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A Conversation-Analytic Investigation of Disorganized Speech in
Face-to-Face Interactions with Individuals Diagnosed with Schizophrenia:
Why Methodology Matters

A thesis submitted in partial satisfaction
of the requirements for the degree Master of Arts
in Applied Linguistics

by

Adrienne Ruth Isaac

ABSTRACT OF THE THESIS

A Conversation-Analytic Investigation of Disorganized Speech in
Face-to-Face Interactions with Individuals Diagnosed with Schizophrenia:

Why Methodology Matters

by

Adrienne Ruth Isaac

Master of Arts in Applied Linguistics

University of California, Los Angeles, 2013

Professor Charles Goodwin, Chair

This study investigates five types of disorganized speech as defined in the psychiatric literature in individuals diagnosed with schizophrenia through ethnographic and conversation-analytic methods. Data analyzed for this research have been taken from a video ethnography study investigating the ecological validity of participants' functioning and neurocognitive assessments (Bromley et al., 2012a; Bromley et al., 2012b). Results of this research highlight (a) the difference in analytical privilege between analysts and interlocutors; (b) the distributed, rather than individual, responsibility of managing the consequences of disorganized speech; (c) the way in which face-management takes precedence over mutual understanding of talk and d) the way in which communicative breakdowns are not conversational endpoints. Social skill interventions geared towards behavioral transfer to real-world settings can benefit from an understanding of the interactional resources underlying face-to-face interaction.

The thesis of Adrienne Ruth Isaac is approved.

Elizabeth Bromley

Marjorie Harness Goodwin

Charles Goodwin, Committee Chair

University of California, Los Angeles

2013

Dedication Page

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Introduction

Researchers in the fields of psychiatry and psycholinguistics have largely utilized methods that examine the relationship between linguistic output and neurological and psychological processes in schizophrenia in order to better characterize the disorder and its underlying pathology. Such an exploration increases the possibility of intervention at the site of pathological origin. Common methods include the elicitation of speech samples through scripted interview protocols (Andreasen, 1979a). Even when communicative processes are studied, experimental methods serve to enhance our understanding of the impaired speaker. The characterization of language patterns becomes an end in itself and such findings have limited generalizability to real-world settings. Assessments of language behavior are inextricably tied to researchers' end goals as achieved through the methods they employ.

Little is known about the real-world functioning of individuals diagnosed with schizophrenia (Bromley et al., 2012b), and in particular, how language is used to communicate with others in contexts outside of clinical or institutional settings such as patients' homes and communities. Such a methodological focus is particularly timely as institutionalization becomes less common (Cretchley et al., 2010) for this population. Studying language behavior as it occurs in context as observed through naturalistic methods has intrinsically different theoretical and practical aims such as the ability to view competencies instead of impairments, and interactionally-consequential processes instead of processes internal to an individual. The use of naturalistic methods to examine communicative behavior in individuals managing medical diagnoses which impair or otherwise make problematic the ability to use language in contexts outside of clinical settings has only recently come to light as having great utility (Goodwin, 2003). By analyzing how language in context has interactional consequences, we take the focus

off of the disorder, and off of the speaker, and we are able to examine processes of negotiation and shared responsibilities in alternating speaker and hearer roles.

In order to highlight the relationship between theoretical aims and research methodologies, this research applies five types of disorganized speech in schizophrenia as defined in the psychiatric literature (Andreasen, 1979a) – perseveration, illogicality, tangentiality, self-reference and circumstantiality – to instances in which these phenomena are found in naturalistic contexts as analyzed through conversation analytical methods. An analysis of conversation has implications for both interlocutors and analysts given the differential ability to analyze, and need to manage, disorganized speech as it occurs in real-time. What the analyst may find objectively problematic in the analysis of conversation may differ from what an interlocutor subjectively deems problematic given the need to make momentary assessments of meaning which have consequences for further conversational sustainability. Such consequences can be fruitfully studied using data from naturalistic settings rather than through the confines of experimental paradigms and within institutionalized settings where members maintain scripted communicative roles. Focusing on the processes and consequences of language as it is used for communicative purposes in individuals with schizophrenia dovetails nicely with one of the primary concerns for researchers studying individuals with schizophrenia: social functioning. Corrigan and Penn (2001), for example, explain that a diagnosis of schizophrenia is particularly distressing because most domains of social functioning are hampered and thus serve as the basis for social skill training interventions.

Research Questions

- What are interlocutors' goals as they manage communicative breakdowns as a result of disorganized speech?

- What implications does this research have for the ability to generalize experimental findings of communicative behavior in schizophrenia to real-life settings?
- Why is it important to differentiate between linguistic output and communicative behavior in face-to-face interactions with individuals with schizophrenia as assessed through the research methodologies employed?
- What implications does this research have for our understanding of social functioning and social skill intervention in schizophrenia?

Literature Review

Introduction

Schizophrenia has been defined as a mental disorder involving the breakdown of thought processes that affects one's ability to differentiate what is real from what is not and to engage in the world in emotionally appropriate ways (Martin, 2010). Paul Eugen Bleuler first coined the term "schizophrenia" in patients where he observed disconnected associations and strange patterns of affect (Fusar-Poli & Politi, 2008). A defining feature of schizophrenia was what Bleuler saw as a splitting in the psychological functioning of individuals normally giving rise to coherence in personality (Fusar-Poli & Politi, 2008). Symptoms of schizophrenia can be characterized as "positive" to include hallucinations and delusions, and "negative" to include apathy, lack of initiative and withdrawal.

Schizophrenia and Disorganized Speech

Language and speech patterns have been of large interest to researchers investigating schizophrenia as a way to better understand a complex disorder with an unusual constellation of symptoms (Covington et al., 2005) as well as to unearth the underlying processes of the disorder (Frith, 1992; Andreasen, 1979a). One line of thinking is that language impairments do not stem

from a disorder of language expression but from an underlying disorder in the form of patients' thoughts, more specifically known as formal thought disorder (Andreasen, 1979a; Andreasen, 1979b; McKenna & Oh, 2005). Andreasen (2008) distinguishes between the process of thought, as opposed to the content of thought: abnormalities in the latter are manifested through delusions and hallucinations, while abnormalities in the former result in disorganized speech.

The claim that disorganized speech is derived from faulty processes in the formation of thought, however, has been met with criticism. Levy et al. (2010), for example, argue that disorganized thoughts do not necessarily result in disorganized language production. Whatever the underlying cause of the language patterns may be, Andreasen's (1979a; 1986) definitions and assessment scale of disorganized speech in formal thought disorder are still applied in the fields of psychiatry. These terms include the following positive symptoms such as derailment, incoherence, tangentiality, illogicality, clanging, neologisms, word approximations, pressured speech, distractible speech, circumstantiality, loss of goal, echolalia, stilted speech and self-reference; and negative symptoms such as poverty of speech, poverty of content of speech, blocking, and perseveration (Andreasen, 1979a; 2008). Andreasen (1986) differentiates between symptoms in formal thought disorder that have more of an effect on language than communication. While poverty of content of speech, pressured speech, distractible speech, tangentiality, derailment, stilted speech, echolalia, self-reference, circumstantiality, loss of goal, perseveration, and blocking are considered disorders of communication such that the listener's perspective is not accounted for by the speaker, incoherence, clanging, neologisms and word approximations more accurately depict symptoms of a language disorder characterized by semantic and syntactic impairments. Andreasen (1986) has urged clinicians to do away with the term "formal thought disorder" as assessment of disorders of language are in fact disorders of

communication. Further, only poverty of speech and illogicality are specifically phenomena involving thought (Andreasen, 1986). The speech phenomena included in Andreasen's (1979a) Thought, Language and Communication (TLC) scale where definitions of language phenomena and their corresponding rating scales were developed, was constructed through interviews conducted in the following way:

The interview began by inviting the patient to talk without interruption for about ten minutes, after which a variety of questions were asked, ranging from the abstract ("Why do people believe in God?") to the concrete ("How far did you go in school?") and the impersonal ("What do you think of President Nixon?") to the personal ("Tell me about your first sexual experience."). Each interview lasted for approximately 45 minutes; each was tape-recorded and transcribed, but the tapes were not used to assist in making ratings. These were all done live, with the recognition that fine details or nuances of disorder might be missed, since the live rating would most closely approximate the usual clinical situation. The original pilot study convinced us that evaluations of language behavior can only be done well through a live or videotape interview. Using either transcripts or audiotapes appeared to make evaluations very difficult and perhaps to make the patient seem more disorganized, since the clinician lost visual and auditory cues that might make the patient's statements seem more sensible. This problem is especially serious when transcripts alone are used. (Andreasen, 1979a; p. 1317)

Andreasen's (1979a) scale has been used in studies of speech to assess thought disorder. Harvey (1983), for example, assessed manic and schizophrenic participants through a ten to fifteen minute interview. The specific procedures were as follows:

The interviewer first engaged the subject in conversation about any topic of interest to the

subject for a 10- to 15-minute period. If the conversation faltered, the interviewer asked an open-ended question such as, ‘Tell me about some happy times you've had’ or ‘What kind of person are you?’ The interviewer tried to talk as little as possible while conducting this portion of the interview. The diagnostic interview followed collection of this speech sample. Both the speech sample and diagnostic interview were tape-recorded. (p. 370)

The most recent edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) (American Psychiatric Association & DSM-5 Task Force, 2013) which is used as the golden standard measurement for psychiatric diagnoses lists disorganized thinking and speech as part of its criteria which define psychotic disorders to include schizophrenia. It reads:

Disorganized thinking (formal thought disorder) is typically inferred from the individual’s speech. The individual may switch from one topic to another (*derailment or loose associations*). Answers to questions may be obliquely related or completely unrelated (*tangentiality*). Rarely, speech may be so severely disorganized that it is nearly incomprehensible and resembles receptive aphasia in its linguistic disorganization (*incoherence* or “word salad”). Because mildly disorganized speech is common and nonspecific, the symptom must be severe enough to substantially impair effective communication. The severity of the impairment may be difficult to evaluate if the person making the diagnosis comes from a different linguistic background than that of the person being examined. Less severe disorganized thinking or speech may occur during the prodromal and residual periods of schizophrenia. (italics original)

Schizophrenia and Communication

Frith (1992) explains: “The abnormalities of schizophrenic language lie at the level not of

language competence, but of language use. The problems arise when the patient has to use language to communicate with others” (p. 98). Covington et al. (2005) assert that it is at the level of discourse and specifically, the ability to execute a coherent discourse plan, wherein most impairment is found. Many of these impairments have been explained by deficits in high level executive planning and in language processing (Frith, 1992). Pragmatic ability is particularly impaired in this population because of deficits in the ability to interpret nonliteral word meaning that go beyond the ability to carry out a coherent plan of discourse as one attends to the intentions of an interlocutor which may not be evident through literal interpretations of language (McKenna & Oh, 2005). Individuals with schizophrenia exhibit difficulties in self-monitoring and in maintaining an awareness of others’ intentions which compromise their ability to secure shared interlocutor knowledge (Frith, 1992). Deficits in abstract thinking and in theory of mind have been reported (Frith, 1992) which compromise one’s ability to speculate about the internal states of his or her interlocutor and which hamper successful engagement in communicative processes. The ability to interpret an interlocutor’s mental states is central to human engagement in social life in what Enfield & Levinson (2006) describe as “a specialized cognition, crucially involving intention attribution or ‘mind reading’” (p. 9).

Experimental Methods, Language and Schizophrenia

Rochester and Martin (1979) explain that early experiments examining information processing of language in individuals with schizophrenia were seen in the form of verbal responses to stimuli. Such responses were assessed to determine the research participant’s ability to attend to and process verbal stimuli. Additionally, with respect to language processing abilities, psycholinguistic experiments have engaged research participants in language recognition and recall tasks. Kuperberg (2010) describes three main types of language research

conducted with individuals with schizophrenia including the examination of a) speech in terms of their statistical features; b) linguistic output with respect to their lexical and syntactic properties; and c) discourse with respect to its structure. Rochester and Martin's (1979) work on lexical cohesion, for example, utilized methods such as cohesion analysis, which were applied to sentence clauses. Their speech samples were extracted from three sources: unstructured interviews, the retelling of a narrative, and the interpretation of cartoon images (Rochester & Martin, 1979). Docherty et al. (1996) investigated lexical cohesion by analyzing language structure from samples taken from interviews covering such topics as personal interests, political views, family and religion, while Docherty et al. (2003) analyzed stability in reference use as extracted from emotionally-neutral topics in conversation. Docherty (2005) studied the relationship between cognitive processes and communication in schizophrenia. The author assessed communicative failures through speech samples coded with the Communication Disturbances Index (CDI) (Docherty et al., 1996). In the development of this measure of language disturbance in psychiatric diagnoses characterized by thought disorder, the authors used the following methods to elicit speech samples from their research subjects:

All subjects were interviewed using a semistructured format. They were asked a series of open-ended questions about topics such as school, interests, family, religion, and political beliefs. The interviews were audiotaped, and the tapes transcribed. Ratings were done using the typewritten transcripts of the speech. (p. 359)

Methodological Criticisms

Rochester and Martin (1979) provide historical explanations for the predominant methods used in the investigation of language in individuals with schizophrenia. The authors argue that the ill-fitting methodological precedent began as a result of clinicians who wished to study

patterns of schizophrenic discourse. They state:

Ultimately it was the clinicians who attempted to study the productions of schizophrenic patients by borrowing methods and concepts from their experimental colleagues. The exuberant discourse of schizophrenic speakers was thus squeezed into a behavioral framework—and the fit was not a good one. (p. 9)

The authors continue that findings from experimental research do not predict actual language use as they state that “language is a social act and it is doubtful that we can learn much about the behavior of language users from highly controlled laboratory settings” (p. 23). Echoing this sentiment, Thomas (1997) states that there is limited utility in an analysis of language used for communicative purposes if the speech samples are rendered in contrived settings. The author states that findings from word association and proverb tasks cannot be generalized to language found in naturalistic settings. With specific respect to schizophrenic speech, Docherty (2005) explains that disorganized speech in the abstract may not necessarily translate into incomprehensible speech in practice and argues that disorders of speech should be defined in terms of their effect on communicative processes. The author uses this argument to explain an absence of robust correlations between cognitive processes and disorganized speech. Davies and Mehan (1988) describe the relationship between the comprehensibility of linguistic output and audience type in their analysis of speech of a brain-injured victim. The authors found that family members were more likely to understand the participant’s speech than clinicians.

Even when characterizing communication rather than speech, we see an analytical focus on the speaker – and on failure. Rochester and Martin (1979) define discourse failure in the following way:

To say that a speaker is incoherent is only to say that one cannot understand the speaker.

So to make a statement about incoherent discourse is really to make a statement about one's own confusion as a listener. [...] The focus of study depends simply on the direction of attribution. (p. 3)

McTear & King (1991) describe their interpersonal perspective of miscommunication:

That it derives primarily from discrepancies between the mental states of the dialogue participants – that is, what they believe and what they believe their interlocutor believes – rather than from some problem in the linguistic channel arising out of the communicative disability of one of the participants, that is, the patient. (p. 195-196)

Rochester and Martin (1979) make the astute observation that theoretical goals can be gleaned from the methodologies researchers employ. The authors argue that researchers have focused on analyzing speech that deviates from the norm to highlight language failure, as opposed to more holistically analyzing language performance in general.

Experimental paradigms do not get at the crux of why communication is so troubling for individuals with schizophrenia. While there is ample evidence that afflicted individuals exhibit pragmatic deficits, we have less information regarding the consequences of such deficits in social interaction. Social scientific methods analyzing language as both context-derived and context-renewing provide a perspective on the limited generalizability of experimental findings to real-world competence across a range of contexts. Goodwin (2003), for example, argues that common assessments of language impairment do not predict real-world engagement in interaction.

Moreover, Schegloff (2003) states that the use of experimental protocols for individuals with communication disorders has troubling implications. Through this paradigm, he states that individuals “become mere ‘language users,’ as the phrase goes, and ones with problems in that regard, rather than actors with things to do [...] with language among the resources with which

to do those things” (p. 44). Goodwin (2003) makes explicit the limitations of experimental methods in studying language ability, particularly with those who have suffered brain injuries and discusses the benefits, if not necessity, of using conversation in real-world contexts as a potent site to assess patients’ communicative abilities as well as to depict the consequences of brain injury in patients’ and their family members’ lives. Goodwin’s (2003) argument is especially relevant considering that communicative resources used by participants engaged in conversation do not necessarily involve linguistic output. Hamilton (1994) has pointed out that when linguistic ability is impaired, the structural components of conversation may still be in tact. In her research on conversations with an individual with Alzheimer’s Disease, the author did not observe any problems with her research subject engaging in conversational turn-taking, even if the contribution itself was inappropriate. Probably the most convincing argument that language ability differs from communicative ability is the difference in how the brain is implicated between the former and the latter. Schegloff (2003) explains that the left hemisphere of the brain is responsible for speech production including syntax, semantic, phonological and lexical properties while the right hemisphere of the brain is responsible for pragmatic and conversational competence. Such findings reinforce the notion that communicative engagement is not equated with linguistic output.

A Methodological Alternative: Conversation Analysis

Building on the notion that real-world competence cannot be generalized from findings from experimental research, a methodology that focuses on language used in context by employing naturalistic methods may provide a greater understanding of how disorganized speech in schizophrenia might have consequences for both the speaker and hearer. Face-to-face interactions provide a unique context in which largely unconscious, yet complex, mechanisms

are used to accomplish very ordinary things. The analysis of human interaction through the methods of conversation analysis require that the notion of disorder take a backseat in that its methods rely on ubiquitous processes of which no one is exempt. Schegloff (1996) states the following:

I take it that, in many respects, the fundamental or primordial scene of social life is that of direct interaction between members of a social species, typically ones who are physically co-present. For humans, talking in interaction appears to be a distinctive form of this primary constituent of social life, and ordinary conversation is very likely the basic form of organization for talk-in-interaction. (p. 4)

The methods of conversation analysis stem from the sociological subfield of ethnomethodology in which the analysis of social organization focuses on competencies (Heritage, 1984a). The collaborative nature of conversation takes the focus of analysis away from the deficient speaker to that of language behavior produced and interpreted by two alternating parties. Such an analytical focus affords more opportunities for neurological and psychiatric patient populations presenting language difficulties and differences with the ability to engage in communicative success as it is viewed as a collaborative rather than singular endeavor.

Schegloff (1996) notes that in conversation analysis, turns at talk are not analyzed in terms of words or sentences but according to their placement within their interactional context. In conversation, interlocutors engage in turn-taking and are held accountable to responding to prior talk. Such accountability is seen in the way that talk is tailored to the conversational recipient. Schegloff (1992) explains that speakers demonstrate their understanding of prior talk in the way that their talk refers to it. As language is viewed as action, it must be dealt with by interlocutors regardless of how problematic it may be as viewed in the abstract.

Both the content and mechanisms of turns at talk in conversation are structured by politeness such that face-threatening acts are avoided (Brown & Levinson, 1987). Politeness structures repair sequences, which serve to resolve misunderstandings in conversation. Hamilton (1991) states that in everyday conversation interlocutors play a balancing act in the ability to effectively communicate a message while engaging in face-maintenance. This balance becomes particularly salient when interlocutors manage communicative breakdowns.

Recently, researchers have begun to look at the role of both patient and interlocutor by looking beyond quantitative analyses of linguistic ability to that of the collaborative and cumulative project of engagement in conversation. Analyses of conversations in therapeutic settings specific to individuals with schizophrenia have been of great interest to researchers who cite relationships with treatment providers as predictive of functioning outcomes (Themistocleous et al., 2010). Themistocleous et al. (2010), for example, analyzed repair sequences in conversations between individuals with schizophrenia and psychiatrists to explore how understanding between patients and practitioners were organized. The researchers chose to look at repair as it is used by interlocutors to resolve misunderstandings (Sacks, Schegloff, & Jefferson, 1974). In the analysis, the authors found that patients initiated more repair sequences than psychiatrists but that psychiatrists resolved more repair sequences than patients, which the authors interpret as the psychiatrists placing more effort into mutual understanding than the patients. A higher rate of psychiatrist repair correlated with more favorable viewings of the relationship by the psychiatrist. Similarly, McCabe et al. (2002) applied conversation analytical methods to investigate engagement in interaction through conversational topics between patients and psychiatrists. The researchers found that patients discussed their psychotic symptoms frequently while clinicians were reluctant to engage in such topics, creating a source of conflict.

Researchers have also looked outside of clinical settings to focus on the people with whom patients most frequently interact – caregivers and clinicians – while using conversation analysis methods to capture the details of the interactions. (Cretchley et al., 2010) state that as institutionalization becomes less frequent, individuals with schizophrenia are engaging more frequently with family members and other caregivers outside of clinical settings and exploring those communication patterns is therefore of great import. The researchers applied Giles, Coupland and Coupland's (1991) Communication Accommodation Theory and Leximancer software to capture concepts in language. The authors also investigated communicative style across patients who were assessed as low or high activity speakers. The authors found that caregivers used different communicative strategies for accommodation depending on whether the patient was a high or low activity speaker. Caregivers with low activity speakers initiated discussion by asking questions and furthering conversation while caregivers with high activity speakers asked questions to verify their understanding of the talk.

Data & Methodology

The excerpts in this research have been taken from a video ethnography study investigating the ecological validity of neurocognitive measures of individuals diagnosed with schizophrenia (Bromley et al., 2012a; Bromley et al., 2012b). Neurocognitive measures were taken using the MATRICS Consensus Cognitive Battery (MCCB) whose domains include: Speed of Processing, Attention/Vigilance, Working Memory (verbal and nonverbal), Verbal Learning, Visual Learning, Reasoning & Problem Solving, and Social Cognition (Nuechterlein et al., 2008). Participants who scored in the top and bottom one-third of all participants in an ongoing study (Brekke, 2007) were included in this study. Participants falling into any of the following categories were excluded from the study: those with a psychiatric hospitalization

within the six weeks prior to the study; those on parole or probation; those engaging in substance abuse six months prior to the study; and those diagnosed with a cognitive disorder not associated with their diagnosis of schizophrenia. Nine participants, five of whom rendered MCCB composite scores in the lowest one-third of all participants and four of whom rendered scores in the highest one-third of all participants, were included in this study. The participants included seven men and two women, eight diagnosed with schizophrenia and one diagnosed with schizoaffective disorder on the Structured Clinical Interview for DSM Disorders. All of the participants had chronic symptoms and lived in community-based housing as part of a treatment program which provided case management and psychiatric services approximately four times per month. The participants ranged in age from 31 to 55.

Participants were videotaped in their homes and communities as ethnographers captured their daily routines. The participants were observed for an average of 4.4 visits (ranging from one to six visits) for an average of 10.5 hours each (ranging from 3 to 8.5 hours). To assess functioning skills from the video data, the researchers developed a coding scheme – community performance indicators (CPIs) – where levels of behavioral activity, problem solving skills, engagement in social interaction and pursuit of goals were coded and measured. To assess the ecological validity of the MCCB scores, researchers investigated the relationship between participants' MCCB scores and their CPI scores.

Five segments of interaction were selected for the current research, to include three of the nine research participants. The segments were chosen based on the presence of disorganized speech as determined by the author of this research in accordance with speech patterns documented in the psychiatric literature. Conversation analytic methods were employed to analyze how disorganized speech arose and was managed by the interlocutors.

Analysis

In this analysis, descriptions of language samples and assessment scales of disorganized speech in schizophrenia used in diagnostic and experimental procedures will be juxtaposed with the same phenomena as observed and analyzed in naturalistic settings. The specific language phenomena that will be analyzed include: perseveration, illogicality, tangentiality, self-reference and circumstantiality. It is important to view how formal thought disorder is assessed through disorganized speech in the diagnosis of schizophrenia. Andreasen (2008) describes the assessment process whereby clinicians listen to what the patient says or look at what he/she writes. “The clinician observes the patient’s verbal output and determines whether it is well connected, well organized, and seems to make sense or whether, on the other hand, it seems disconnected, disorganized and bizarre” (p. 436). Clinicians using the Thought, Language and Communication scale (Andreasen, 1979a; 1986) to assess thought disorder are instructed to elicit speech samples from patients in the following way:

Most of the ratings can be made after a patient has been evaluated with an ordinary psychiatric interview, since this is a good vehicle for eliciting typical patterns of speech using relatively standardized questions. During some time the patient should be permitted to talk as long as possible to observe his speech during this condition. The patient should be interrupted at some time in order to see how he responds to this. [...] These ratings are based on the assumption that most interviews take about 50 minutes. (Andreasen, 1986; p. 474)

Perseveration

Perseveration in Experimental Settings

Crider (1997) describes perseveration in schizophrenia as “the contextually inappropriate and unintentional repetition of a response or behavioral unit” (p. 63), different from intentional use of repetition in communication. Andreasen (1986; 2008) describes perseveration in the following way in the assessment of formal thought disorder used to diagnose schizophrenia: “Perseveration involves persistent repetition of words, ideas, or subjects so that once a patient begins to refer to a particular subject or use a particular word, he/she continually returns to it in the process of speaking” (p. 438). The following speech sample is used to illustrate this phenomenon:

Interviewer: Tell me what you are like, what kind of person you are.

Patient: I’m from Marshalltown, Iowa. That’s sixty miles northwest, northeast of Des Moines, Iowa. And I’m married at the present time. I’m thirty-six years old. My wife is thirty-five. She lives in Garwin, Iowa. That’s fifteen miles southeast of Marshalltown, Iowa. I’m getting a divorce at the present time. And I am presently in a mental institution in Iowa City, Iowa, which is a hundred miles south-east of Marshalltown, Iowa. (p. 438)

The rating scale below is used to assess the severity of perseveration:

- 0 No perseveration.
- 1 Mild (has a persistent repetition of one set of words or ideas).
- 2 Moderate (has persistent repetition of two or three different sets of words or ideas).
- 3 Severe (has persistent repetition of four or more different sets of words or ideas). (Andreasen, 1986; p. 479)

Manschreck et al. (1985) assessed repetition in speech samples consisting of at least one hundred words where individuals were instructed to describe a painting presented before them. The researchers applied word frequency and proximity calculations as they analyzed word and phrase repetitions.

Perseveration in Naturalistic Settings

The following excerpt provides an example of perseveration in context. In this segment, the ethnographer has asked Liz, a research participant, about her arm as she has noticed a visible scar. Liz describes how she injured her arm and the ethnographer makes a comment regarding how Liz is doing well in spite of her injury. Liz misinterprets the meaning of the ethnographer's assessment "You do a pretty good job" as well as her attempt to clarify her assessment. Instead, Liz interprets the ethnographer's assessment as referring to the severity of the event when she injured her arm – that she injured her arm badly, or did a "good job" injuring her arm. Liz perseverates on this interpretation even as the ethnographer tries to clarify the intention underlying her assessment. Liz's perseveration with respect to her interpretation is seen in the use of verb tense, as she refers to a discrete past event, rather than to a present condition.¹

01 ETH: What was u::h did something happen to your hand or was it-
02 (.) were you born with it that way?
03 Liz: I cut it (0.2) through a window
04 ETH: Ohhh you're kidding oh no when did that happen?
05 (0.4)
06 Liz: Twe- thirty years ago
07 ETH: °Oh my goodness°
08 Liz: So they can't fix it now
09 (0.8)
10 ETH: So it got uh (0.8) clo::sed
11 Liz: It got cut right there
12 ETH: O:::[h
13 Liz: [And when they- the operating stuff it was closed like
14 that and they didn't give me no therapy
15 (0.8)
16 ETH: O:::h [(so) it just
17 Liz: [They didn't tell me to come back with no therapy or
18 nothing
19 ETH: O::h so it got <contracted>
20 Liz: It got stuck
21 ETH: Yeah
22 (0.8)
23 ETH: → You do a pretty good jo:b?
24 (0.4)
25 Liz: Yeah cut it real bad
26 ETH: We[ll but you do good you know
27 Liz: [It was bleeding
28 (0.4)
29 ETH: Working around it
30 (0.4)
31 Liz: Yeah

¹ See Appendix A for a description of transcription conventions.

32 (1.0)
33 ETH: °You do a good° job
34 Liz: It was bleeding pretty bad
35 ETH: Yeah

The analysis will focus on lines 23 through 35 to show how Liz perseverates on her understanding of the ethnographer’s talk, an understanding that does not coincide with the ethnographer’s intention underlying her talk. In this interaction, the ethnographer’s “You do a pretty good job” in line 23 is an assessment of Liz’s current condition in spite of her past injury. Liz’s talk in line 25 “Yeah I cut it real bad” reveals Liz’s understanding of the prior talk, which is in fact a misunderstanding, through the sequential nature of conversational organization (Schegloff, 1992). Liz assesses a discrete past event in which she cut her arm “real bad,” while the ethnographer makes an assessment of a present situation. The ethnographer then counters Liz’s interpretation of a “pretty good job” in her “well but” in line 26 and continues with a present tense assessment “you do good you know.” This talk is in partial overlap with Liz’s “it was bleeding” in line 27, and serves as a justification of her own assessment in line 25. The ethnographer continues with the final clause of her talk in line 26 with “working around it” as seen in line 29, further reinforcing a present condition and further countering Liz’s understanding of the initial source of trouble “you do a good job.” Liz’s “yeah” in line 31 claims understanding rather than demonstrates it (Sacks, 1995). This claim of understanding is further reinforced in line 34 where Liz emphasizes her prior justification of “it was bleeding” with “It was bleeding pretty bad.” This emphasis is seen in response to the ethnographer’s recycled talk “you do a good job” in line 33.

Below I have shown visually how Liz and the ethnographer maintain different interactional intentions that are never reconciled. While Liz constructs her interactional agenda through assessments of concrete past events, the ethnographer makes assessments of abstract and

present situations. Each participant builds upon her *own* prior talk and claims, rather than demonstrating understanding. Some talk below has been omitted for ease of viewing:

23 ETH: You do a pretty good jo:b?
(present-focused assessment of outcome of past event; abstract idea)

25 Liz: Yeah cut it real bad
(past-focused assessment of concrete event; misinterpretation of prior talk)

26 ETH: We[ll but you do good you know
(present-focused assessment of outcome of past event; recycling of own talk in line 23)

27 Liz: [It was bleeding
(past-focused; concrete event; justification of own prior assessment)

31 Liz: Yeah
(claims agreement)

33 ETH: °You do a good° job
(present-focused assessment of outcome of past event; recycling of own talk from line 26)

31 Liz: It was bleeding pretty bad
(past-focused concrete event; recycling of own talk in line 27)

32 ETH: Yeah
(claims agreement)

In addition to the different references to time through verb tense, the interlocutors use different pronouns in how they address their talk. This is a crucial component of how perseveration of ideas is demonstrated by Liz. While the ethnographer addresses her talk to Liz and makes her assessment about Liz using the second person pronoun “you,” Liz describes a past event without addressing this talk to her interlocutor. This is most evident in the exchanges of the ethnographer in line 26 “Well but you do good you know” and Liz’s subsequent “It was bleeding” in line 27, as well as the exchange in line 33 “°You do a good° job” by the ethnographer and subsequent response by Liz in line 34 “It was bleeding pretty bad.” Liz’s talk in line 34 justifies an assessment of a past event with no reference to an actor, rather than responding to the ethnographer’s assessment in line 33, which was specifically about, and addressed to, Liz. Both interlocutors claim, rather than demonstrate, an understanding of each

other's talk as seen in Liz's "yeah" in line 31 and the ethnographer's "yeah" in line 35. Liz ultimately does not respond to the ethnographer's efforts to counter her initial interpretation and as such, this interaction becomes unsustainable. Claims of understanding by both interlocutors may serve to resolve the unsustainability of the conversation and may represent Lakoff's (1973) assertions regarding the negotiation of clarity of talk and politeness in conversation. She states "...it seems to be the case that when clarity conflicts with politeness, in most cases [...] politeness supersedes: it is considered more important in a conversation to avoid offense than to achieve clarity" (p. 298).

Abstract versus Action-Based Notions of Perseveration

Viewing the phenomenon of perseveration in context helps to understand the consequences that it has in real time. In lines 23 through 35, Liz and the ethnographer speak at cross-purposes as the ethnographer attempts to establish mutual understanding with respect to the intention underlying her talk. Further, the format of the clinician interview and of naturalistic conversation juxtaposed here to describe perseveration differentially influence topic as well as format of talk. Clinicians assessing language patterns and generating diagnoses use an interview format on topics that are removed from the immediate physical environment. The patient's talk is thus necessarily in the format of a response to a question. Speech samples elicited in clinical contexts contrast with the findings in the segment provided here where recognition and assessment of visible bodily injury are made in the living room of the research participant's home.

The clinician and interlocutor have different responsibilities in the coding and management of perseveration. While the ethnographer attends to the immediate demands of the conversation such as taking action toward a resolution if mutual understanding cannot be

established after several attempts, clinician interviewers' coding of abstract categories of disorganized speech is unilaterally decided and not deemed a social entity that must be managed by both clinician and patient.

Illogicality

Illogicality in Experimental Settings

Andreasen (2008) describes illogicality in the following way:

A pattern of speech in which conclusions are reached that do not follow logically. This may take the form of non sequiturs [...] in which the patient makes a logical inference between two clauses that is unwarranted or illogical. It may take the form of faulty inductive inferences. It also may take the form of reaching conclusions based on a faulty premise without any actual delusional thinking. (p. 439)

Andreasen (2008) provides the following example:

Parents are the people that raise you. Any thing that raises you can be a parent. Parents can be anything, material, vegetable, or mineral, that has taught you something. Parents would be the world of things that are alive, that are there. Rocks, a person can look at a rock and learn something from it, so it could be a parent. (p. 439)

The rating scale below is used to assess the severity of illogicality:

- 0 No illogicality.
- 1 Mild (occurs once during an interview).
- 2 Moderate (occurs from two to four times).
- 3 Severe (occurs 5 to 10 times).
- 4 Extreme (occurs more than 10 times, or so frequently that the interview is incomprehensible).

(Andreasen, 2008; p. 478)

Using criteria of formal thought disorder as outlined by the Schedule for Affective Disorders and Schizophrenia (Endicott & Spitzer, 1978), Manschreck et al. (1985) assessed

research participants for illogicality through a semi-structured interview. The authors describe illogicality in the following way: “Thinking in which facts are obscured, distorted or excluded or thinking which contains clear internal contradictions or in which one premise does not follow from another. This is a complex and subtle judgment which usually requires a knowledge of the subject’s reasoning process” (p. 259). The authors provide the following example: “In answering questions about his first hospitalization, patient says, ‘It could have been a few years before or after I was born’” (p. 259).

Illogicality in Naturalistic Settings

In the following excerpt, the ethnographer is speaking to Clara, a research participant, about the fact that community college professors have less responsibility outside of the classroom to conduct research and publish than that of university professors. The ethnographer then adds that while the outside demands to conduct research is less intense for community college professors than for university professors, community college professors also engage in their profession outside of the classroom. The ethnographer provides two examples of professionals who work on their trade outside of the classroom – an artist and a musician, to which Clara provides an additional example. Clara’s exemplar, however, does not match the same logic from which the ethnographer’s examples were drawn.

01 ETH: The teaching LOad is (0.4) isn't as high as (0.8) the- the number
02 of classes that you have to teach isn't as high as at a↑
03 community college, but it's not as low as (0.9) at a (.)
04 university and the amount of research that you have to (.) do
05 isn't as high as they would expect- (.) research and publishing
06 isn't as high as they would expect from a university
07 CLARA: ((nods head))
08 ETH: But it's (0.4) not as low as it would be at a:: (.) community
09 college where they don't really care if you (0.5) () re[search
10 and publish (but)
11 CLARA: [Right
12 (1.0)
13 ETH: I mean alth- although I have noticed that a lot of- (0.2) a lot
14 of people at community colleges do
15 CLARA: Hmmm
16 ETH: Do do stuff they publish or they- if they're a musician they

17 record if they're an artist they
 18 CLARA: [Yeah?
 19 ETH: [They sell their paintings you know they (.) they show their
 20 paintings
 21 (0.3)
 22 CLARA:→ Uh like a gym teacher.
 23 (0.8)
 24 ETH: [But like a gym teacher wo-
 25 CLARA: [They uh (0.2) get into different degree programs ((*sing song*
 26 *intonational rhythm*))
 27 (0.4)
 28 ETH: Yeah
 29 (.)
 30 CLARA: At a community college [yeah
 31 ETH: [A gym teacher wouldn't pro- probably you
 32 know they just teach the gym and
 33 CLARA: Yeah?
 34 (0.4)
 35 ETH: That'd be a pretty laid back job hhhh
 36 CLARA: Yeah pretty laid back yeah ((*monotone*))
 37 (0.7)
 38 ETH: So
 39 (0.8)

In this segment, the ethnographer has provided two examples of professionals who would be able to engage in their profession outside of the classroom. In lines 16 and 17, and 19 and 20, the ethnographer states that musicians record, and artists sell and show their paintings. In line 22, Clara's "Uh like a gym teacher" is well-suited as a contribution in terms of its structure beginning with "uh like" as it foreshadows an example of her own, but is ill-suited as a contribution in terms of its content. More specifically, the content of her contribution -- that of a gym teacher -- does not match the logic with which the ethnographer has used to derive his examples. A gym teacher may engage in his or her profession outside of the classroom but such activities are not tied to the professional identity of a gym teacher. The ethnographer attempts to counter Clara's talk in line 24 with "But like a gym teacher wo-" while Clara provides a justification for why a gym teacher would be categorically fitting in line 25: "They uh get into different degree programs." This justification, however, does not match the justification on which the ethnographer based his examples.

In lines 31 and 32, the ethnographer repairs his prior talk in line 24 in countering Clara's contribution by stating "A gym teacher wouldn't pro- probably you know they just teach the gym and." In line 35 the ethnographer makes an assessment regarding the content of Clara's contribution, rather than its interactional relevance by saying that teaching the gym would be a pretty laid back job, which may serve as an interactional resolution to move beyond the source of trouble whose origins to Clara may still be unknown. This resolution may be co-constructed by Clara who ultimately claims, rather than demonstrates, agreement in line 36 with a monotone "Yeah pretty laid back yeah."

Abstract versus Action-Based Notions of Illogicality

In this segment, we have viewed the presence of illogicality as a social entity to which the ethnographer must be accountable through a response. Clara's illogicality in this segment is an understanding of talk belonging to her interlocutor, an understanding that is well-suited in terms of its delivery but not in terms of its content. Abstract notions of illogicality bear no relevance as Clara's talk is analyzed within its placement of the conversation and is then countered. Conversational repair is an interactionally-delicate process and even more so when it involves individuals who have pragmatic or linguistic impairments. Wilkinson (2007) notes the nature towards progressivity in conversation such that conversational repair is organized to increase conversational progression, such as the preference for self-repair. The author adds that "although repair can on occasion be prolonged or can fail, in most cases it is both successful and quick, with one repair effort or 'try' normally sufficient to deal with a trouble" (p. 546). Perkins (2003) states that the possibility of repair is greater with individuals who have linguistic impairments. Clark & Wilkes-Gibbs's (1986) *principle of least collaborative effort* is especially relevant to the sensitive nature of repair. It states: "In conversation, the participants try to

minimize their collaborative effort—the work that both do from the initiation of each contribution to its mutual acceptance” (Clark & Brennan, 1991). Collaborative contributions to conversation include the *presentation phase*, such as the problematic utterance of Clara’s “Uh like a gym teacher” in line 22 and the *acceptance phase* as seen in the ethnographer’s “That’d be a pretty laid back job hhhh” in line 35 and Clara’s “Yeah pretty laid back yeah” in line 36 (Clark & Brennan, 1991).

Speech samples elicited by a clinician to assess illogicality code the talk presently or retrospectively for specific information relative to the phenomenon in question. In their coding, they only become accountable to the patient through the formulation of their diagnoses in the form of written documents. In the context of conversation, however, analysis of language takes place on a momentary basis and must balance both understanding of talk and face-maintenance.

Tangentiality

Tangentiality in Experimental Settings

Andreasen (2008) describes tangentiality in the following way:

Tangentiality involves replying to a question in an oblique, tangential, or even irrelevant manner. The reply may be related to the question in some distant way. Or the reply may be unrelated and seem totally irrelevant. Tangentiality has sometimes been used as roughly equivalent to loose associations or derailment. The concept of tangentiality has been partially redefined so that it refers only to replies to questions and not to transitions in spontaneous speech. (p. 439)

Andreasen (2008) provides the following example:

Interviewer: What city are you from?

Patient: Well, that’s a hard question to answer because my parents ... I was born in Iowa, but I know that I’m white instead of black so apparently I came from the North somewhere and I don’t know where, you know. I really

don't know where my ancestors came from. So I don't know whether I'm Irish or French or Scandinavian or I don't believe I'm Polish but I think I'm I think I might be German or Welsh. I'm not but that's all speculation and that that's one thing that I would like to know and is my ancestors you know where did I originate? But I never took the time to find out the answer to that question. (p. 439)

The rating scale below is used to assess the severity of tangentiality:

- 0 No tangentiality.
 - 1 Mild (occurs once during an interview).
 - 2 Moderate (occurs from two to four times).
 - 3 Severe (occurs from 5 to 10 times).
 - 4 Extreme (occurs more than 10 times, or so frequently that the interview is incomprehensible).
- (Andreasen, 1986; p. 476)

Tangentiality in Naturalistic Settings

In the following segment, the ethnographer asks Clara, the research participant, about her experience communicating with others while engaging in recreational drugs, after previously stating that such drugs compromise her communicative abilities. In her tangential response, Clara employs contrastive analogical reasoning while providing a hypothetical scenario of communicating while on the birth control pill, a drug that does not affect one's ability to communicate with others.

01 ETH: What would it be like?
02 CLARA:→ Well you know say for instance (0.2) you want to stay from- (0.2)
03 you want to keep from getting pregnant
04 (0.2)
05 ETH: Yeah
06 (1.2)
07 CLARA: When you take the pill (0.2) you could see (0.4) y- where your
08 communication comes from
09 (1.0)
10 CLARA: A::nd other people- (0.2) other girls that (0.2) take it also
11 (0.2) can communicate as well as those that are on- that are
12 ETH: To who communicate
13 CLARA: To whoever whoever I [am
14 ETH: [Somebody else?
15 CLARA: To m-
16 ETH: Like [oh I'm (on) the pill?
17 CLARA: [To somebody else
18 ETH: Or
19 CLARA: Yeah I'm already (on) the pill
20 CLARA: [You know

21 ETH: [Hmm
 22 CLARA: .hhhhh a::nd uh it doesn't bring out mental illness and it
 23 doesn't bring out depression or diabetes or anything like that=I
 24 think the pill=I used to be on the pill for a while,
 25 (0.5)
 26 CLARA: But um
 27 (1.0)
 28 CLARA: You know there was nobody to talk to
 29 (0.2)
 30 ETH: Hmm
 31 (0.2)
 32 CLARA: You know
 33 CLARA: The cre- the communication up there is ve[ry
 34 ETH: [But I mean what's it
 35 like (0.2) wh- what's it like experiencing (0.2) th- (0.2) the
 36 paranoid <schizophrenic> (.) part
 37 CLARA: Oh [(that yeah)
 38 ETH: [When a- when you do the drugs that make- that bring that out
 ...

In this segment, the ethnographer asks Clara “What would it be like?” as seen in line 1, in reference to communicating with others while using recreational drugs. Clara pursues a tangential response by using the contrastive analogy of the birth control pill, a drug that does not affect one’s behavior with others in the way that recreational drugs do. Clara’s preface in line 2 “Well you know say for instance” refers to a hypothetical condition and foreshadows a description. Clara’s contribution, however, is not one based on her prior experience using recreational drugs; instead, Clara provides an example of communication while using drugs that do not influence communicative abilities as seen in lines 7 and 8 and 10 and 11. Rather than providing examples of communication exemplifying the *presence* of recreational drug use, she provides examples of communication in the *absence* of such drug use by invoking hypothetical examples of communicative consequences of birth control pill use. Below I show how Clara’s talk responds to the ethnographer’s question by providing contrastive hypotheticals.

07 CLARA: When you take the pill (0.2) you could see (0.4) y- where your
 08 communication comes from

Interpretation of contrastive hypothetical: By contrast, with recreational drug use, you cannot see where your communication comes from (i.e., your mind is not compromised by the drug).

10 CLARA: A::nd other people- (0.2) other girls that (0.2) take it also
11 (0.2) can communicate as well as those that are on- that are

Interpretation of contrastive hypothetical: By contrast, with recreational drug use, others are compromised by the drugs as well.

22 CLARA: .hhhhh a::nd uh it doesn't bring out mental illness and it
23 doesn't bring out depression or diabetes or anything like that=I
24 think the pill=I used to be on the pill for a while,

Interpretation of contrastive hypothetical: By contrast, recreational drugs cause changes in the mind, (i.e., recreational drugs cause mental illness).

One of the ways in which the interlocutors engage in the process of understanding is through Goodwin's (1990) notion of format tying in which interlocutors engage in meaning by sequentially reusing their interlocutors' talk in purposeful ways. Below I show format tying as it takes place between Clara and the ethnographer in lines 11 and 12 where the ethnographer reuses Clara's "communicate" to pose a question of his own "To who communicate?" in order to make sense of her talk. Similarly, the ethnographer's question in line 14 "Somebody else?" is then re-used by Clara in her response in line 17 "To somebody else" which repairs her initial response in line 15 "To m-." Finally, in line 16, in an effort to establish understanding, the ethnographer asks "Like oh I'm (on) the pill?" which Clara uses later as her response to this in line 19 "Yeah I'm already (on) the pill."

10 CLARA: A::nd other people- (0.2) other girls that (0.2) take it also
11 (0.2) can **communicate** as well as those that are on- that are
12 ETH: To who **communicate**
13 CLARA: To whoever whoever I [am
14 ETH: [Somebody else?
15 CLARA: To m-
16 ETH: Like [oh I'm (on) the pill?
17 CLARA: [To somebody else
18 ETH: Or
19 CLARA: Yeah I'm already (on) the pill

Another construct that structures this interaction is politeness. Hamilton (1991) discusses the idea of communicative stigma surrounding those with psychological disabilities. She states:

It is important to note that the decreased ability of the mentally disabled speaker to take the role of the other results in more than problems of understanding for the normal other. Such nonsuccesses are a source of interpersonal feelings of embarrassment or inadequacy and contribute heavily to the stigma that is associated with mental disability. (p. 169)

In line 5, we see that the ethnographer provides a claim of agreement with “yeah” and asks a question about her talk in line 12, as seen in “To who communicate.” In line 12, the ethnographer shows his understanding of the prior talk, and recycles Clara’s talk – the most recent verb “communicate” – as he seeks clarification. He then provides a candidate response to his own question as seen in line 14 with “somebody else?” and seeks further clarification in line 16 with “Like oh I'm the pill?” Clara claims agreement in line 17 while reusing the ethnographer’s talk in line 14. The fact that the ethnographer seeks clarification – repair work normally interactionally-delicate – demonstrates that the ethnographer’s attempt to make sense of Clara’s tangential talk represents his confidence that Clara can provide sufficient information to achieve clarity.

Another form of politeness used by the ethnographer is the use of backchannel tokens (Lambertz, 2011; Ford & Thompson, 1996). For example, in line 5 (“Yeah”), line 21 (“Hmm”), and line 30 (“Hmm”), the ethnographer provides continuers to return the floor to Clara. The ethnographer finally reasserts his original inquiry in lines 34 to 36 and repairs it with “But I mean...” as seen in line 34, and specifically addresses the information he originally wished to hear, “What's it like (0.2) wh- what's it like experiencing (0.2) th- (0.2) the paranoid <schizophrenic> (.) part” to which Clara provides a change of state token (Heritage, 1984b) in line 37 with “Oh (that yeah)” indexing knowledge that is new to her.

Lastly, it is important to point out that the interlocutors have used their talk for different purposes. In line 16 the ethnographer positions himself as a hypothetical person who is on the

pill as seen in “Like oh I’m (on) the pill?” and who’s communicating with the hypothetical Clara who’s on the pill. This is one way in which the ethnographer engages in empathic sense-making. Clara’s talk in line 19, however, does not align with this position; instead she reasserts her position as the protagonist, rather than a hypothetical interlocutor to the ethnographer as seen in “Yeah I’m already (on) the pill”.

Abstract versus Action-Based Notions of Tangentiality

It is evident again that abstract notions of tangentiality are irrelevant to the momentary understanding of an utterance and the need to formulate a response that avoids threatening the face of the interlocutor. The analysis above provides an understanding to the analyst of the analogical connection made between the ethnographer’s question and Clara’s response; Clara’s interlocutor, however, has a more difficult job of interpreting her talk and formulating a response in real-time as he pieces together how her response connects to his prior talk. Ultimately, the ethnographer is asking about Clara’s experience using drugs, and not about its absence. Clinicians assessing tangentiality code linguistic output to serve a purpose whose result need not be produced in the moment. Linguistic output is translated into severity ratings to generate an assessment of disorganized speech by a clinician who is not accountable to talk produced by the patient.

Self-Reference

Self-Reference in Experimental Settings

Andreasen (1986) describes self-reference in the following way:

A disorder in which the patient repeatedly refers the subject under discussion back to himself when someone else is talking and also refers apparently neutral subjects to himself when he himself is talking. This finding usually cannot be evaluated on the basis

of a psychiatric interview, since the subject is then asked to talk about himself. It may be observed during the tests of the sensorium or informal conversation about neutral subjects and should be rated only in that context. (p. 480)

Andreasen (1986) provides the following example of self-reference:

Interviewer: What time is it?

Patient: Seven o'clock. That's my problem. I never know what time it is. Maybe I should try to keep better track of the time. (p. 480)

The rating scale below is used to assess the severity of self-reference:

- 0 Absent.
- 1 Mild (self-reference occurs once during a 15-minute discussion of a neutral subject).
- 2 Moderate (self-reference occurs two to four times during a 15-minute discussion of a neutral subject).
- 3 Severe (self-reference occurs five or more times during a 15-minute discussion of a neutral subject).

(Andreasen, 1986; p. 480)

Self-Reference in Naturalistic Settings

In this segment, the ethnographer is speaking with Clara, the research participant, and Clara's housemate. The housemate expresses concern that service men and women in the Iraq and Afghanistan wars are returning with mental illnesses and expresses hope that there are services in place when they return. Clara offers a solution, and potential counter, by stating that soldiers can seek help through the agency where she has sought help. Her talk is then countered by the ethnographer and housemate who state that veterans seek help through the services offered by the Veterans Affairs Administration. Clara uses self-referential thinking as she generalizes her own experience receiving services for her mental health needs to other populations. Her co-participants become accountable to this talk as they are required to respond to it.

01 House: Yeah there's there's I- I- do I do hope and I think I sense it

02 will it is different for um (0.4) uh this this current war that-
03 that uh returning (0.4) vets are being treated differently
04 (0.2)
05 House: But I'm not sure that there's sufficient help out there for the
06 ones that ha- are have the mental (.) difficulties
07 (0.8)
08 ETH: [Yeah I don't think there is
09 CLARA:→ [Well there's help at Carter's
10 (0.3)
11 ETH: What?
12 CLARA: You know there's help at Carter's for mental (0.4) mental
13 [illness
14 ETH: [Are there a lot of vets there?
15 CLARA: Blacks?
16 ETH: Vets
17 House: N- [Vets
18 CLARA: [Vets?
19 (0.2)
20 CLARA: No
21 House: [Yeah no I mean
22 ETH: [() they go to the VA
23 House: Yeah people are co- peop- (0.3) people are coming back from this
24 war very (0.4) uh with very severe mental problems
25 CLARA: Yeah
26 ETH: °Yeah°
27 (0.9)
28 CLARA: That's the way it was in back in the sixties too

In this segment, both the ethnographer and the research participant, Clara, respond to Clara's housemate regarding her concern that returning veterans may not be able to receive the care that they need to address their mental health issues. The housemate states in line 5: "But I'm not sure that there's sufficient help out there for the ones that ha- are have the mental (.) difficulties." The simultaneous responses by Clara and the ethnographer in lines 8 and 9 show a contrast in appropriateness: whereas the ethnographer displays agreement with the housemate with "Yeah I don't think there is," Clara's talk challenges the housemate with "Well there's help at Carter's." Clara's talk asserts the presence of help, specifically the same help she received for her "mental difficulties."

Clara resides in a housing facility run by Carter's, a dual-diagnosis residence for individuals who have had both substance abuse and mental illness diagnoses. While it is true that "there's help at Carter's for mental (0.4) mental illness" (lines 12-13), not all individuals are

eligible to receive assistance through Carter's and military veterans in particular seek services through Veterans Affairs services. Clara's talk is most glaringly misplaced in that she makes an observation about the world, particularly her world, without responding to the sentiment expressed by her housemate – that of uncertainty. Clara latches on to keywords such as “mental illness” and “help” and produces talk related to her experience with both.

Clara's self-referential talk becomes problematic for her interlocutors, who deem the response to be inappropriate. In an effort to seek clarification of Clara's talk, the ethnographer boldly engages in a repair in line 11 with “What?” in such a way that he both indexes a need for clarification as well as potentially assesses the appropriateness of Clara's response. Clara provides an explanation in lines 12-13 and begins with “you know” as if to say that this is common knowledge. By implicitly stating her relationship to Carter's, she says “You know there's help at Carter's for mental (0.4) mental illness.” After further clarification takes place in lines 14 through 18, Clara states “No” answering the ethnographer's initial question in line 14, “Are there a lot of vets there?” It is important to point out that just because there are not many veterans who seek assistance at Carter's for mental illness concerns, Clara's prior talk is not negated: the facts that there's help for mental illness at Carter's and that there are not many veterans at Carter's are not mutually exclusive. By posing the question in line 14, the ethnographer diminishes the possibility of a face-threatening act by requiring Clara to merely answer the current question, rather than allowing for the possibility of negating her own talk as that would cause embarrassment. That is, Clara's talk in line 20 potentially negates her original assertion that there's help for veterans with mental health needs at Carter's; by only responding to the ethnographer's question in line 14, this potential conflict becomes resolved especially as

the ethnographer in line 22 provides justification for Clara's response in line 20 with his "() they go to the VA."

I would like to point out Clara's talk in line 28 where she aligns with her housemate's talk in lines 23-24. In lines 23-24, the housemate makes an argument regarding the state of veterans "from this war" and Clara aligns with this argument by claiming that there are similarities to prior wars "back in the sixties" as seen in line 28. Clara's talk references the beginning of the conversation when the housemate in lines 1-3 states her hope for current veterans, differentiating it from how veterans were treated in the past. As such, this segment provides a very rich example of the variation in conversational environments that allow for cohesive forms of talk with individuals with schizophrenia.

Abstract versus Action-Based Notions of Self-Reference

Clinical and experimental protocol set out to assess variation in speech would not be able to provide the environment seen here that is organic and structured by rules which dictate the appropriateness of turn content. Assessments of self-reference through interviews elicited by researchers do not carry this component, where speech samples are analyzed with respect to the coherence within a turn at talk, as opposed to between turns at talk. Further, this interaction illustrates how implicit references to the self, not often captured in experimental and clinical speech samples in which the patient is explicitly asked to talk about him/herself, can be used as fruitful indicators of self-referential thinking for clinicians in the assessment of disorganized speech. Such indicators are viewed in conversational contexts, as they are built upon and made sense in accordance with, the prior contributions of the interlocutors.

Circumstantiality

Circumstantiality in Experimental Settings

Rochester and Martin (1979) define circumstantiality as described by Freedman et al., (1976) as “a disorder of association in which too many associated ideas come into consciousness because of too little selective suppression” (p. 6). Moreover, Andreasen (1979a) defines circumstantiality in the following way:

A pattern of speech that is very indirect and delayed in reaching its goal idea. In the process of explaining something, the speaker brings in many tedious details and sometimes makes parenthetical remarks. Circumstantial replies or statements may last for many minutes if the speaker is not interrupted and urged to get to the point. Interviewers will often recognize circumstantiality on the basis of needing to interrupt the speaker to complete the process of history-taking within an allotted time. (p. 1320)

The rating scale below is used to assess the severity of circumstantiality:

- 0 No circumstantiality.
- 1 Mild (occasional circumstantial reply or description during an interview, but patient can get to the point quickly if interrupted and urged to do so).
- 2 Moderate (several circumstantial replies or descriptions during an interview, or single replies often last at least 5 minutes, or patient continues to use circumstantial pattern sometimes if interrupted).
- 3 Severe (many circumstantial replies or descriptions during an interview, or any single reply of a characteristic circumstantial nature lasting more than 15 minutes, or patient usually continues circumstantial pattern even when interrupted). (Andreasen, 1986; p. 479)

Circumstantiality in Naturalistic Settings

In the following segment, Ken, a research participant, and the ethnographer are walking in Ken’s neighborhood. Ken points out that he used to have a friend in a nearby building and incorporates physical stimuli including the building, the ethnographer (whom he refers to as a “videographer”), and the institution from which the research study originated. The talk is distractible in that it incorporates elements in the immediate physical environment as well as

includes many unrelated details which significantly delay and ultimately prevent Ken's talk from reaching its goal, thus rendering his talk circumstantial.

01 KEN: I had a friend () building there? (0.2) he was- he was a
02 videographer he used to work for a uh (0.2) magazine
03 ETH: Oh really?
04 KEN: And uh (0.2) he made a documentary about (0.1) Hurricane
05 Katrina=they had a uh (0.3) out by UCLA and Westwood (0.4) back I
06 guess during that time when Hurricane Katrina was around (0.2) he
07 made a documentary cause they had a uh (0.2) a protest (0.3)
08 and that's when you know the Ipod was first- the Ipod shuffle
09 first came out?
10 ETH: Mm Hmm
11 KEN: But you know he was in- (0.3) a videographer and he would do
12 different stories he would go like the company would send him a
13 plane ticket and he would go to New York, (0.2) New Jersey (0.2)
14 and covers you know a story social issue or whatever (0.2)
15 sporting event, but his room (0.2) ma:::n he had like three
16 hundred thousand dollars worth of video equip[ment in his room
17 ETH: [Whew
18 ETH: (Ye[ah)
19 KEN: [In the little apartment where we live at?
20 ETH: [Uh huh
21 KEN: [He used to live on the second floor (0.2) but he moved (ov-
22 (0.2) he wind up moving to Fairfax Virginia?
23 ETH: It's working. ((*referring to videocamera he was checking*))
24 KEN: Okay [fantastic.
25 ETH: [hhhh
26 ETH: [()]
27 KEN: [He moved] he wind up moving to Fairfax Virginia? (.) now I
28 hear he's in Kesemete Florida
29 (0.2)
30 ETH: () [what?
31 KEN: You [know Kesemete Florida. This is what people where the guy-
32 (0.1) moved to cause (0.2) reason why he moved to Virgina cause
33 the company he worked for magazine company he worked for (0.2)
34 they had moved to (0.2) Virginia
35 ETH: Uh huh?
36 KEN: I mean to New York.

Sacks et al. (1974) describe turn-constructural units as a way in which participants in conversation project the end of their interlocutor's utterance. Interlocutors are able to take the conversational floor after the first turn-constructural unit. Turn-constructural units can be sentential, phrasal, causal, or lexical (Sacks et al., 1974), as well as intonational (Reed, 2012).

In this segment, Ken engages in circumstantial talk with the inclusion of irrelevant details in part through the achievement of many turn-constructural units in one turn. Ken is able to do so as he adds clauses and uses prosody (not represented in the transcript) in such a way that he

produces many turn-constructive units in one turn. This achievement is not a solitary one: the ethnographer assists with this process through his use of back-channel tokens that index what Lambertz (2011) calls “engaged listenership” and describes as “the desire of the listener to portray active, supportive and polite listenership” (p. 12). Lambertz (2011) describes Gardner's (2001) definitions of different types of backchannel tokens. Such tokens include continuers such as “mm” and “uh huh” in which the listener returns the floor to the speaker, and tokens of acknowledgement such as “mm” and “yeah” which serve to agree with or understand the speaker. The ethnographer engages in active listening as seen in his token of acknowledgement in line 2 “Oh really?” which Heritage (1984b) describes as a change of state token, or a change in the speaker's knowledge base. In line 10, the ethnographer produces the continuer “mm hmm”; the minimal evaluative assessment “Whew” in line 17; the token of agreement “yeah” in line 18; the continuer “uh huh” in line 20; and finally the continuer “uh huh” in line 35.

Ford and Thompson's (1996) notion of backchannelling represents the role in which the ethnographer is engaged in this segment. Taken from (Schegloff, 1982), the ethnographer's backchannel tokens can be described as “short utterances produced by an interlocutor who is playing primarily a listener's role during the other interlocutor's speakership” (p. 152). Ken is able to maintain long turns of talk because of the listener role that the ethnographer assumes. By taking the role of the listener, the ethnographer does not have to respond to the content within each turn at talk and instead provides a backchannel token when he projects a transition relevance point through Ken's intonational patterns which serve to structure his turn-constructive units. This tool is especially important as the ethnographer is unable to follow the content of Ken's talk and can therefore merely respond to the action represented by Ken's most recent turn-constructive unit.

Abstract versus Action-Based Notions of Circumstantiality

Andreasen (1979a) states that circumstantiality is noticeable to interviewers as patients' talk "may last for many minutes if the speaker is not interrupted and urged to get to the point" (p. 1320). Interruptions in conversation are strategic and are weighed against many variables including politeness. In this segment, Ken's circumstantial talk is an interactional achievement by both Ken and the interlocutor through an analysis of turn-constructional units, backchannel tokens and politeness. Circumstantial details pervaded the content of Ken's talk such that Ken's interlocutor became accountable to this talk through his role as listener and the backchannel tokens he employed.

Discussion

Summary of Findings

The preceding analysis illustrated how the features of disorganized speech in formal thought disorder such as perseveration, illogicality, tangentiality, self-reference, and circumstantiality used to characterize speech patterns in schizophrenia are seen in context. Similar themes evolved from each of the segments presented: (a) abstract concepts of disorganized speech phenomena do not serve as prescriptions for how interlocutors manage disorganized speech through their moment-to-moment responsibilities of responding to talk while preserving face on behalf of their interlocutors; (b) speech samples elicited and analyzed through experimental protocols provide a basis on which to observe patterns, code symptoms and characterize disorders; and (c) disorganized speech takes on a social life of its own where labels are no longer relevant and where problematic speech is dealt with in an organized yet delicate manner.

Properties of Language as Theoretical Endpoint versus Language as Action

The title of this research proposes a preliminary response to the question of why methodology matters in the investigation of language in schizophrenia. In this research, experimental and naturalistic methodologies have been juxtaposed to highlight differences in how language phenomena become visible and serve to structure different types of activities. Clinicians and researchers alike would benefit from considering the following question as they carry out their work: What are the goals underlying the phenomena we have chosen to study and the methods we have chosen to employ? The perspective of language behavior espoused in this research is one of action, as we examined participants doing things with language. This finding relates to observations made throughout the data set in which participants were able to fulfill instrumental needs such as purchasing items at grocery stores, liquor stores and restaurants in their communities. As such, the findings in this research may provide evidence for the observation Cretchley et al. (2010) made regarding their overall impression of the conversations they analyzed. They state:

It is interesting to note the trend toward positivity across all conversations. [...] In most cases in which problems occurred, the discussion moved on without explicit acknowledgement of the trouble. Although the interactions could not always be described as smooth, somehow the participants ‘made it work.’ Whether out of commitment or necessity, our findings show that carers use a range of strategies to facilitate successful conversations with their relatives or patients with schizophrenia. (p. 15)

Participants in the interactions the authors analyzed “made it work” in part because the mechanics of conversation dictate doing so, as the present analysis has confirmed.

The findings in this study, although limited to three individuals with schizophrenia, illustrate real-world processes of communicative breakdowns, which differ from some

descriptions of communication patterns in schizophrenia. Walsh (1997), for example, states that individuals with schizophrenia “may either refrain from engaging in conversation or converse in an inappropriate and incoherent way, often leaving the listener confused and unable to follow the line of conversation, leading to breakdown” (p. 105). Analyses from this research show that communicative breakdown is not a conversational endpoint as interlocutors manage the consequences of communicative breakdowns. The detailed analyses of the conversations presented in this research point to the ramifications regarding language use in real-world contexts: human interaction encompasses a range of resources that are used in the communicative process. What the research participants were doing in each of these segments had little to do with language ability. Language, when viewed as action, reflects a foundation for social life, and as such, these segments are more predictive of the research participants’ future interactions with interlocutors in their naturalistic environments than that of severity ratings of disorganized speech used for prescriptive purposes.

Implications for Social Skill Intervention

The findings from this research have implications for social skill intervention efforts focused on communication skills. This research has shown that conversation is organized, organic and structured. Mechanisms for organizing conversation, such as turn-taking and the preference for self-repair, is often unconscious and involuntary. Conversational skill interventions for individuals with schizophrenia may be able to benefit from a distinction between abstract versus procedural knowledge of conversational skills, as well as the fact that inherent in the rules of conversation are interlocutors’ abilities to minimize and manage communicative breakdown. These observations should be considered in the following review of two intervention studies.

Walsh (1997) discusses a conversational skills training for individuals with schizophrenia which focused on (a) the social organization of discourse; (b) presupposition, in which participants were taught to attend to the needs of their interlocutor based on their talk; and (c) communicative intent, to help participants recognize the underlying intent of their interlocutor's talk. Examples of tasks for each of the three domains are described below (p. 113-116):

Organisation of discourse

Roles of speaker and listener:

Task: 'What do we do as a listener?'

'What do we do as a speaker?'

Conversational repair:

Following a greeting, each member was given an ambiguous/confusing utterance out of context, that could lead to conversational breakdown. The members were encouraged to respond with request for clarification. One model was given.

Presupposition

Problem solving – making inferences, role taking:

Task: Pictures of problem situations; What might the person be saying or thinking?

Communicative Intent

Activity focused on recognising the intent of others; responding to indirect speech acts (a) appropriately and (b) inappropriately.

The authors found that these trainings were effective in that participants were able to articulate metacommunicative frustrations. Similarly, Henton, Sinclair and Sideras (2001) describe an interpersonal skills training they conducted which included: (a) presentation of a topic related to verbal or non-verbal behavior; (b) modeling of behavior by clinicians; (c) role-play of the

concepts by participants who then received feedback; (d) problem solving; and (e) reinforcement, such as praise for successful engagement in the previous components of the training. The authors found that the participants who most benefitted from the training had their acute symptoms under control as well as maintained insight into their condition which led them to volunteer in the training in the first place.

Findings from the present research show the context-specific nature of disorganized speech in which conversational contributions have an interactional origin and cannot be dealt with in isolation of the context from which it is derived. As an absence of metacommunicative awareness significantly hampers communicative success in individuals with schizophrenia, feedback that specifically addresses the procedural nature of conversation by focusing on action as opposed to abstract understandings of language use behavior may be beneficial. As demonstrated in this research, abstract knowledge of conversational behavior may not transfer into interlocutor responsibilities as determined on a moment-by-moment basis.

Where Does Further Investigative Responsibility Lie?

This research has analyzed disorganized speech of individuals with schizophrenia by understanding the role that interlocutors play in conversation and the mechanisms of conversation that allow for occasions of trouble to be managed delicately. To assume that conversational mechanisms will serve to be self-correcting is irresponsible. Further scholarly responsibilities rest in the way in which investigators' theoretical intentions are made explicit through the methodologies employed and the relative focus on impairment versus competence. A continued understanding of real-life behavior in schizophrenia is warranted and is the responsibility of investigators studying communicative processes in schizophrenia. The responsibility also lies with potential interlocutors – the general public – through an

understanding of resources they can rely upon when interacting with individuals with perceived communicative impairments or aberrancies.

This research has shown how theoretical intentions dictate research methodologies and has explored perspectives of competence versus impairment and collaborative responsibilities versus individual ones. Antaki (2011) provides timely input on how the continued use of naturalistic methodologies such as conversation analysis encourages an analytical focus on competence in individuals diagnosed with conditions that affect the way in which they communicate with others. The author states:

Locating competence in just one person is to seriously underplay the role of the others involved, and to fail to identify the skills that even a person with a disability can bring to the exploitation of conversational norms and regularities. What Conversation Analysis can bring to the study of competence is an enrichment of, and a methodological alternative to, more abstract pragmatic models of communication. If that illuminates how people with disabilities can better be helped to manage their communicative environment, then we shall have done still more than merely add to our stock of linguistic knowledge.
(p. 109)

Appendix A

Transcription Conventions (from Antaki, 2011)

| | |
|---------------------|--|
| (.) | just noticeable pause |
| (0.3) | timed pause |
| [word [word | overlapped talk |
| .hhh | in-breath |
| hhh | out-breath |
| wo(h)rd | laughter in talk |
| wor- | talk that is cut off |
| wo:rd | sound preceding colon is stretched |
| (word) | guess of unclear talk |
| () | unclear talk |
| word=word | no pause between sounds or turns at talk |
| <u>word</u> , WORD | underlined words are louder; capitalized words even louder |
| °word° | talk that is quiet |
| >word< | faster speech |
| <word> | slower speech |
| ↑word | upward intonation |
| ↓word | downward intonation |
| → | analyst representation of significant line of talk |
| ((<i>coughs</i>)) | material that cannot be represented phonetically |

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