (2): 361–382.
- Seppänen, E. (1997). Vuorovaikutus paperilla [*Interaction on paper*]. In L. Tainio (ed) *Keskustelunanalyysin perusteet*, 18–31. Tampere: Vastapaino.
- Sidnell, J. (2013) Basic conversation analytic methods. In J. Sidnell and T. Stivers (eds) *The Handbook of Conversation Analysis*, 77–99. Chichester: Wiley-Blackwell.
- Siitonen, P., Wahlberg, K.-E. and Karjalainen, M. (2012). Responssin puuttuminen perheneuvottelussa [No response in family negotiation]. *Puhe ja kieli* 32 (3): 103–126.
- Siitonen, P. and Wahlberg, K.-E. (2015a) Ehdotukseen vastaaminen perheen psykologisessa vuorovaikutustestissä: toimintalinjasta poikkeavat ensivastaanotot [Responding to a proposal in a psychological family-interaction test: Responses deviating from the projected course of action]. *Virittäjä* 119 (4): 559–586.
- Siitonen, P. and Wahlberg, K.-E. (2015b) Finnish particles *mm*, *jaa* and *joo* as responses to a proposal in negotiation activity. *Journal of Pragmatics* 75: 73–88.
- Singer, M. T. and Faunce, E. (1977) *Communication Deviance scoring manual for spouse and family Rorschach*. Unpublished Manuscript.
- Singer, M. T. and Wynne, L. C. (1965a) Thought disorder and family relations of schizophrenics. III Methodology using projective techniques. *Archives of General Psychiatry* 12 (Feb): 187–200.

- Singer, M. T. and Wynne, L. C. (1965b). Thought disorder and family relations of schizophrenics. IV Results and implications. *Archives of General Psychiatry* 12 (Feb): 201–212.
- Singer, M. T. and Wynne, L. C. (1966) Principles for scoring communication defects and deviances in parents of schizophrenics: Rorschach and TAT scoring manuals. *Psychiatry* 29: 260–288.
- Singer, M.T., Wynne, L.C. and Wahlberg, K.-E. (1986) *Finnish Communication Deviance scoring manual for spouse and family Rorschach*. Unpublished Manuscript. University of Oulu, Oulu.
- Sorjonen, M. (2001) *Responding in Conversation. A Study of Response Particles in Finnish*. Philadelphia, PA, USA: John Benjamins Publishing Company.
- Sousa, P. de, Varese, F., Sellwood, W. and Bentall, R. P. (2014) Parental communication and psychosis: A meta-analysis. *Schizophrenia Bulletin* 40 (4): 756–768.
doi: 10.1093/schbul/sbt088
- Stevanovic, M. (2012) Establishing joint decisions in a dyad. *Discourse Studies* 14 (Dec): 779–803.
doi: 10.1177/1461445612456654
- Stevanovic, M. and Peräkylä, A. (2012) Deontic authority in interaction: The right to announce, propose, and decide. *Research on Language & Social Interaction* 45 (3): 297–321.
doi:10.1080/08351813.2012.699260
- Stivers, T. and Rossano, F. (2010) Mobilizing response. *Research on Language & Social Interaction* 43 (1): 3–31. doi:10.1080/08351810903471258
- Tienari, P., Wynne, L. C., Sorri, A., Lahti, I., Läksy, K., Moring, J., Naarala, M., Nieminen, P. and Wahlberg, K.-E. (2004) Genotype-environment interaction in schizophrenia-spectrum disorder. Long-term follow-up study of Finnish adoptees. *British Journal of Psychiatry* 184: 216–222.
- Wahlberg, K.-E. (1998) Kommunikaatiohäiriöt ja skitsofrenia [Communication Deviance and schizophrenia]. – *Duodecim* 114: 521–528.
- Wahlberg, K.-E., Wynne, L. C., Oja, H., Keskitalo, P., Anais-Tanner, H., Koistinen, P., Tarvainen T., Hakko H., Lahti I, Moring J., Naarala M., Sorri A. and Tienari, P. (2000) Thought disorder

index of Finnish adoptees and communication deviance of their adoptive parents.

Psychological Medicine 30: 127–136.

Wahlberg, K.-E., Wynne, L. C., Oja, H., Keskitalo, P., Pykäläinen, L., Lahti, I., Moring J., Naarala M., Sorri A., Seitamaa M., Läksy K., Kolassa J. and Tienari, P. (1997) Gene-environment interaction in vulnerability to schizophrenia. Findings from the Finnish adoptive family study of schizophrenia. *American Journal of Psychiatry* 154 (3): 355–362.

Wynne, L. C. and Singer, M. T. (1963a) Thought disorder and family relations of schizophrenics. I A research strategy. *Archives of General Psychiatry* 9 (Sept): 191–198.

Wynne, L. C. and Singer, M. T. (1963b) Thought disorder and family relations of schizophrenics. II A classification of forms of thinking. *Archives of General Psychiatry* 9 (Sept): 199–206.

Wynne, L. C., Singer, M. T., Bartko, J. J. and Toohey, M. L. (1977) Schizophrenics and their families: research on parental communication. In J. M. Tanner (ed) *Developments in Psychiatric Research*, 254–286. London: Hodder & Stoughton.

Table 1. Responses to inkblot-interpretation proposals in the data.

Response	n	%
No response	27	5
Response particle <i>mm</i> , <i>jaa</i> or <i>joo</i>	92	16
Evasive response	21	4
Other	445	76
Total	585	100