Turn permeability and cognitive-communication disorders

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Statement of Originality

This work has not previously been submitted for a degree or diploma to any other university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Natalie Skinner October 2020

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Like turn permeation, a thesis is a collaborative accomplishment! It is one long turn that was shaped by all the recipients along the way.

Abstract

Cognitive-communication disorders are characterised by impairments to attention, memory and/or executive functioning, impacting inferencing, discourse and pragmatics. Research and clinical findings indicate that social interaction is problematic in this population, but few studies have empirically explored everyday conversations. Turn-taking in conversation has a well-established body of research in typical populations, with turn permeation (i.e., points where the initial speaker's turn is incomplete when the recipient begins to talk) revealing the complex intricacies of the turn-taking process. Exploration of turn permeation in conversations with people who have cognitive-communication disorders may provide a sensitive means to uncover problematic aspects of interaction that have proven difficult to explore through quantitative and experimental studies to date. Utilizing qualitative collection-based conversation analytic methods, this study explores turn permeability with three participants with a cognitive-communication disorder, in everyday conversations with their familiar Three separate conversations (two triadic, one dyadic), each communication partners. approximately 50 minutes, were audio and video recorded. 45 instances in which a participant's turn at talk was permeated were identified and analysed. These analyses show that aspects of turn design accomplishing next-speaker selection between turns are also relevant for managing participation within turns. This enables speakers to invite participation in a turn in progress, or may enable recipients to participate without invitation. Whether participation is invited influences the social actions accomplished through turn permeation. Participants with a cognitive-communication disorder engage in turn permeation in ways largely consistent with typical participants. Sporadic and heterogeneous atypicalities were noted, suggesting a possible tendency for participants with cognitive-communication disorders to misread the current action. Additionally, conduct following instances of permeation evaluates or ratifies the permeating talk. This conduct is shown to play a role in promoting progressivity and adapting to unusual moments in interaction. These findings contribute to knowledge of turntaking, and offer potential areas for future research on its applications to assessment and intervention for people with a cognitive-communication disorder.

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1 Introduction

Conversation participants display intersubjective understanding through their participation in interaction and, importantly, through taking turns at talk (Heritage & Atkinson, 1984). In face-to-face interaction, each participant influences the progression of the interaction in both overt and subtle ways (Goffman, 1981; Levinson, 1988). Speakers design their talk and actions for recipients, modifying and adapting to recipients as the talk progresses (e.g., Garfinkel, 1967; Goodwin, 1979; Goodwin & Goodwin, 1987). The study of communication disorders has traditionally focused on cognitive and sensory-motor processes involved in understanding and speaking. These processes are usually separated out or viewed simplistically, considering the 'speaker' separately from the 'hearer', which removes the crucial element of interaction (Barnes & Bloch, 2019; Levelt, 2013; Wilkinson, 2019). To access and describe communication disorders and their effects on everyday social participation, a thorough understanding of communication in interaction is required (Barnes & Bloch, 2019; Wilkinson, 2013, 2019). As a consequence, there is a need for studies of communication disorders in the context of interaction, which will build knowledge about disruptions to understanding and speaking grounded in everyday interactions. The present study adopts such an approach, exploring turn-taking in the conversations of people with a cognitive-communication disorder and their familiar communication partners.

Chapter 1 of this thesis first defines turn-taking with a particular focus on projection in TCUs and sequences. Secondly, turn permeability is explored in terms of speaker and recipient collaboration and action accomplishment at a sub-TCU level. Finally, research in the field of cognitive-communication disorders is discussed, demonstrating the potential for interaction-based research to reveal problems in social interaction for this population.

1.1 Turn-taking and sequence organisation

Turn-taking in conversation is the repeated alternation of speakership among two or more conversational participants. Using turn-taking as a starting point for exploring interaction provides a deceptively simple, and yet stable base from which to explore the intricacies of interaction, and the larger scale social accomplishments it supports. In their foundational paper, Sacks et al. (1974) outlined a turn-taking system for everyday conversation that has proven robust across languages and cultures (e.g., Stivers et al., 2009). In this system, put simply, each participant is entitled to one "complete" turn in which they either select the next speaker, or the next speaker self-selects. The current speaker may also extend their own turn. Sacks et al. (1974) observed that, as a consequence of applying the rules of the turn-system, mostly one participant speaks at a time, with no gaps or overlap when transferring between speakers. For this to occur, there is careful coordination across participants. The elements involved in turn taking are intrinsically interdependent. Manifold features of talk and embodied action converge and coordinate each moment (e.g., Auer, 2009, Selting, 1996). As a speaker progresses their turn at talk, the recipient attends to features of the turn's design, monitoring for a relevant place to take their next turn.

Turns are composed of Turn Constructional Units (TCUs) (Sacks et al., 1974). A TCU can be conceptualized as a flexible spate of talk being constructed in real time along a projectable trajectory (Selting, 1996). It is a unit of exchange that is formed for recipients and adapted in response to recipients as it unfolds (e.g., Lerner, 1996; Schegloff, 1996), into a "retrospectively recognizable 'unit'" (Selting, 2000, p. 491). TCUs vary significantly in length, from a minimal "mm" to longer, syntactically governed structures. This flexibility is essential to interaction (Ford, 2004). Speakers and recipients orient to TCU boundaries (Schegloff, 1996; Szczepek Reed, 2010) as legitimate (i.e., normatively unmarked) opportunities for speaker transition to take place. These moments are termed Transition Relevance Places (TRPs) (Auer, 1996; Lerner, 1996; Sacks et al.; 1974). Sacks et al. (1974) define the TRP as a place for (possible) speaker change. The completeness of a TCU and relevance of a transition space are determined

at different levels of granularity (Auer, 2002). Syntactic, prosodic and embodied features of the TCU (alongside actional ones) project completion points or further talk.

1.1.1 Projection in TCUs and turns

Projection is a collaborative process whereby the speaker incrementally foreshadows the trajectory of their developing talk, and their recipient(s) incrementally make sense of what is being projected (Auer, 2009, p. 188; Selting, 2000). It occurs at different levels of granularity. At the level of the TCU, features such as syntax, timing, phonetic features, prosody and embodied action are resources for projection. Syntax is a powerful "projecting device" (Auer, 2009, p. 204), with substantial capacity for specificity (Auer, 2009; Selting, 1996). Syntax is organized such that the strength of projection increases as the TCU progresses (Auer, 2009; Hayashi, 1999; Iwasaki, 2008). Participant orientation to syntactic units is evident in the timing of recipient talk, including receipt tokens (e.g., "mm"), which often occur around the end of a syntactically complete unit (Selting, 1996; Thompson & Couper-Kuhlen, 2005). At a finer granularity, syntactic structures are composed of phonemes and breaks in phonation, and are impacted by the manner and timing of the production of these units. Phonetic features in themselves have projecting qualities (Local & Kelly, 1986). Close analysis of silences in terms of glottal closure, breath directionality and gradations in phonation can project turn holding in contrast to turn yielding (Local & Kelly, 1986). Similarly, cut-off phonation has turn holding properties that signal selfrepair (Jasperson, 2002). Sound stretches or elongations of the final sound in a word can project a range of activities, including for example, word search (Goodwin & Goodwin, 1986) and repair (Schegloff, 2000; Schegloff, Jefferson, & Sacks, 1977).

Prosody and embodied action can frame syntactic and phonetic aspects of talk. TCUs are produced with variations in pitch and loudness forming prosodic contours or "melodic gestalts" (Selting, 1996. p. 368). These contours contextualize syntactic and phonetic projection. Level pitch or slight rising

or falling contours project further talk from the current speaker, while distinct rising or falling intonation can project a TRP (Bogels & Torreira, 2015; Local, 1992; Schegloff, 1998; Selting, 1996; Szczepek-Reed, 2010). Similarly, embodied actions combine with talk to demarcate completeness of a TCU (Goodwin, 2000; Mondada, 2007; Streeck & Hartge, 1992). For instance, gestures, such as pointing, during a TCU may project its upcoming end, a 'palm up' has been shown to project the formation of a list (Mondada, 2007; Streeck & Hartge, 1992) and a paused or frozen gesture can project further talk along with gesture completion (Schegloff, 1984). Importantly, embodied actions are also intertwined with the projection of next-speakership.

Speaker change predominantly occurs at TRPs, with projection of who will speak next embedded in the design of the TCU through lexis, syntax, phonetics, prosody and embodied action (Couper-Kuhlen, 1993; Goodwin, 1979, 1980; Goodwin, 2000; Lerner, 2003; Mondada, 2007, 2013; Sacks et al., 1974; Streeck & Hartge, 1992). Selection of a next speaker by the current speaker can occur explicitly through terms of address (e.g., names, pronouns) and embodied action (e.g., gaze, pointing), or tacitly through epistemic skewing to a recipient's domain (Blythe, Gardner, Mushin, & Stirling, 2018; Lerner, 2003; Mondada 2013; Stivers and Rossano, 2010; Vatanen, 2018). Self-selection can be projected by recipient pointing pre-TCU, where a recipient shows themselves as an "incipient speaker" (Mondada, 2007, p. 197). Orientation to epistemic stance has been shown to be a factor in self-selection prior to a TRP (Vatanen, 2018). Negotiation of next speaker selection is a complex, reflexive, multimodal process combining speaker turn design (talk and embodied action) and recipient orientation to projected speakership (Goodwin, 1979; Mondada, 2007, 2013; Schegloff, 1996).

Speaker selection becomes increasingly complex in multi-person conversations. Embodied resources for projection, such as gaze, are assigned a meaning by recipients in the enchronic processes of interaction (Enfield, 2014). However, these same resources are used for a range of functions (e.g., general address and speaker selection), creating the potential for ambiguity. Speaker selection resources,

such as pronouns and gaze, can be applicable to more than one recipient (Blythe et al., 2018; Lerner, 2003, 2019). Ambiguity and the resultant complexities multiply with the number of participants (Clark & Carlson, 1982; Goffman, 1981; Takanashi, Fujimoto, Kono, Takeuchi, & Isahara, 2006). These kinds of problems in speaker selection can become apparent as a speaker's turn progresses, and participants may adjust to address them, progressively employing finer and/or disambiguating resources as required (Blythe et al., 2018).

1.1.2 Projection in sequences

Projection also operates in other interactional units that articulate with those operating in the turntaking system. Alternating turns form sequences (Sacks et al., 1974) with some predictable action related features contributing to projection. Sequence organization revolves around pairs of turns known as 'adjacency pairs', which are composed of a First Pair Part (FPP) and Second Pair Part (SPP) (Schegloff, 2007). The FPP-SPP pairs accomplish interrelated actions such as question-answer, and invitationacceptance. Sequences can extend out from this adjacency pair, with pre-, insert- and post-expansions of the base adjacency pair sequence. Actions within a sequence project a next relevant action (Pomerantz, 1984; Schegloff, 2007; Enfield & Sidnell, 2017) (e.g., a question projects an answer). Within this there is an interactional preference towards alignment and agreement across the sequence. The TCUs within turns in a sequence are regularly designed in order to avoid directly disaligning responses (Heritage, 2013; Pomerantz, 1984; Schegloff, 2007). This is evidenced via dispreferred turn shapes of various kinds, involving turn prefaces (e.g., "well", "yes, but"), pauses and hesitation markers, all of which project potentially disaligning responses (Gardner, 2001; Heritage, 2013) and contribute to projection of upcoming talk and next relevant actions.

1.2 Turn permeability

1.2.1 Permeation and interactive turn spaces

Turn permeation refers to recipient talk within the speaker's turn space, (potentially) infringing on the speaker's right to produce at least one complete TCU in their turn (Sacks et al., 1974). Projection is an important mechanism for enabling recipients to participate in a turn prior to a TRP (Lerner, 1996). Turns can be permeated briefly with response tokens, such as acknowledgement tokens or continuers (e.g., 'mm', 'yeah') without transfer of speakership (e.g., Gardner, 2001; Goodwin, 1979, 1986; Jefferson, 1983; Sacks, 1992; Sacks et al, 1974; Selting, 1996). Turns can also be permeated with more substantial stretches of talk, in which either the permeation shares the turn space of the current speaker, or initiates a next turn. Shared turn space has been described in a variety of ways, such as co-producing utterances (Sacks, 1992), recognitional and progressional overlap (Jefferson, 1983), 'duetting' (Falk, 1979; Szczepek, 2000a, 2000b), 'choral completion' (Lerner, 1987; 2002), collaborative completion (Lerner, 1987; Sacks, 1992; Szczepek, 2000a; Wilkes-Gibbs, 1986), co-participant completion (Hayashi, 1999), and co-construction (e.g., Helasvuo, 2004). Each interpretation highlights particular aspects of the phenomenon. Turn permeation evidences the continuous process of projection in unfolding talk that, as I have argued so far, involves a complex interactive process spanning talk and embodied action (e.g., Bolden, 2003; Goodwin, 1979, 1995; Goodwin & Goodwin, 1986; Hutchins & Nomura, 2011).

Through the process of projection, recipients may seek to complete the speaker's TCU or continue the sequence with a next turn (Chevalier & Clift, 2008; Goodwin, 1979; Helasvuo, 2004; Iwasaki, 2008; Lerner, 1996; Ono & Thompson, 1996). TCU completion often flows syntactically and prosodically from the speaker's TCU, bringing the TCU to a TRP, as is the case with Lerner's (1987, 1989) collections of collaborative completions. In some instances, matching syntactic completions are produced in unison by speaker and recipient, which have been termed choral completions or duetting (Falk, 1979; Lerner, 1987). However, it is not necessarily the case that the candidate completion will follow the speaker's

apparent trajectory (e.g., Bolden, Hepburn & Potter, 2019; Local, 2005; Lerner, 1987, 1989, 2004). In some instances, the completion occurs in overlap and differs syntactically and semantically from the speaker's eventual version of the TCU (Lerner, 2004). Alternatively, the recipient may permeate the incomplete TCU with a next turn in the sequence, thus treating the TCU as though it had come to a TRP, taking the floor for themselves, and leaving the syntactic completion implied (Chevalier & Clift; 2008; Depperman, 2018; Lerner, 1987).

Turn permeation by a recipient can be projected by the speaker (Lerner, 1996). Iwasaki (2008, 2009) explored this phenomenon within the TCU in Japanese, expanding on Goodwin's (e.g., 1979, 2000) and Lerner's (e.g., 1987, 1996) analyses of talk and embodied interaction. Iwasaki (2008, 2009) revealed 'interactive turn spaces', in which the speaker invites the recipient to participate in the construction of the TCU. These spaces, and the participation therein, may be as brief as half a second in duration, consisting of a recipient facial expression, which guides the speaker's ongoing TCU (Iwasaki, 2008, 2009). The speaker constructs the space through combinations of gaze, phonetic features, prosody, slowed speech rate and pauses in phonation (Iwasaki, 2008, 2009). Permeation may also occur without being projected by the speaker (Lerner, 1996). Jefferson (1983) and Vatanen (2018) explored instances of 'recognitional overlap', in which recipients permeate a TCU in the absence of an invited interactive turn space. In these instances, the completion occurs in overlap and recipients make a claim to shared knowledge. In summary, then, the prospect of permeation can be foreshadowed by the speaker or retrospectively activated by a recipient, with reference to an array of semiotic resources, including syntax, phonetic features, prosody, gaze and epistemics.

1.2.2 Response to permeation

The progressive construction of talk in interaction is complemented with mechanisms for repair (Jürgen Streeck & Jordan, 2009, p. 100). While turn permeation is made possible by incremental turn

construction and mutual orientation of speaker and recipients to projected elements of a TCU (Lerner, 1996; Iwasaki, 2008), the speaker has the right to complete at least one TCU once they have successfully gained the floor (Lerner, 2004; Mondada, 2007; Sacks et al., 1974). The speaker, therefore, has resources available for remedially responding to turn permeation by a recipient that was not projected by the speaker. For example, the overlap resolution devices described by Schegloff (2000), which include repair practices, can come into play to resolve conflicts during turn permeation. The speaker and recipient may persist in overlap, or one participant may withdraw from overlapping talk. Lerner (2004) outlined a three part "collaborative sequence" that eventuates from collaborative completion, which is one form of turn permeation. Following a speaker's incomplete TCU, completed by a recipient, the speaker may also evaluate the completion (Lerner, 1989) or negotiate stance (Iwasaki, 2008, 2015), through a 'delayed completion', which serves to accept or reject the completion, or to reclaim the turn space. This "receipt slot" acts as a "repair device" (Lerner, 2004, p. 232).

Turn permeation involving recipient completion of a TCU, and the resultant collaborative activities, share features with repair. Repair is the mechanism through which participants can make adjustments or corrections to talk as a conversation progresses (Sacks et al., 1974; Schegloff et al., 1977). Repair can be initiated by the speaker of the trouble source (self-initiation of repair) or a recipient of the trouble source (other-initiation of repair), and, accordingly, the repair can be accomplished by the speaker or recipient (self-repair and other-repair respectively) (Schegloff et al., 1977). The positioning of the repair relative to the trouble source turn is also consequential (e.g., in the same turn, or at the transition space) (Schegloff et al., 1977). Self-Initiated Other-Repair (SIOR) is one of the various combinations that can arise, and it most resembles 'collaborative completion' (Lerner, 2004). During SIOR, the recipient's intervention into the turn can be overtly invited by the speaker (e.g., Goodwin, 1986), using the same phonetic resources to repair initiation, including for example, sound stretches and silences (e.g., Fox et al., 1996). However, in many instances of turn permeation, this invitation (if it is present at all)

is handled far less explicitly. This suggests that many instances of turn permeation resembling repair are likely to serve additional or alternative actions.

1.2.3 Social actions accomplished through permeation

Participant conduct in turn-taking is goal directed. Recipients ascribe meaning to the speaker's talk and embodied actions, interpreting the turn as a social action (e.g., a request, or noticing), and use this to guide their own response (Enfield & Sidnell, 2017). This response, therefore, plays a key part in establishing the meaning of the speaker's action (Enfield & Sidnell, 2017). Prior studies have identified a range of actions and associated activities that may be accomplished through turn permeation, with many focusing on collaborative word searches, i.e., SIOR. The actions accomplished through turn permeation tend to vary with the degree to which recipient participation was projected or not. That is, as I have discussed so far, speakers may project a recipient's participation in their TCU through their turn design, effectively inviting permeation, or recipients may permeate the TCU without any such invitation.

Recipient collaboration in the current speaker's word search is a commonly reported activity associated with turn permeation (e.g., Bolden, 2003; Goodwin & Goodwin, 1986; Iwasaki, 2008; Lerner, 1986, 1996; Wilkes-Gibbs, 1986). This recipient participation occurs following breaks in progressivity (e.g., pauses, cut-offs, hesitation markers and restarts) and can be seen as a form of repair in which the speaker initiates repair and a recipient accomplishes the repair within the same turn (e.g., Wilkes-Gibbs, 1986; Jefferson, 1983). Speakers can explicitly indicate such a word search with utterances such as 'what's the word' (Schegloff et al., 1977). Wilkes-Gibbs' (1986) early exploration of turn permeation in the form of 'spontaneous completion' focused on instances in which recipient completion occurred following halts in progressivity. Ferrara (1992) similarly noted "helpful utterance completions" following breaks in progressivity. Studies in aphasia have often demonstrated collaborative word searching and finding through turn permeation (e.g., Beeke, Capindale, & Cockayne, 2020; Goodwin,

1995; Laakso, 2015; Samuelsson & Hyden, 2017). In this context, turn completion by a 'typical' recipient is a "collaborative repair strategy" employed to promote progressivity (Beeke et al., 2020, p. 18; Laakso, 2015). Speakers with aphasia initiate the word search and the unimpaired recipient completes (Samuelsson & Hyden, 2017). This is then ratified by the speaker with a response token, e.g., 'yeah' (Beeke et al., 2020; Samuelsson & Hyden, 2017).

Projected turn permeation is also evidenced in instances of designedly incomplete TCUs. These have been shown to accomplish several actions, including requesting information in order to gain knowledge (e.g., Ferrara, 1992; Schegloff, 2007), testing (requesting information to test the knowledge of others) (Koshik, 2002) and avoiding a delicate topic (Lerner, 2004, 2013). Designedly incomplete TCUs are common in pedagogical contexts (Koshik, 2002). Teachers frequently formulate a TCU designed for students to complete as a means of testing student knowledge (Koshik, 2002) or questioning (Ferrara, 1992; Schegloff, 2007). Depperman (2018) describes a subset of incomplete TCUs as having an analeptic design, which projects a next relevant turn rather than a syntactic completion. Analeptic design can be utilized to avoid a delicate topic, resting on an implication of shared knowledge or understanding. A TCU can also be completed with a gesture. Such completions are ambiguous in principle because the talk is incomplete, yet they can be treated by recipients as a complete TCU (Mori & Hayashi, 2006; Olsher, 2004). Iwasaki (2008, 2015) demonstrates that, in Japanese, projected completions are achieved through a collaborative negotiation of stance as the TCU unfolds. These examples are united in that the speaker prospectively indexes recipient participation.

Recipients can use non-projected turn permeation to accomplish several actions. In these instances, the speaker does not design the TCU to project completion by a recipient, but the recipient intervenes nonetheless. For instance, recipients may permeate to take a stance on the speaker's talk so far, invoking their independent grounds for doing so (Vatanen, 2018). This stance may, but need not, align with the speaker's stance (Vatanen, 2018; Kangasharju, 2002). Jefferson (1983) described recognitional overlap

as recipients overlapping a current speaker's talk at a point of recognition. Vatanen (2018) explored this in closer detail, showing that recipients orient to shared knowledge in a speaker's assertion, and use overlap (i.e., a type of turn permeation) as a resource for asserting their own, independent epistemic stance. Non-projected turn permeation can also be used as a means to accomplish alignment in committee meetings (Kangasharju, 2002), and to participate in co-telling (Hayashi, Mori, & Takagi, 2002). Along slightly different lines, recipients may utilize projection within a TCU to change the speaker's projected action in "subversive completions". In these instances, the completion proffered via the permeating recipient is "designedly wrong" and can accomplish teasing or joking actions (Bolden et al., 2019, p. 256; Local, 2005). In these forms of permeation, the recipient retrospectively reconfigures an aspect of the speaker's turn and/or action design.

Turn permeation showcases the complexities of turn-taking mechanisms through evidence of projection at the sub-TCU level, and the fine range of social actions that can be accomplished.

1.3 Cognitive-communication disorders

1.3.1 Traditional conceptualisation of cognitive-communication disorders

Cognitive-communication disorders are characterized by impairments to attention, memory and/or executive function impacting communication, in the absence of impairments to core language functions. Cognitive-communication disorders may result from a range of aetiologies, including Right Hemisphere Brain Damage (RHBD), Traumatic Brain Injury (TBI) and Dementia (e.g., Blake, 2018; Mahendra, 2021; Togher, McDonald, & Code, 2014). For people with RHBD and TBI, the degree of impairment changes over time, with the most severe disruptions to cognition occurring in the acute phase post brain damage (Blake, 2018; Togher, McDonald, & Code, 2014). The reverse is true of progressive conditions such as dementia in which effects worsen over time (Mahendra, 2021). For people with RHBD and TBI, the effects of cognitive-communication disorders are lifelong, causing various negative

impacts on social participation, personal relationships, workplace functioning and, ultimately, quality of life (e.g., Frankel & Penn, 2007; Hewetson, Cornwell & Shum, 2018; Togher, Douglas, Teasell & Turkstra, 2014).

The effects of cognitive impairment are apparent in conversations involving people with RHBD and TBI (e.g., Constantinidou, 2021; Hagen, 1982; Hartley 1995; Purdy, 2021; Russell, 1932; Steel & Togher, 2019; Villard, 2021). These symptoms are often characterized as affecting "pragmatic" aspects of language, in contrast to disorders affecting core aspects of speech and language (e.g., dysarthria, aphasia) (e.g., Blake, 2018; Mahendra, 2021; Togher, McDonald, & Code, 2014). Specific impairment symptoms in conversation are reported to vary widely between individuals, and can include difficulties with inferencing, planning and adaptability, using and understanding prosody, appropriate turn-taking and cohesion in conversation (e.g., Blake, 2018; Martin & McDonald, 2003; McDonald, Togher, & Code, 2013). This heterogeneity of symptoms has made clinical measurement of cognitive-communication disorders challenging, with testing procedures and other clinically-based tasks failing to capture important aspects of impairment symptoms and their communicative consequences. Therefore, in both research and clinical practice, there have been steadily increasing efforts to explore and capture the ways that cognitive-communication disorders affect spontaneous language use, with a view to improving clinical assessment and intervention. I will argue, however, that further efforts are required to investigate exactly how interaction is affected, using an inductive approach grounded in exploration of naturally occurring conversation.

1.3.2 A critical perspective on cognitive-communication disorders

Early research on cognitive-communication disorders involved small groups of participants gathered according to the aetiology of disorder (e.g., RHBD or TBI). These studies identified specific language-oriented deficits, such as understanding humour and verbal problem solving, challenging

claims about the location of language functions in the brain and exploring the role of frontal and right hemisphere cortices (e.g., Eisenson, 1962; Gardner, Ling, Flamm, & Silverman, 1975; Caramazza, Gordon, Zurif, & Deluca, 1976). This progressed to more recent explorations of discourse skills and use of gesture, in an effort to empirically study subjectively reported discourse difficulties (e.g., Brady, Armstrong & Mackenzie, 2006; Cocks, Hird, & Kirsner, 2007; Coelho, Liles, & Duffy, 1991). The methodological approaches adopted in these studies often provide little consideration of interactive context, and compromise their capacity to capture these difficulties. For example, analyses of monologic discourse samples and classification of gestures by pre-determined criteria are not grounded in the interaction in which they took place (Barnes & Armstrong, 2010; Weed, 2011).

There has been a gradual shift toward the study of how cognitive-communication disorders impact the use of language in monologic and dialogic discourse tasks. However, the influence of experimental methods has constrained how researchers have examined these phenomena, limiting the relevance and applicability of findings to everyday communication (e.g., Coelho et al., 2002; Hird & Kirsner, 2003; Kennedy, Strand, Burton, & Peterson, 1994; Snow, Douglas, & Ponsford, 1997, 1998). These studies tend to focus on group comparisions, and generate their conversational data via elicitation tasks and interviews with an examiner (typically, a researcher or a speech pathologist). The measures employed in these studies often have limited theoretical or empirical basis (e.g., turn initiation, topic maintenance, 'discourse errors'), and measures are singularly quantitative (e.g., number of turns, length of turns). In addition, the brain injured person's discourse tends to be the sole focus, excluding any influence of the interviewer as a participant in the interaction (e.g., Brady et al., 2006; Coelho et al., 1991). Although this research has offered interesting findings that warrant further investigation (patterns in turn-taking, repair strategies and topic initiation, see, e.g., Chantraine, Joanette, & Ska, 1998; Snow et al., 1997), participants with cognitive-communication disorders are often difficult to distinguish from

control participants in discourse tasks, which means that the core symptoms and impacts of cognitivecommunication disorders on everyday communication are still underspecified.

In research and clinical practice, there has also been an increasing acknowlegdement of the role that communication partners play in supporting people with a cognitive-communication disorder in everyday communication. This is particularly the case for people with TBI, where compensatory strategies and communication partner training have become prominent parts of clinical practice for cognitive-communication disorders (e.g., Penn & Cleary, 1988; Bogart, Togher, Power, & Docking, 2012; Chia et al., 2019; Sim, Power, & Togher, 2013; Togher & Hand, 1999; Togher, Hand, & Code, 1997). As a consequence, it is vital that further evidence is developed on how cognitive-communication disorders are interactionally realized and managed.

1.3.3 An enchronic approach to studying cognitive-communication disorders

The approach one adopts to studying communication disorders both reflects and shapes the phenomenon itself. Pre-conceived ideas or presuppositions about communication disorders and specific populations guide and influence the way these topics are researched and how classifications systems are developed (Barnes & Bloch, 2019; Hagen, 1982; Wilkinson, 2019). As noted above, much of the research to date in the area of cognitive-communication disorders has focused on aspects of cognitive and linguistic functioning (i.e., from a "microgenetic" and "synchronic" perspective, see Enfield, 2014, and Barnes and Bloch, 2019), and employed experimental paradigms. This work emphasizes the disordered individual removed from an interactive context (Barnes & Armstrong, 2010). An alternative, "enchronic" perspective (Enfield, 2014) can provide insight into language and communication as collaborative phenomena, intrinsically tied to an interactive context. By studying language and communication in interaction, traditional ideas about communication disorders are challenged, and the impact of the

disorder on interaction becomes the focus through which the disorder is explored (Bloch & Beeke, 2008; Barnes & Bloch, 2019; Wilkinson, 2019).

Research employing principles and findings from Conversation Analysis (CA) and interactional linguistics has been increasing in the field of communication disorders, with existing CA findings regarding typical conversation providing a strong basis for systematic investigation (Barnes, Toocaram, Nickels, Beeke, Best & Bloch, 2019). CA research has developed substantially in the area of aphasia, contributing to knowledge of its effects in the context of interaction and development of communication partner training (e.g., Barnes & Ferguson, 2015; Beeke, Capindale, & Cockayne, 2020; Booth & Perkins, 1999; Hall, Lind, Young, Okell, & van Steenbrugge, 2018; Lock et al., 2001; Wilkinson, 2009, 2019). CA has developed knowledge of atypical communication patterns that cross diagnostic boundaries. This opens exploration of communication disorders to more universal principles of interaction directly applicable to everyday contexts (Bloch & Beeke, 2008; Wilkinson, 2013, 2019).

There are a small number of studies employing CA methods to interactions involving people with cognitive-communication disorders caused by RHBD and TBI. These in-depth qualitative analyses of interaction have yielded preliminary findings contributing to the understanding of RHBD and TBI as they manifest in everyday interaction. CA has been shown as an effective means of exploring inappropriate touching conduct by people with TBI, demonstrating how these moments can be interactionally-generated (Denman & Wilkinson, 2011). Response mobilization and other-initiation of repair have been demonstrated as potential means for detecting deficits in participants with RHBD (Barnes et al., 2019; Barnes, 2019; Barnes, Beeke & Bloch, 2020). Communication partner strategies that may facilitate participation of people with TBI (Barnes, 2012; Mann, Power, Barnes, & Togher, 2015), as well as partner conduct which may inhibit or reduce participation of people with RHBD has been explored (Barnes et al., 2020). However, much remains to be discovered about how cognitive-communication disorders manifest in interaction. In particular, further research is required on everyday

conversations with familiar people, which are lacking in the literature. CA's inductive methods, grounded in naturally occurring conversation, offer a sensitive means of exploring interactions involving people with a cognitive-communication disorder, and discovering the nature of the disorder on "ecologically valid" grounds (Barnes & Armstrong, 2010, p. 66).

1.4 The present study

Cognitive-communication disorders significantly impact communication, but there is limited information about the ways it manifests in everyday conversation. Turn-taking involves fine interactive co-ordination of interactional conduct, and there are some previous studies that have suggested turn-taking as an area of communication specifically affected for people with cognitive-communication disorders. Turn permeation, in particular, provides an interesting prospect for study because of the multifaceted and granular aspects of turn-taking organization, sequence organization, and action formation that it involves. As a consequence, problems with managing turn permeation may be sensitive to the problems cognitive-communication disorders cause in conversation; particularly, when permeation is not explicitly invited. If this is the case, then moments of turn permeation may offer a potential target for clinical assessment and intervention. The present study explores turn permeation in everyday conversations involving people with a cognitive-communication disorders in conversation. It will aim to address the following research question: *How are moments of turn permeation managed in conversations involving people with cognitive-communication disorders and their familiar conversation partners*?

2 Method

2.1 Approach and design

The present study used Conversation Analysis, which is a descriptive, qualitative methodology. The data analyzed in the present study were drawn from two projects: "Right hemisphere stroke and conversation" and "Improving diagnosis of verbosity following traumatic brain injury: a descriptive study". The first of these was granted ethics approval by Macquarie University Human Research Ethics Committee (reference: 5201700298) and the second was granted ethics approval by Northern Sydney Local Health District (reference: RESP/18/79), and Macquarie University Human Research Ethics Committee (reference: HREC/18/HAWKE/106) (see Appendix B).

2.2 Participants and recruitment

This study involved eight participants. Three participants had experienced an acquired brain injury that had led to a subsequently diagnosed cognitive-communication disorder. The remaining five participants were friends and family of the participants with a cognitive-communication disorder. Participants were recruited via community stroke groups and a local rehabilitation hospital. All participant and place names shown in this thesis are pseudonyms. Participant groupings are shown in Table 1.

2.2.1 Participants with a cognitive-communication disorder

Bill was 73 years old at the time of data collection and assessment, which was five years postright hemisphere stroke. He is a monolingual speaker of Australian English, is right-handed and has adequate hearing and vision. Bill has a PhD and worked as an academic prior to his stroke. Bill is independent in activities of daily living. Communication assessment for the purposes of the present study included the Montreal Protocol for the Evaluation of Communication (MEC) (Joanette et al., 2015) and the Apple Cancellation Test (Humphreys, Bickerton, Samson, & Riddoch, 2012). MEC results indicate difficulty with conversational discourse, production and recognition of emotional prosody, and narrative. His partner reports changes in Bill's communication post stroke, including repetition of the same ideas or questions, reduced understanding of humour, some difficulty understanding indirect statements, occasional inappropriate comments and topic changes in conversation. The Apple Cancellation Test showed no substantial left side neglect, although it was present in the acute stages of his recovery. Bill was not receiving speech pathology services at the time of participation.

Group	Participants	Description
1	Bill	Male with a cognitive-communication disorder
	Adrienne	Female spouse
	Carli	Female friend
2	Erin Federico	Female with a cognitive-communication disorder Male spouse
	Daisy	Daughter
3	Annie Caroline	Female with a cognitive-communication disorder Female friend

Erin was 78 years old at the time of data collection and assessment, which was 3.5 years postright hemisphere stroke. She is now retired. Erin has received 11 years of education. She speaks Australian English and Italian. She is right-handed and has reduced use of her left hand. For the purposes of the present study the communication assessment included the MEC (Joanette et al., 2015) and Apple Cancellation Test (Humphreys et al., 2012). MEC results indicate deficits in conversational discourse, production and recognition of linguistic prosody, and narrative discourse. Her partner reports changes in Erin's communication, including speaking too much, repeating the same ideas, inappropriate comments and topic changes in conversation. The Apple Cancellation Test showed no substantial left side neglect. Erin was not receiving speech pathology services at the time of participation. Annie was 61 years old at the time of data collection and assessment, which was two years after a motor vehicle accident that resulted in a Traumatic Brain Injury (TBI). She is a monolingual speaker of Australian English and is right-handed. Annie has a bachelor's degree and worked as a journalist prior to her injury. She has a mild ataxic gait, right sided weakness and mild ataxic dysarthria. For the purposes of the present study, communication assessment included the Measure of Cognitive Linguistic Abilities (MCLA) (Ellmo, 1995) and the LaTrobe Communication Questionnaire (LCQ) (Douglas, O'Flaherty, & Snow, 2000). MCLA results indicate intact expressive and receptive language and moderately impaired verbal fluency. Clinician-observed communication difficulties at discourse level include word finding difficulties and verbosity. In the LCQ, Annie self-reports significant changes to her communication post injury, while her familiar communication partner reports fewer changes than Annie does. Difficulties reported by her communication partner include provision of redundant information which is inappropriate at times, false starts and impaired speech rate. Annie was receiving community outpatient speech pathology services at the time of participation, focused on the impacts of her cognitive-communication disorder on her employment.

2.3 **Procedures and data collection**

Video and audio recordings were collected using multiple recording devices. Video recordings were made with two video cameras (GoPro HERO5 and Panasonic AG-UX90 4K Camcorder) placed at different angles to provide complementary perspectives of embodied actions (see Figures 1-3). Participants were fitted with lapel microphones (Sennheiser MK2-4) with wireless transmitters (Sennheiser SK100 G3-G). Audio signals were recorded using a Zoom H6 Handy 6Track Recorder and three wireless receivers (Sennheiser EK100 G3-B). Audio and visual signals were synchronized using PluralEyes software plugin for Adobe Premiere Pro. The data were viewed and analyzed (e.g., timing, data analysis management) using ELAN, linguistic annotation software (e.g., Lausberg & Sloetjes,

2009). Microsoft Excel and Word were used for managing annotated data. The duration of recordings ranged from 45 to 60 minutes (Group 1- 45 minutes, Group 2- 60 minutes, Group 3- 50 minutes). Video recording devices were positioned to provide two perspectives of participants as depicted in Figures 1-3.

Panasonic AG-UX90 4K

GoPro HERO5



Figure 1. Group 1

Panasonic AG-UX90 4K

GoPro HERO5



Figure 2. Group 2

Panasonic AG-UX90 4K

GoPro HERO5



Figure 3. Group 3

2.4 Data analysis

Talk was previously transcribed using Conversation Analytic conventions described by Hepburn and Bolden (2017) in earlier stages of the research projects listed in Section 2.1. The transcripts were then improved by the present author, incorporating a focus on embodiment. This included adopting the conventions for gaze transcription developed by Federico Rossano (Rossano, Brown & Levinson, 2009; Rossano, 2013) (see Appendix A). Screenshots and text boxes accompanying the transcripts depict and describe participants' embodied actions. Collection-based procedures (Schegloff, 1996a, 1997) were used to collect and analyze instances of turn permeation. As part of this process, recordings and transcripts were repeatedly and comprehensively explored for candidate instances of the targeted phenomena. An inclusive initial collection was developed, and each instance was analyzed with reference to the organization of turn-taking, sequencing and social action accomplishment. Features of the analysis were formalized into a feature tracking coding system managed in the spreadsheets.

The type of turn permeation in focus in the present study involves a speaker's syntactically incomplete TCU, a talk-based intervention by a recipient, and the immediately subsequent conduct of the speaker. Recipient talk includes TCU level completion and more sequentially-oriented responses. Throughout the thesis the terms 'permeation' and 'participation' are used to refer to recipient talk in the speaker's turn space. A schematic depiction of the focus phenomena is shown in Figure 4.

Speaker:	i think (0.6) colombian food (.) in general .h $$	Pre-permeation
	involves a fair amount'v (0.2)	
Recipient:	fat	Permeation
Speaker:	fat hHHh ((laughter))	Post-Permeation

Figure 4. Schematic depiction of the focus phenomena

The collection was grouped according to parameters that offered potentially different actional outcomes. Responses were first grouped into TCU and sequence level responses. These were divided into instances where recipient participation was either projected by the speaker, or not projected. Features of projected participation in the 'pre-permeation phase' (e.g., gaze, silence, pronouns) were determined through a process of elimination in conjunction with corresponding features of the 'permeation phase' (e.g., competitive overlap, participant withdrawal). Projected and non-projected instances were further grouped according to social actions accomplished in the permeation phase. Social actions were considered in relation to the post-permeation phase, exploring the speaker's response to permeation. Initial analyses were carried out consistently across all participants. Comparisons were made across typical and atypical participants at a later stage to explore the possibility of atypical patterns. Instances identified as potentially atypical were compared to similar instances seen in typical interactions both in the present data and published findings in the literature.

This analytic process yielded an initial broad collection of around 80 instances. This was then reduced to a core collection of 45 instances. Excluded instances were better explained as other specific practices including forms of repair, overlapping talk, and repetitions of portions of a speaker's TCU. Clear instances of other-initiation of repair (OIR), self-initiation of other-repair (SIOR) and self-initiation of self-repair (SISR) were excluded, as were instances of terminal word-search in which the speaker explicitly indicated a word search (e.g., 'what's that word?'). In general, terminal overlap and persistent overlapping talk (e.g., an instance of co-telling) were excluded, as were minimal receipts that permeated the speakers turn. Recipient repetitions or recasts of the speaker's TCU were also excluded from the collection. This left a collection of instances in which a recipient permeates a speaker's TCU prior to a TRP, with talk that either continues the TCU or takes a next turn in the sequence.

2.5 **Presentation of findings**

Findings and analyses are presented in Chapters 3-6 of this thesis. *Chapter 3: Permeation phases*, is intended as an overview of the target phenomena, with extracts demonstrating features of the permeated TCU in terms of syntax and prosody and the three phases for analysis (pre-permeation, permeation and post-permeation). Targeted phenomena are indicated in bold text. *Chapter 4: Projecting and managing participation*, closely explores the nature of projected participation in the present data, including conduct of the speaker and recipient in each of the three phases. *Chapter 5: Action formation*, looks closely at social action accomplishment in each phase and by each participant. Chapter 6: *Turn permeability and cognitive-communication disorders*, focuses on the participants with a cognitive-communication disorder and their participation in turn permeability.

3 Permeation phases

In this chapter, I will outline the characteristics of the turn permeation practices collected in the present study. I will provide examples of the ways that participants organized their conduct across 'prepermeation', 'permeation' and 'post-permeation' phases. In the pre-permeation phase I will focus on the design of these TCUs in terms of syntax and prosody, and progressively show the shape and nature of recipient interventions in the TCU in the permeation phase, and subsequent conduct of the TCU speaker post-permeation.

3.1 Pre-permeation phase

In the pre-permeation phase, a speaker is holding the floor and producing a TCU. This phase continues up to the point of permeation by a recipient. I will now highlight recurrent syntactic and prosodic features of TCUs in the collection. I will concentrate on the TCU up to and including the permeation. The same extracts will be revisited showing further talk surrounding the permeation.

3.1.1 Syntax

All instances in the collection involve a syntactically incomplete TCU. The next item projected is either a word, phrase or clause, depending on the syntactic progression at the point of permeation. These differences in projection are demonstrated in Extracts 1-3.

In Extract 1, Bill, Adrienne and Carli have been discussing historical Japanese pottery; in particular, Satsuma pottery that was designed for export. Carli asks Bill about the style of pottery that was typical of Japanese homes of the time, since Satsuma, although made in Japan, was not popular with Japanese people. Bill explains that pottery in Japanese homes was quite different from the exported Satsuma. He relates this to the simplicity and minimalism of Japanese homes.

Extract 1. Sake

```
1
     B .mK well they had tables (.) b't very low tables >b'coz
2
         they all sat on th' (floor), <
3
         (.)
        righ';=
4
     С
        =.hh=
5
     В
6
     C = ° right °;
7
         (.)
     B >an' they sat on< mats, (.) that's why you have to take</pre>
8
         y' shoes off at the d\uparrow oor;=
9
10
     C = [mm:;]
11
         [mm.]
12
         (0.3)
13
     В
        b'cos (0.5) .mTK the floo_{\downarrow}\!:\!r is the place where people
         (sleep) (.) .mtk an' sit;
14
         (0.5)
15
         an' drink their sa:- y'know .hh (0.2) th- y[`h- ]
16
     В
     С
                                                       [(mm ] .ghm)
17
         (0.2)
18
19
         (SA:KI) =
     С
20 A
        =.mk m↑h[m;
                      ]
21 в
                 [(fuh-)] yeah;
```

Extract 1 is a multi-unit telling by Bill, interspersed with response tokens from Carli (e.g., " o right o ", line 6, " \underline{m} m:;" line 10). In lines 13-16, Bill lists functions of the floor in a Japanese home. ".mTK the floo \downarrow :r is the place where people (sleep) (.) .mtk an' sit;". In listing the third function "an' drink their " (line 16), Bill encounters word finding difficulty in specifying what they drink. Bill provides a verb (drink), possessive article (their), and begins a potential noun "sa", which he cuts off and reformulates with a possible word search marker "y'know", followed by further signs of self-repair or possible terminal word search ".hh (0.2) th- y'h-". In line 19, Carli provides the complete projected noun, 'sake', "SA:KI", thus completing the TCU. In summary, then, this extract shows an incomplete TCU by the speaker, Bill, that is subsequently completed by the recipient, Carli, with a projected noun.

In Extract 2, Caroline is telling Annie about a meal that her daughter's boyfriend intends to cook for them.

Extract 2. Fat

1	С	an >he's gonna cook us a< co <u>lombi</u> an m <u>ea</u> l on monday night.=
2	A	= toh>'v'ad'it w- like <t td="" what;<=""></t>
3		(.)
4	С	.hhh well i \uparrow th <u>i</u> nk it involves a f <u>ai</u> r amount'v p <u>or</u> k; (0.1) an
5		a fair amount'v f <u>a</u> t.
		((26 lines omitted))
31	С	i's'not.< .Hh >b't anyway< i think (0.6) colombian food (.)
32		in general .h involves a fair amount'v (0.2)
33	A	fat
34	С	fat hHHh ((laughter))

Extract 2 similarly shows a speaker's TCU that projects a noun. From line 31, Caroline produces a TCU incrementally, broken up by pauses and in-breaths, ">b't anyway< i think (0.6) colombian food (.) in general .h involves a fair amount'v (0.2)". She provides the subject, "colombian food", and verb "involves", projecting the object noun "fat" (as per prior talk). Each of these elements (in line 32) is followed by additional syntactic elaborations that extend or draw out the production of the TCU. That is, the subject is followed by a 'parenthetical disclaimer', "in general", and the verb is followed by the modifier "a fair amount of" (linking back to prior talk), at which point a 0.2 second silence ensues, and

Annie completes the TCU syntactically with the projected noun "fat" (line 33). As in Extract 1, this extract shows a recipient completing the TCU with a projected noun.

In Extract 3, Federico, Erin and Daisy are discussing colonization and Federico uses a hypothetical situation to express his stance against empires forming colonies in areas where people have resided for many generations.

1	F	[how would	y'] feel if the- if	[the:y n']=
2	Е			[kgh kgm]
3	F	=someone came [here] n'	said <u>a</u> l[right sydne	у,]
4	D	[h]	[y' can	't] go t'
5		f <u>i</u> ve dock anymore.		
17		(0.2)		
18	Е	.mtk		
19	F	y <u>e</u> a[h.		

Extract 3. Five Dock

In lines 1-3 Federico begins with "how would y' feel if the- if the:y n' someone came here n' said". The TCU at this point is open ended, with several syntactic possibilities. The trajectory projects (hypothetical) reported speech. Federico and Daisy continue the TCU in overlap (lines 3-4) and Federico withdraws. Daisy completes the TCU (lines 4-5) with a clause in the format of reported speech consistent with Federico's TCU trajectory "y'can't go t'five dock anymore.". In Extract 3, the TCU is permeated at an earlier point than Extracts 1 and 2. While this extract shows the recipient completing the speaker's TCU, permeation occurs where a phrase or clause is projected, in contrast to a noun.

3.1.2 Prosody

The syntactically incomplete TCUs in the present collection have a fairly uniform intonation. 81% have level intonation prior to permeation, and the remaining 19% of instances have slightly rising or slightly falling intonation. Each of these intonation patterns are potentially indicative of further talk (e.g., Gardner, 2001; Selting, 1996), and together with incomplete syntactic structure suggest an incomplete TCU.

In Extract 4, the TCU pre-permeation ends with level intonation, "i left italy_" (lines 1-2).

Extract 4. Voluntarily

1 F really >what y- y' know=w' ↑me i' w's< diff'ren'. <u>i</u> left
2 italy_ °.hhh° (0.9) °↑0[:w° ↓wen' back af]t'r you:_ (0.5)
3 E [voluntarily;]

The TCU in Extract 5 ends in slightly falling intonation "if we can't get a text message;", followed by a further element ending in slightly rising intonation "y'know,".

Extract 5. Text message

```
    C an if we can't get a text message; (0.8) y'know, (0.5)
    A o:h yea:h
```

3.2 Permeation phase

In the second, "permeation" phase, the TCU is permeated by a recipient. The permeations in this collection take two main forms, reflecting the recipient's treatment of the TCU in progress. The permeation either progresses the TCU along its projected completion trajectory (i.e., TCU level completion) or takes the next turn to progress the sequence (i.e., sequence level completion).

3.2.1 Progressing the TCU

Recipient permeation completing the TCU occurs in 27 of the instances in the present collection. Extracts 1-3 above take this form. In each of these instances, the permeating talk of the recipient completes the TCU syntactically.

3.2.2 Progressing the sequence

In 18 instances of this collection, permeation by the recipient treats the permeated TCU as sufficiently complete by taking the next relevant turn in the sequence. In Extract 6, Daisy, Federico and Erin are discussing laws pertaining to marriage and divorce in Australia and Italy. Erin has asked Daisy about her own circumstances and plans, to which Daisy replies that her plans are "not against the law". Daisy then directs a related question to Federico.

Extract 6. Citizenship

1 D .H=>t't's not against the law,=°i'm an italian citizen.<°
2 (2.6)
3 D d' y' think they'll ever change that; >having<
4 both_ (0.2) like the fact that you c'n have dual_ (0.6)
5 F .TSK (0.9) °any[thing can be changed.]°</pre>

At line 3, Daisy asks the question "d' y' think they'll ever change that¿", which she elaborates in lines 3-4 with the expansions "having both_ (0.2) like the fact that you c'n have dual_". These expansions, particularly the latter, are syntactically and prosodically incomplete, projecting a further noun to complete the phrase (dual-citizenship), however a 0.6 second silence follows. In line 5, a recipient, Federico, permeates the incomplete TCU with an answer to Daisy's question "^oanything can be changed.^o", progressing the interaction via sequence development. In this instance, the speaker's incomplete TCU is not completed syntactically at the TCU level. Instead the recipient treats the TCU as sufficiently complete and proceeds with the next relevant response in the sequence. That is, Daisy's TCU is treated as a question and Federico provides an answer.

In Extract 7, the speaker's TCU is also permeated with a sequentially-implicated response. In their discussion about Satsuma pottery, Bill tells Carli that he has been reading about the history surrounding this art form. His reading has been quite extensive and he has revealed inconsistencies.

Extract 7. Writings

1	В	[huh huh HAH HAH HUH HAH hah mind you i've] already
2		beginning th (.) t' find (.) the fla:ws .h (.)
3		in some of the .hhh ah .hhh wr <u>i</u> tings th't 'v:
4		been (0.6)
5	С	oh: really-
6		(0.1)
7	В	produced (0.2) ab <u>o</u> ut sats <u>u</u> ma,=

In lines 1-4 Bill begins his TCU haltingly, and with self-initiations of repair "mind you i've already beginning t- .h (.) t' find (.) the fla:ws .h (.) in some of the .hhh ah .hhh writings th't 'v: been (0.6)". At line 4, Bill's TCU is syntactically incomplete, projecting a main verb. The recipient, Carli, permeates in line 5 with a newsmarking response token "oh: really-", which forms the next turn in the sequence. As in Extract 6, this extract shows the recipient treating the speaker's incomplete TCU as sufficiently complete and proceeding with the next turn in the sequence.

3.3 Post-permeation phase

Following permeation from a recipient, the speaker may deal with the permeation in a variety ways. In 25 instances, the speaker resumes their TCU through syntactic completion or expansion. In 11 instances, the speaker or another recipient responds to the permeation, mostly with a response token. Finally, in 9 instances, there is an absence of a talk based response to the permeation from the speaker.

3.3.1 Syntactic completion and expansion

In Extracts 8-10, the speaker completes and/or expands their own TCU syntactically postrecipient permeation.

Extract 8 shows talk preceding Extract 3, in which Federico, Daisy and Erin are discussing political events leading to the colonization of a particular region. Federico states the involvement of the United Nations at the end of the war.

Extract 8. End'v the war

```
[ye- ↑i- i- hu- wouldn've been just the
 1
    F
        british it would've been the united nations at the end `f
 2
 3
         the (0.6)
 4
     E end 'v the <u>wa</u>r[:.
                                   1
 5
                       [end e' the] wa[:r?
     F
6
                                       [yeah it was [the united=
     D
                                                     [kgh kgh=
7
     Е
8
     Ε
         =kgm]
9
     D = na]tions;=wa[sn' it,]
```

In lines 1-3 the speaker, Federico, produces a TCU that comes to a 0.6 second silence following a determiner, which projects a noun to complete the TCU, "it would've been the united nations at the end 'f the (0.6)". In line 4, a recipient, Erin, permeates Federico's TCU, partially repeating his talk, and offering a noun to complete it syntactically "end 'v the war:.". In line 5, the post-permeation phase, Federico repeats Erin's turn "end e' the wa:r?", thus resuming and completing his own TCU. In summary, this extract shows the speaker completing his pre-permeation TCU following the recipient's permeation in a way consistent with the recipient intervention.

In Extract 9, Federico, Erin and Daisy are discussing a meal that Daisy's fiancé made for Federico and Erin. In complementing the meal, Federico suggests that a type of South American corn would also have suited the dish.

Extract 9. Corn

```
°°mm.°° .HH .mtK wouldn- THAT dish w'd be amazing with
1
    F
2
       that corn from south a[merica.]
3
    D
                             [mm:. ]
       (0.4)
4
5
       y' know the [big-]
   F
6
   D
                   [.mtk] yeah.
      [the white] cor[n. ]
7
   Ε
      [(hh mm.] [.mtk] white corn or th' tblack corn or >° whatever;<
8
   F
```

In line 5 Federico's TCU "y'know the big-", projects a noun. The TCU is permeated in lines 6 and 7 by two recipients. A sequentially-implicated response from Daisy, in line 6 ".mtk yeah." and a syntactic completion of the TCU by Erin in line 7, "the white corn.". Federico's post-permeation response

in line 8 both completes and expands his TCU from line 5, incorporating and acknowledging Erin's permeation in line 7, "white corn or th' *†*black corn or *>°*whatever;<". As in Extract 8, the speaker completes, and here expands, his pre-permeation TCU syntactically following the recipient's permeation.

Similarly, in Extract 10, the speaker completes her own TCU after the recipient's permeation. In this extract, Caroline is telling Annie of an incident in which she thought her daughter's boyfriend was planning a proposal.

Extract 10. A tizz

1 C ^{°°}uh^{°°} he w'z (.) in a in a (0.7) ^{°°}y'know, ^{°°}=
2 A =a <u>ti</u>zz
3 C a tizz .hh about h y'know wanning it t'go u- h- >i really
4 hope it goes alright'n philomena's a really lovely partner
5 n'stuff< .h an i said to william (0.5)</pre>

In line 2, the recipient, Annie, offers a permeating completion, "a tizz" (i.e., an agitated or excited state), which is repeated by the speaker post-permeation and expanded to continue the telling "a *tizz*.hh about h y'know wanning it t'go u- h-...".

3.3.2 Receipts

Post-permeation is not always a syntactic resumption of the TCU. In some instances receipts, employing various response tokens, are used.

In Extract 11, I revisit the 'Sake' example previously encountered in Extract 1. In this extract, Carli has completed Bill's TCU. Following the permeating response by Carli in line 7 "SA:KI ", Bill responds with the agreement token "yeah;" (line 9).

Extract 11. Sake

```
1
     B b'cos (0.5) .mTK the floo\downarrow:r is the place where people
         (sl<u>ee</u>p) (.) .mtk an' s<u>i</u>t;
2
3
         (0.5)
     B an' drink their sa:- y'know .hh (0.2) th- y['h- ]
4
     С
5
                                                           [(mm ] .ghm)
6
         (0.2)
7
     С
        (SA:KI) =
     A = .mk m \uparrow h[m; ]
8
                   [(fuh-)] yeah;
9
     в
```

Extract 12 is a further instance of a post-permeation response token. In this instance, Federico notices that Erin did not wake up early to watch a television program she had recorded.

Extract 12. Gianni Versace

```
1 F .mTK i thought you were gonna wake up at five o'clock this
2 morning t' watch .HH .H (.) (n' t' big-) the (0.2)
3 recorded (0.4) .ghm (0.2)
4 E g[ianni] versta[chi;]
5 F °[o:h; ]° [.h y]tes;
6 (3.9)
```

In lines 1-2 Federico formulates a TCU, "i thought you were gonna wake up at five o'clock this morning t' watch", yet subsequent self-initiation of repair (in breath, pauses, cut offs) in line 2-3 suggest word finding difficulty ".HH .H (.) (n' t' big-) the (0.2) recorded (0.4) .ghm (0.2)". Erin permeates Federico's turn space in line 4, with the projected noun "gianni vers \uparrow ace;". Federico responds with the token "y \uparrow es;". As in Extract 11, the speaker's response following the recipient permeation comes in the form of a response token.

3.3.3 No response post-permeation

Extracts 13 and 14 show recipients permeating the speaker's TCU with no response postpermeation from the speaker.

In Extract 13, Bill has been telling Carli about the historical context of Satsuma pottery production. In trying to understand the timeline of Bill's telling, Carli asks whether the period he is speaking of pre-dates British influences.

Extract 13. Enlightenment

1	С	.H AN' BEFORE b'f- is that before - is that before the um
2		(0.3) .mTK [english] come in
3	В	[th'enl <u>i</u> ght°m°-]
4		(0.1)
5	В	>y- th- th' vericans'd come< (.) .h °in° in eighteen
6		fifty four;

In lines 1-2, Carli designs an interrogative TCU in which self-initiation of repair "um (0.3) .mTK" seemingly prompts Bill to permeate the TCU with a possible completion "th'enlight^om^o-" in line 3. Carli

persists in completing her own TCU in line 2 "english come in ", resulting in overlapping 'completions'. Bill withdraws from the overlap, and takes a further turn in lines 5-6, after Carli completes her turn and a 0.1 second gap. Carli does not respond to Bill's permeation of her TCU (line 3). Speaker persistence with their own TCU in the permeation phase is further explored in Chapter 4.

Extract 14, Citizenship (previously encountered as Extract 6), shows that both recipients Federico and Erin permeated the speaker's TCU in different ways. Of note is the lack of response to Erin's permeation by the speaker, Daisy.

Extract 14. Citizenship

1	D	d' y' think they'll ever <u>cha</u> nge that; >having<
2		both (0.2) like the fact that you c'n have dual $_$
3		(0.6)
4	F	.TSK (0.9) °any[thing can be changed.°]
5	Е	[c <u>i</u> tizen]ship¿
6	F	=>any[thing can be changed;<]
7	D	[bu' i mean d'y' think] italy would ever change,

In line 5, Daisy's TCU is also permeated by a second recipient, Erin. Erin's permeation progresses the TCU with the syntactically projected noun "citizenship;" in overlap with Federico's sequential response. In line 6, Federico repeats his sequence-level response "anything can be changed;" and Daisy (in line 7) redoes her TCU, emphasizing Italy "bu' i mean d' y' think italy would ever change,".

Daisy's post-permeation response orients to Federico's permeating response, and there is no (talk based) response to Erin's permeation.

This chapter has outlined the three phases of permeation to provide a basis for the analyses in Chapters 4-6. In chapter 4, I explore the management and projection of participation in each phase.

4 Projecting and managing participation

Chapter 3 outlined the three phases of turn permeation in relation to projection through syntax and prosody, with an emphasis on talk. These features broadly show how turn design in the pre-permeation phase projects further talk. In this chapter, I will explore how participation is projected (or otherwise) in the unfolding TCU, focusing on aspects of turn design and embodiment.

The speaker's conduct projecting participation is explored in the pre-permeation phase, including features of talk and gaze. The recipient's conduct—in particular, overlapping talk—is explored in the permeation phase as evidence for projected participation. The speaker's response post-permeation is then examined, and ambiguities in resources used for projection are highlighted.

4.1 **Pre-permeation Phase**

4.1.1 Projected participation

In 17 instances within the current collection, participation in the permeable turn is projected. In the pre-permeation phase, the speaker designs their turn with a combination of forms of address and creation of an "interactive turn space" (Iwasaki, 2008) to which the recipient orients. Projected participation is realized via a form of address in combination with a marked opportunity space. Forms of address include speaker gaze to the permeating recipient and/or a pronoun. The opportunity space is marked by silence and/or sound stretch of the final speech segment of the TCU so far. Extracts 15, 16 and 17 below are instances in which participation in the permeable turn is projected.

In Extract 15 (previously encountered as Extract 2), Caroline's turn design will be explored in relation to its projection of recipient participation.

Extract 15. Fat

1	С	an >he's gonna cook us a< co <u>lombi</u> an m <u>ea</u> l on monday night.=
2	A	= toh>'v'ad'it w- like< t what;
3		(.)
4	С	.hhh well i \uparrow th <u>i</u> nk it involves a f <u>ai</u> r amount'v p <u>or</u> k; (0.1) an
5		a fair amount'v f <u>a</u> t.

```
((26 lines omitted))
```

Α

31

i's'not.< .Hh >b't anyway< i think (0.6) colombian food (.)

G1

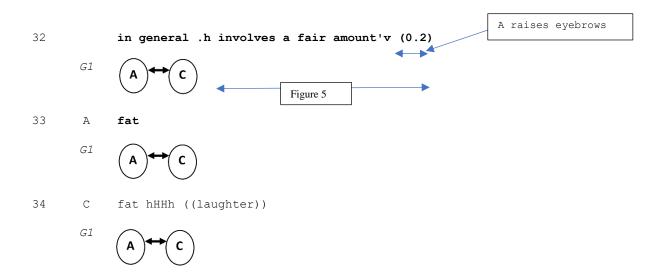


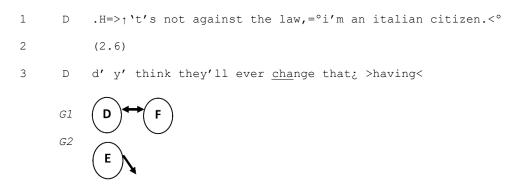


Figure 5.

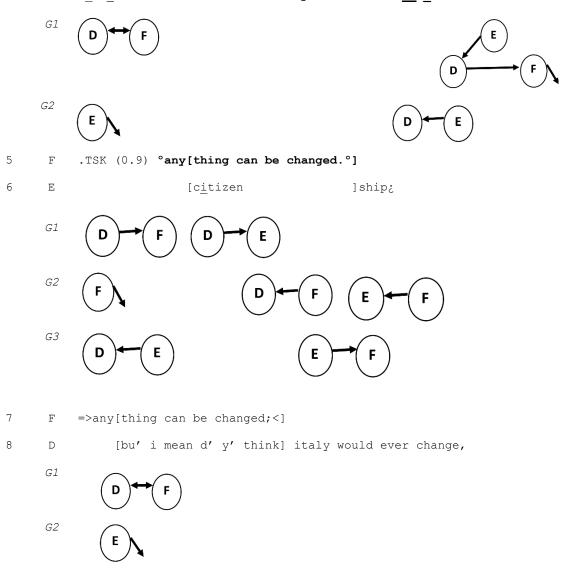
As noted previously, Caroline produces a TCU in lines 31-32 incrementally. From the 0.6 second pause following "i think " in line 31, Caroline and Annie share gaze through to the completion of the TCU. Here, gaze from Caroline to Annie is the form of address. Following "fair amount'v" in line 32, Caroline marks an opportunity space for Annie to participate. This space consists of a 0.2 second silence in line 32. The combination of gaze and silence project Annie's participation in the TCU. In this instance, Caroline further accentuates the interactive turn space or projected participation through raised eyebrows and tilting her head toward the recipient in the phrase leading up to the silence " involves a fair amount'v" (line 32, Figure 5). In summary, recipient participation in the speaker's TCU is projected through gaze as a form of address and silence as an opportunity space for participation. This is further supported by Caroline's embodied actions.

In Extract 16, I return to 'Citizenship' (previously encountered as Extracts 6 and 14) and focus on signs of projected participation. This example involves two recipients (Erin and Federico) permeating the speaker's (Daisy's) TCU as noted, but permeation by only one participant (Federico) is projected.

Extract 16. Citizenship



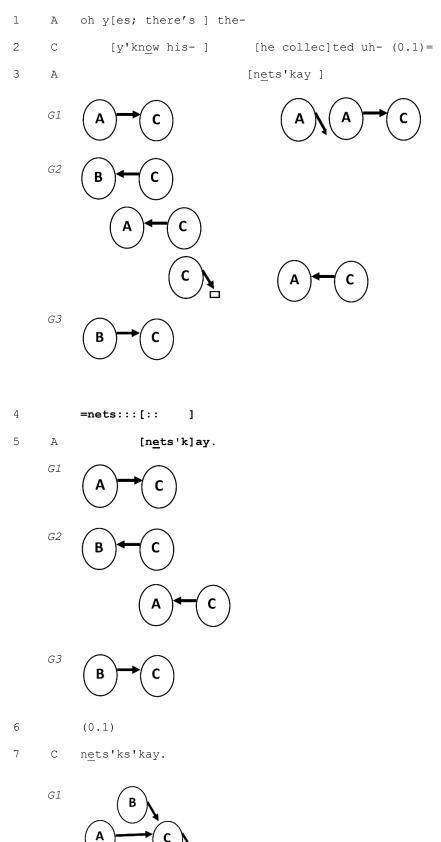
4



In line 3, Daisy addresses her TCU to Federico through gaze and the pronoun 'you', and in line 4 provides an opportunity space with a 0.6 second silence. This combination creates an interactive turn space projecting Federico's participation. Erin's participation is not projected.

In Extract 17, Carli projects Adrienne's participation in her TCU. Carli has asked Bill about his own Satsuma pottery collection. His response reminds Carli of a book "The Hare with Amber Eyes", which portrays a collection of Japanese Netsuke, i.e., miniature sculptures.

Extract 17. Netsuke



42

In lines 2-4, Carli addresses her TCU to Adrienne with the pronoun "you" and gaze, yet she encounters difficulty retrieving the projected noun to complete it. In line 4, Carli begins the projected word, briefly gazing at Bill and then to Adrienne. An opportunity space is marked by a sound stretch. The final phoneme is elongated "nets:::::". This combination of gaze to Adrienne with an opportunity space, in this instance marked by a sound stretch, projects her participation in the TCU. Carli's gaze projects the participation of either Bill or Adrienne.

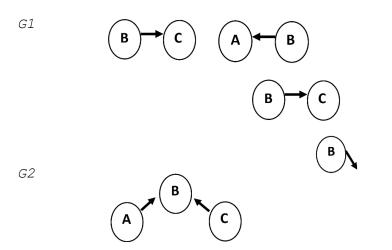
4.1.2 Non-projected participation

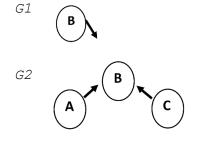
Twenty-eight instances in the collection did not project recipient participation in the permeable turn. In these 28 instances, forms of address were not combined with a marked opportunity space, yet recipients still permeated the speaker's TCU.

In Extract 18, Bill has been explaining that he purchases Satsuma items online. It is suggested that the websites recognize him and raise prices accordingly. To resolve this issue, Carli recommends that Bill search for other unrelated items and return to Satsuma searches at a later time to avoid recognition and elevated prices. Bill then tells of a non-Satsuma website that he visited recently.

Extract 18. Eggs

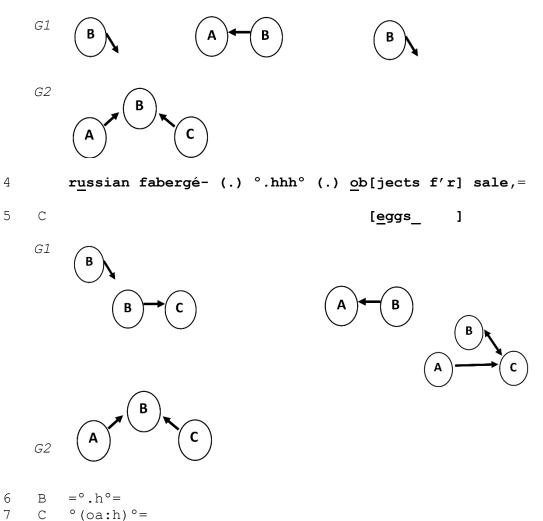
1 B °.hh° i ↑can- i c- i found a- °*a- a-* sort'v a-°







°°*(eh::-)*°° website °wh'ch: had (u:h-)° (0.6)



In lines 1-4, Bill constructs a TCU that includes a variety of self-initiation of self-repair phenomena (including cut offs, restarts, long in breaths, pauses). In line 4, Bill utters "russian fabergé-", which may project a noun to follow. While Bill's gaze is directed to Carli at this point in the TCU, he turns his gaze to Adrienne and resumes his own TCU in overlap with Caroline's candidate completion "eggs_" (line 5). The possible opportunity space "(.) °.hhh° (.)" does not coincide with a form of address to project Carli's participation, and the in-breath suggests upcoming talk rather than turn yielding. Carli, however, orients to the syntactic projection, and delays in progressivity, and permeates the turn space. Thus, Carli's participation in Bill's TCU is not projected in this instance.

In Extract 19, Daisy's participation is not projected. Daisy has been telling her parents (Erin and Federico) about her primary school aged daughter falling in love with various boys in her class. Erin responds to this by suggesting that the little girl might like "Louis", the son of Prince William (i.e., of the British Royal family). Daisy does not respond to Erin, yet following a long gap she glances at Federico, perhaps seeking a means to progress the conversation past Erin's unusual suggestion. Federico addresses Erin, commenting that she is "determined". He begins to ask Erin if she told Daisy of her earlier plans relating to the royal family, then turns to Daisy to relate the story.

Extract 19. Harry and Meghan

1	Ε	[↑0:H]	she	m <u>i</u> ght	like	†l <u>ou</u> is	when	he
2		[grows up;]							
3	D	[.hh hh]	h						
4		(1.0)							
5	D	°(a:w <u>†a</u> ng-) °						
6		(0.2)							

G1 Ε G2 D Е D G3 Ε Ε 8 wanted to invite_ .hh G1 Ε D F 9 D huh [huh n' i w's] there_ 10 F [HHharry;] G1 n G2 D Ε G3 Ε (0.3) 11 .H [an' meghan?] .h[h] 12 F 13 D [.HH] [eh] huh huh [huh] 14 [an'] y' know= Е

y're determined aren't you;=(d' y') tell y'r mum w's-

15 =[what i] think [har-] harry would be good value;

16 D =[.hh] [i-]

7

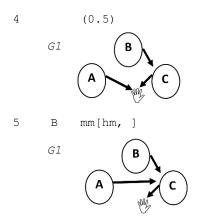
F

In line 7, Federico addresses Daisy with gaze and a pronoun "y'r mum w's- wanted to invite_ .hh". In line 8, further talk is projected prosodically and syntactically (through level intonation, in-breath and projected noun). Daisy permeates Federico's turn with laughter and talk, in the absence of a marked opportunity space, "huh huh n' i w's there_" (line 9), overlapping Federico's TCU continuation. Daisy's participation in the TCU is not projected.

Similarly, in Extract 20, Carli does not project Adrienne's participation in her TCU. Carli is recommending a film to Bill about Giacometti, the famous artist. In doing so, she describes Giacometti's works, including delicate thin sculptures.

1 С .h B'T ANYWAY THEY'RE VERY .h (0.5) Figure 6 G1 B В Α G2 2 3 elon[gated.] А С sometimes very tall an' thin, [su-G1 С G2 G3

Extract 20. Elongated



Carli gestures a tall thin sculpture, by holding thumb and forefinger close together during an upward movement of her hand.



Figure 6.

In line 1, Carli looks at her hands as she 'says' "B'T ANYWAY THEY'RE VERY .h" and proceeds to complete the TCU with a gesture during the 0.5 second silence at line 1 (Figure 6). While the silence creates an opportunity space for Adrienne's permeation in line 2, "elongated.", the permeation is not projected as seen in the lack of any form of address (gaze or talk based) from Carli. Bill is the addressed recipient, as indicated by Carli's gaze shift to Bill during her gesture. Adrienne's participation is not projected.

4.2 **Permeation Phase**

4.2.1 Overlap and overlap resolution devices as evidence for projecting participation

In instances where participation is projected, permeation occurs promptly, minimizing periods of silence and overlap, as per the turn-taking system that operates at and around TRPs (Sacks, Schegloff, &

Jefferson, 1974). Yet, in instances of non-projected recipient permeation, overlapping talk often occurs. Overlap may persist or a participant may withdraw from the overlap. Therefore, the presence or absence of persistent overlap and participant withdrawal may be a source of complementary evidence for projection of participation.

Table 2 summarizes the conduct associated with projected participation, arrived at by a systematic process of elimination, and shows the corresponding instances of persistent overlap and participant withdrawal that indicate non-projected participation.

	Total	Speaker and recipient conduct			
		Persistent competitive overlap	Speaker withdraws	Recipient withdraws	
Forms of address only	16	7	5	6	
Opportunity space markers only	7	3	1	2	
No form of address and no opportunity space marker	5	1	2	0	
Form of address and opportunity space markers	17	2	0	0	
Total	45	13	8	8	

 Table 2. Evidence for projection of participation

As noted above, of the 45 instances collected, 17 project participation in the permeable TCU through a form of address in addition to a marked opportunity space. Their projection and unproblematic uptake is evidenced through the substantial absence of competitive speaker and recipient conduct in 15 of these 17 instances. The two excepted instances are explored in Section 4.4 below.

The remaining 28 instances do not project participation. Nineteen of these have overlap or participant withdrawal in the permeation phase, which is also consistent with the analysis of projected and non-projected participation. However, this leaves nine instances of non-projected participation which do not have overlap or participant withdrawal. Of these nine instances, five project participation through address and opportunity space, but a non-projected participant permeates. That is, an interactive turn space is created by the speaker and 'taken up' by a non-projected participant. The participation of the particular recipient is not projected, however no overlap or withdrawal occurs, because participation was projected by another party.¹ The final two non-projected instances that do not involve overlapping talk or participant withdrawal consist of one instance in which the speaker completes her TCU with a gesture (Extract 20) (i.e., there is no overlapping talk), and a second instance in which the speaker has an apparent extended word search and the non-projected permeation occurs in the clear, with no overlap or participant withdrawal.

4.3 **Post-permeation**

4.3.1 Gaze as evidence for projecting participation

Post-permeation gaze provides some further support for the analyses of projected recipient participation presented so far. In the 17 instances of projected participation identified in the present collection, 16 instances involve gaze as a resource for projecting participation in the pre-permeation phase. Thirteen of these instances also have the speaker gazing to the projected recipient in the post-permeation phase. This includes instances in which a non-projected recipient participates. That is, the speaker's pre- and post-permeation gaze is directed to the projected recipient, despite non-projected participation from a second recipient (as shown in Extract 21. below). In the remaining three instances, the speaker's gaze is to the apparently projected recipient in the pre-permeation phase, which then shifts

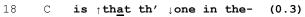
¹ Note that, in Extract 16, recipients' talk overlaps each other, not the speaker.

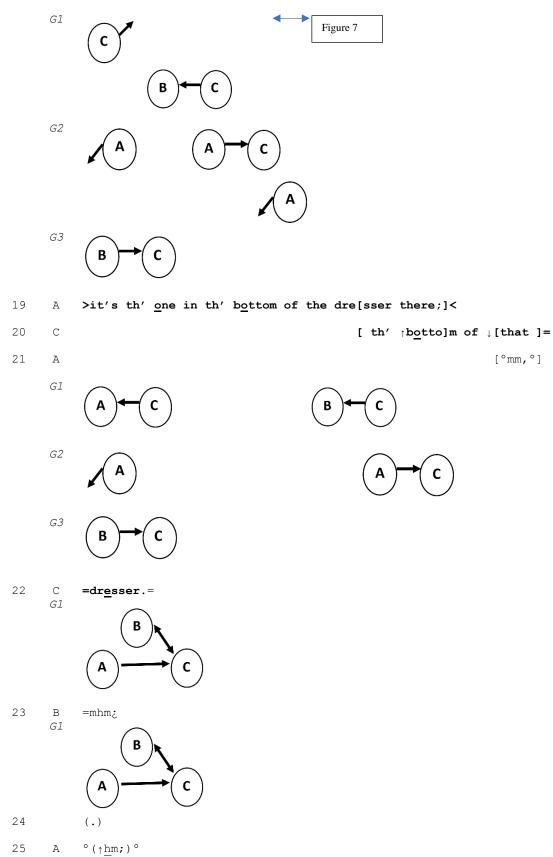
away or down in the post-permeation phase (rather than to another party). I will critically explore the dynamics of one of these instances in Extract 22, and demonstrate that the speaker's conduct can project recipient participation, but competitive overlap or participant withdrawal ensues due to ambiguity (see Section 4.4 below). In summary, a speaker's consistent orientation to a recipient through gaze in both pre- and post-permeation phases, may, therefore be considered a good source of evidence for establishing projected participation in an unfolding TCU.

In Extract 21, gaze across the pre- and post-permeation phases suggest that the TCU is directed to Bill despite permeation by Adrienne. As part of their discussion around Satsuma pottery, Carli asks Bill about the size of his own collection. Bill responds by telling her that he also has a Satsuma tea set.

Extract 21. Bottom of the dresser

1	С	.hh so thow many \downarrow (setsumas) d'you thave thow bill,
2		(0.4)
3	В	w'll (1.0) .mTK i <u>a</u> lso- >(also)< haven't mentioned
4		befot:re
5		(.)
6	С	>(nye:s),<
7	В	i've got a t <u>ea</u> set;
8		(1.5)
9	В	.mTK (0.3) °(?.h)° (.) [which] i bought at a carlton (eh)
10	С	[°(u-)°]
11		(0.9).MTK in an anttique shop; (0.2) °(?.h)°=
12		=[in c <u>ar</u> lton;] here->[in mel]b'n;<=
13	С	=[in m- \uparrow h <u>e</u> :re.] []
14	A	[mm.]
15		=.hh
16	В	°↑mm;°
17		(.)





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[°mm,°]

- 1 C .hh an' that's: °°(uh) °° \uparrow u: \downarrow h (.) satsuma.
- 2 (0.5)
- 3 B ↑yeah.
- 4 (.)
- 5 C <($\circ oa: \circ^{\circ} o::h;$)> >(af' t' look at it-)<°=

Adrienne places her glass on the table with her right hand, and points with her left hand. Her gaze shifts from the glass to the 'dresser'.



Figure 7.

In line 18, Carli directs her incomplete TCU to Bill, projecting Bill's participation with address and opportunity space "is \uparrow that th' \downarrow one in the- (0.3)", but a second recipient, Adrienne, permeates the TCU in line 19 ">it's th' one in th' bottom of the dresser there;<". Carli gazes at Adrienne during the non-projected permeation in line 19, then redirects her gaze to Bill, the projected participant, in her postpermeation response (line 20-22). Bill's participation in Carli's TCU is apparently projected, or Carli is selecting him as the next speaker. Adrienne's participation is not projected, and this can be seen in Carli's gaze to Bill in both pre and post-permeation phases.

4.4 Ambiguities in projecting participation

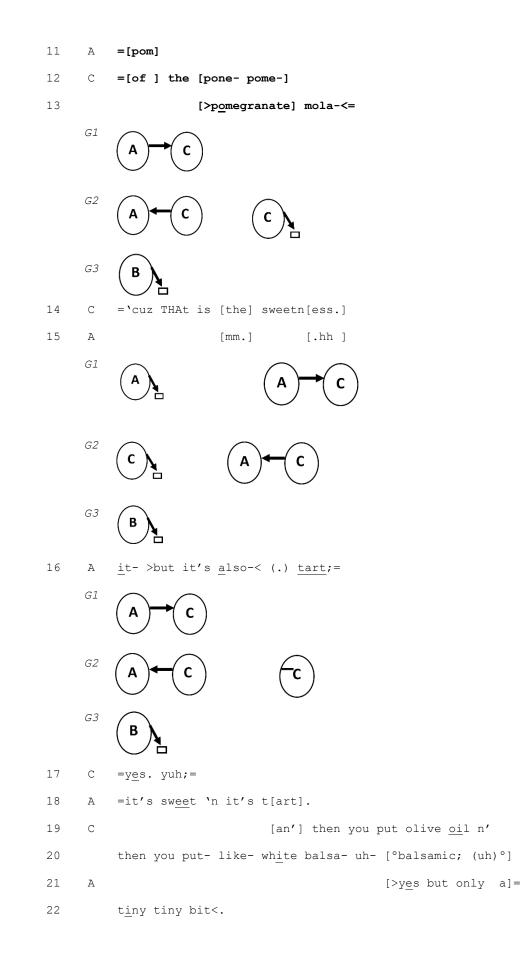
The speaker's conduct in the pre-permeation phase (i.e., embodied actions and talk) is typically in alignment with the recipient's eventual permeation. In some non-projected instances, recipients initiate permeation that overlaps with the speaker's TCU in progress. In this way, projected and non-projected features in the pre-permeation and permeation phase match across speaker and recipient. However, in

three instances, these aspects do not match. In the pre-permeation phase, there is apparent projected participation and yet overlapping talk occurs in the permeation phase, suggesting that participation was not in fact projected. This can be explained by ambiguity between 'addressing' the recipient, and 'projecting participation'. In these cases, the same semiotic resource (gaze) is used to support both tasks. These mismatches are resolved through speaker or recipient withdrawal consistent with non-projected instances.

In Extract 22, Carli and Adrienne are talking about the meal that Adrienne has prepared. Particular attention is given to the pomegranate dressing.

Extract 22. Pomegranate molasses

```
.mk °i° lo:ve °this.°
1
     С
          .mtk .h (0.2) >i-it's a really good< (.)
2
     А
3
     С
          °oh-° it's ↑really [good.]
                               [dress]ing; (.) an' i do the same thing
4
     А
          on mushrooms °which is lovely too:;°=
5
6
     В
          =y<u>ea</u>h;
7
          (0.5)
          b't- .h ↑jus- [just ] ↓a quick- drizzle; (0.5) °.mk [of°]=
8
      А
9
      С
                                                                  [of-]=
10
      В
                        ([°ouch°])
     G1
     G2
     GЗ
```



In line 8 Adrienne appears to project Carli's participation in her TCU through gaze and marked opportunity space, i.e., "jus- just \downarrow a quick- drizzle; (0.5)". Carli orients to these features projecting her participation by permeating the turn, but Adrienne continues her TCU "^o.mk of^o pom >pomegranate mola-<" (lines 8 and 11) in overlap with Carli, who withdraws "of-=of the pone- pome-," (lines 9 and 12). Adrienne also subsequently withdraws. Here, the overlapping talk is indicative of non-projected permeation, and may also be explained by the ambiguity inherent in gaze, as it can be used both to address a participant and to project participation in the TCU.

4.5 Multi-recipient complexities

Triadic conversations in the present collection add complexities in projected participation. Gaze is a more consistent means of projecting participation than pronouns, but gaze is not always required and not always oriented to. There are five instances in which a non-addressed participant permeates where another recipient was projected to participate. Three instances involve non-projected participation of an atypical participant and are explored in Chapter 6. However, non-projected participation is not an essentially atypical or "disordered" phenomenon (e.g., Jefferson, 1983; Lerner, 2004; Vatanen, 2018), nor is participating when another recipient was projected (e.g., Lerner, 2019). There are two instances in which typical participants permeate when gaze is to another recipient. In these two instances, the non-addressed recipients orient to the speaker's gaze and progress the sequence with a next action (e.g., Extract 21 Bottom of the dresser), in contrast to the atypical participant who neither orients to gaze nor progresses the sequence (see Chapter 6).

Chapter 4 has explored how permeation can be projected by the speaker through terms of address and creation of an opportunity space in the pre-permeation phase, and how permeation occurs in instances where it is not projected. Overlap and participant withdrawal in the permeation phase has been demonstrated as a form of evidence for non-projected permeation. Speaker gaze in pre- and postpermeation phases has also been shown as a possible source of evidence for projected participation. Potential for ambiguities in projection has also been highlighted. In Chapter 5, these findings are extended in examination of social action accomplishment.

5 Action formation

In this chapter, I will explore social action accomplishment in each phase. Differences in action types are explored in relation to projected participation in the pre-permeation and permeation phases. Talk and embodiment in the post-permeation phase are then explored as evidence for action formation.

5.1 **Pre-permeation phase**

5.1.1 Action types

The incomplete TCUs in the 'pre-permeation phase' are broadly divided into two action types, "assertion" and "question". The action of the permeated TCU does not appear to correlate with the form of permeation (TCU completion or sequential completion). 70% of incomplete TCUs in the present collection were 'assertions', with the remaining 30% being 'questions'. This proportional distribution is comparable across the incomplete TCUs that are subsequently completed at TCU and sequence level (see Table 3 below). It is not the case, therefore, that incomplete 'questions' are necessarily responded to sequentially, and incomplete 'assertions' completed syntactically. Action formation through permeation is influenced by factors other than the action type pre-permeation, as explored below.

Pre-permeation action type	Form	of permeation
	TCU	Sequence
Assertion	20	10
	(74%)	(63%)
Question	7	6
	(26%)	(37%)
Total	27	16

Table 3. Pre-permeation action type in relation to form of permeation

5.2 **Permeation phase**

There is a clearer relationship between action accomplishment in the permeation phase and the projection of participation. In permeating to progress the TCU, the recipient participates in the speaker's unfolding turn and action and, in doing so, accomplishes their own action within the turn and sequence rubric provided by the turn so far. Permeating the speaker's TCU to progress the sequence accomplishes the next relevant action. However, action accomplishment in either of these forms is affected by whether the recipient's participation was projected or not. That is, the recipient may accomplish different actions depending on whether participation is projected.

5.2.1 Projected participation

As demonstrated so far, when projecting recipient participation, the speaker designs the TCU to incorporate a form of address and opportunity space prior to syntactic completion. As such, permeating actions are accepted by the speaker. The recipient's action is prospectively indexed by the speaker (Goodwin, 1996). In this phase, actions accomplished include supplying a turn element, agreeing or adopting the same stance as the speaker, collaborative avoidance of a delicate topic, and proffering the next relevant action.

5.2.1.1 Supplying a turn element

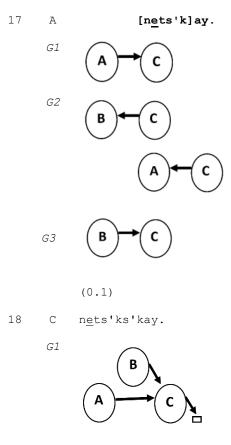
Supplying a turn element is associated with self-initiation of repair or disrupted progressivity during the speaker's TCU pre-permeation.

In Extract 23 (previously encountered as Extract 17), Bill is telling Carli how he began his Satsuma collection, which reminds Carli of a book she has read.

Extract 23. Netsuke

```
1
     В
        .mtK so (0.2) so w- w- we- we- (0.4) .hh (0.2) w've- this
2
         is in memory of my mother,
3
          (.)
4
        aw this is great;=
     С
5
     В
         =yea[h yeah ]
6
     С
             [this is] great [.H ] i w' y' know it reminds me=
7
                              [(nuh-)]
     В
         =uv u:m. .tk (0.2) hare with the amber eye? .hh
8
     С
9
         (0.3)
        u:[m ]
10
     С
          [.H]
11
     А
          (.)
12
13
     А
         oh y[es; there's] the-
14
             [y 'kn<u>o</u>w his- ]
                                [he collec]ted uh- (0.1)=
     С
15
                                 [n<u>e</u>ts'kay ]
     А
     G1
     G2
                       С
    GЗ
           R
```





In line 14, Carli begins a word search "y'know his- he collected uh- (0.1)=" (in apparently oblivious overlap with Adrienne's production of the word in line 13). She directs her gaze to Adrienne during a 0.1 second pause, projecting Adrienne's participation in the TCU. In line 16, she partially produces the sought after word, stretching the final sound of the syllable "nets:::::", with continued gaze to Adrienne, further projecting Adrienne's participation. In line 17 Adrienne overlaps the sound stretch and produces the full word "nets'kay". Adrienne's projected participation accomplishes a repair-like action, collaborating in the generation of the turn element.

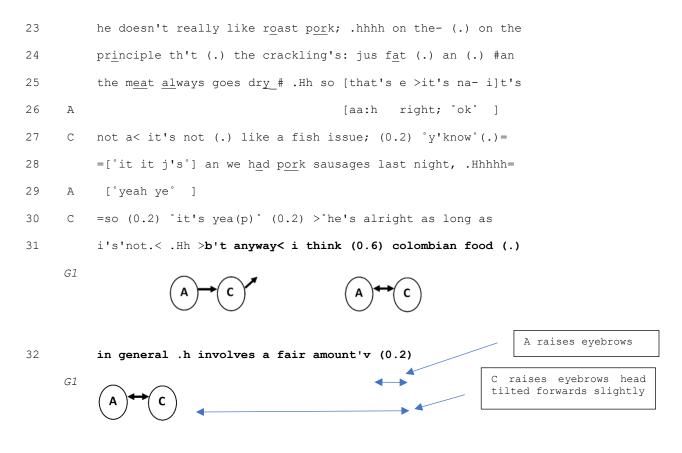
5.2.1.2 Agreeing/adopting the same stance

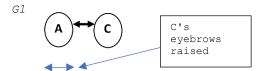
Turn permeation can accomplish agreement or adoption of the same stance, as shown in Extract 24.

I will revisit 'Fat', Extract 24, (previously encountered as Extracts 2 and 15), with a focus on the achievement of affiliation and shared stance. As outlined previously, Caroline is telling Annie about a Colombian meal that her daughter's boyfriend will prepare. She highlights the potential content of pork and fat in the meal. Caroline reveals that her husband does not like pork, which concerns Annie because she has planned to cook pork for Caroline and her husband that night. The exchange regarding pork is potentially disaffiliating.

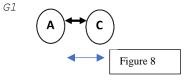
Extract 24. Fat

1	С	an >he's gonna cook us a< co <u>lombi</u> an m <u>ea</u> l on monday night.=
2	A	= toh>'v'ad'it w- like <t td="" what;<=""></t>
3		(.)
4	С	.hhh well i ↑th <u>i</u> nk it involves a f <u>ai</u> r amount'v p <u>or</u> k; (0.1) an
5		a fair amount'v f <u>a</u> t.
6		(0.1)
7	A	HHHH[h]
8	С	[an i] $d\underline{i}dn't$ have the heart to tell'im th't and rew
9		doesn't really \downarrow °lihke° pork; [beca]use (.) >[then he mgh-]
10	A	[.hhh] [aa <u>:</u> ::h]=
11	С	[°He miGHHt°] °°dhes°°Ihde t'c <u>ooh</u> k f <u>I</u> sh n'thAht be H'Eevh'n=
12	А	[<u>o</u> ::h]
13	С	=[wORse] [HA HA ha] [ha ha h-]
14	A	[O:h] [nO:.] [o:h.] .Hh >↑i didn't realise↑=
15	А	=william doesn't like [pork,<]
16	С	[OH L]AY Ay mE- 'HE'll EAt't; b't he
17		<pre>doesn't (.) #love't; >e eats por-< [eats pork (b'coz)]</pre>
18	А	[>we're ha <ving pork="" s]="</td"></ving>
19		=pare ribs t'night,=
20	С	=> <u>no</u> <u>no<</u> w- if 's por- f- >°sble° bl- bleh< blAH >bl- blah<
21		bl <u>a</u> ::h, .HHhh (.) °e-° th <u>a</u> t's fine. (0.2) he eats (.) p <u>o</u> rk
22		>spare ribs with no problem at all.< .hh no he >j's doesn't<





34 C fat hHHh ((laughter))







In lines 31-32, Caroline projects Annie's participation in her TCU. In doing so, Caroline could be seen to be attempting to regain affiliation with Annie. The topic is reset to the 'fatty Colombian meal' as opposed to the problematic pork dinner Annie plans to prepare. This is seen in the repetition of 'fat' at the omission of 'pork' (from lines 4-5) in the collaboratively completed TCU (lines 31-33). In participating in the completion of the TCU with "fat" (line 33), Annie demonstrates her understanding of Caroline's telling and they adopt a shared stance, shifting away from the prior disaffiliating talk.

5.2.1.3 Dealing with delicacy

Dealing with delicacy involves a shared understanding of a delicate topic, social propriety and efforts to prevent offending participants (Lerner, 2013). Participants may collaboratively avoid or co-produce talk relating to these topics.

In Extract 25 (previously encountered as Extract 5), Caroline and Annie are discussing mobile phone service in a fire prone area.

Extract 25. Text message

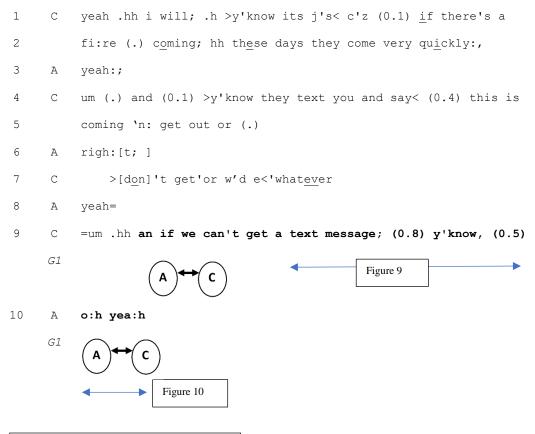








Figure 10.

In line 9 Caroline completes her telling with the syntactically incomplete TCU "an if we can't get a text message; (0.8) y'know, (0.5)". Annie responds sequentially in line 10 with an agreement "o:h yea:h". Caroline's incomplete TCU appears to avoid the delicate topic of burning to death. Her gaze to Annie, combined with long 0.8 and 0.5 second silences, project Annie's participation in the TCU. Annie demonstrates shared understanding in her agreement tokens, emphasized by her facial expression during Caroline's TCU (line 9, Figure 9). Caroline matches this facial expression during Annie's response in line 10 (Figure 10). In projecting Annie's participation in Caroline's turn, the speaker and recipient collaboratively avoid explicit talk relating to the delicate topic of death. Caroline's turn is treated as sufficiently complete, and the participants implicitly demonstrate a shared an understanding of the unmentioned topic.

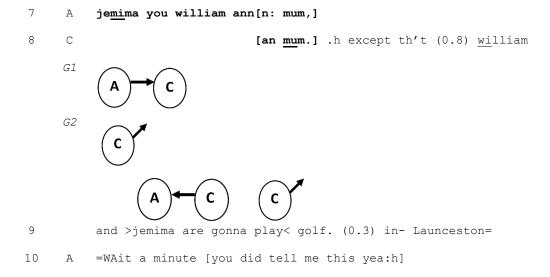
5.2.1.4 Next action

Progressing the sequence through permeation, involves taking the next turn in the sequence. The speaker's TCU is treated as sufficiently complete and the recipient takes the next relevant action. Projected participation in these instances is equivalent to next speaker selection at a TRP.

In Extract 26, Caroline has been telling Annie about her upcoming holiday in Tasmania with her mother, husband (William) and another person, Jemima.

Extract 26. Mum

```
1
     А
                      [>wait a minute< BIS jemtima goi:ng?
2
          (.)
          >↑yeah yeah_<
3
      С
4
          (0.2)
          so: (0.4) how >many of you< e going;</pre>
5
     А
6
      С
          mtk WEll hh (0.5)
```



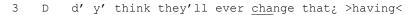
In line 7, Annie formulates a candidate understanding (candidate answer to her own question in line 5), "jemima you william annn: mum,". Annie directs her gaze to Caroline and stretches the word "and", projecting Caroline's participation in the TCU. Caroline permeates the TCU in line 8 in choral completion. Annie's TCU is constructed to invite confirmation (or rejection) of her candidate answer. Through projected participation in the TCU, Caroline accomplishes the action of confirming Annie's candidate understanding, embracing the epistemic priority indicated through Annie's initial question.

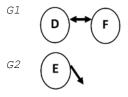
In Extract 27, Citizenship is explored again (previously encountered as Extracts 6, 14 and 16), with a focus on Federico's permeating response, which takes the next relevant action in the sequence.

Extract 27. Citizenship

```
1 D .H=>↑`t's not against the law,=°i'm an italian citizen.<°
```

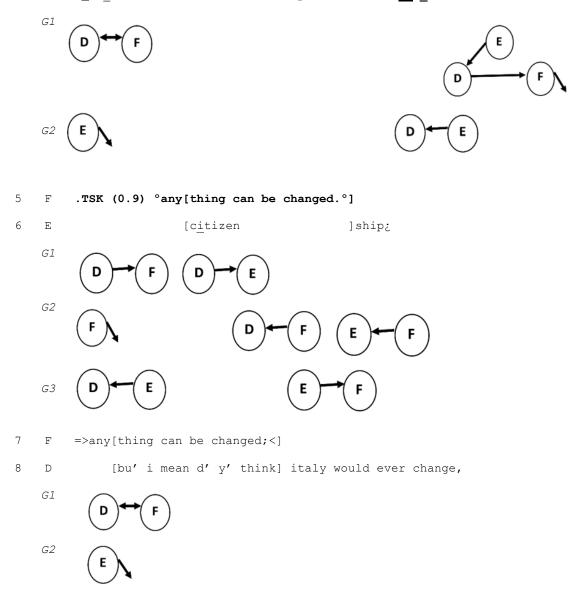
2 (2.6)





4

both_ (0.2) like the fact that you c'n have dual_ (0.6)



Federico's participation is projected in line 4, and he permeates the TCU with the next relevant action, an answer to Daisy's question in line 5 (as per prior analyses of this extract, 16). In this instance,

Daisy's turn is syntactically incomplete, yet gaze and silence projects Federico's participation as the next speaker, as per speaker change at a TRP.

5.2.2 Non-projected participation

In instances of non-projected participation, the recipient permeates the TCU in the absence of an invitation from the speaker. Recipient actions in these instances retrospectively index aspects of the speaker's action. The actional motivations in the present collection include indexing problems with recipient design, agreeing or taking a shared stance, supplying a turn element and subversion.

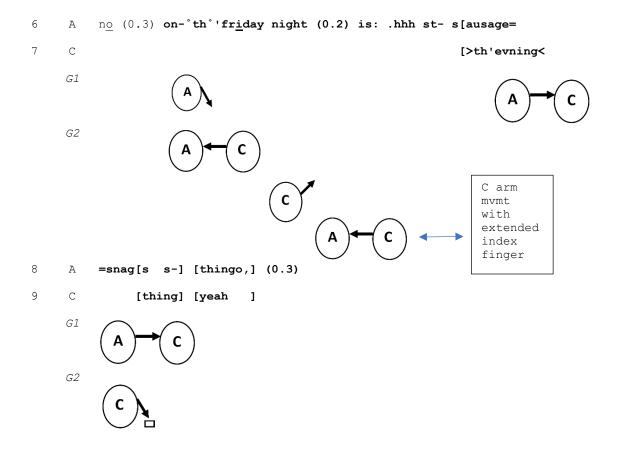
5.2.2.1 Index problems with recipient design

Recipients may permeate the speaker's TCU in order to index problems with recipient design. Such problems may include inaccurate assumptions regarding the recipient's stance or knowledge.

In Extract 28, Annie and Caroline have been discussing plans for Annie's husband's upcoming 60th birthday.

Extract 28. Snag thingo

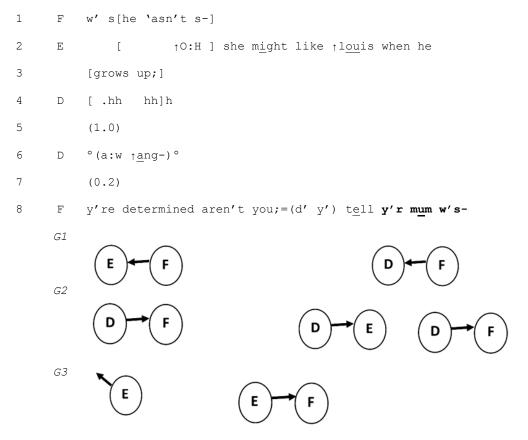
1	. C	<u>okay</u> so next <u>fri</u> day and then on the >saturday night the
2	2	four'v you are going< (0.1) t-
(-)	3 A	.hh .mtk nO:; .hhh no, (0.1)
4	L C	on the (0.1) ac[tual birthday;]
5	ō A	[((shakes head))]



In lines 1-2, Caroline summarises Annie's telling regarding the birthday plans. In line 3, Annie rejects the summary ".hh .mtk nO:; .hhh no," and proceeds to a correction in lines 6 and 8 "no (0.3) on-°th°'friday night (0.2) is: .hhh st- sausage snags s- thingo,". In lines 7 and 9, Caroline permeates Annie's TCU, asserting shared understanding thus far, ">th'evning< thing yeah". This permeation also acts to promote progressivity, and prevent Annie from stating shared knowledge. In summary, Caroline's permeation indexes problems in Annie's turn design in relation Caroline's understanding of the matters conveyed in Annie's turn. Caroline asserts her epistemic stance or understanding, challenging Annie's correction.

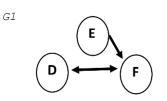
In Extract 29 (previously encountered as Extract 19), Federico began telling Daisy of Erin's plans to invite a member of the British royal family to their own family event. I will re-examine this extract with a focus on the action Daisy accomplishes in permeating Federico's turn.

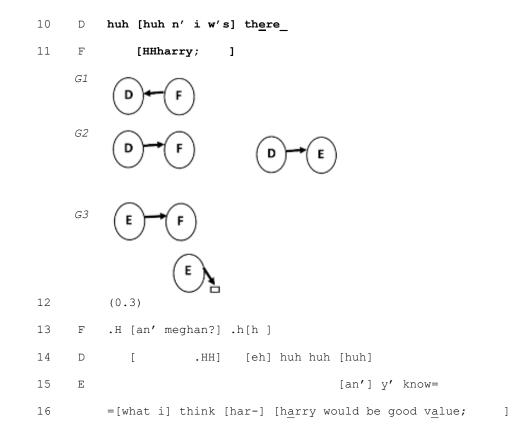
Extract 29. Harry and Megan



wanted to inv<u>i</u>te_ .hh

9





In line 8, Federico begins to tell Daisy that Erin thought to invite Harry and Megan (then members of the British royal family) to an event, "y'r mum w's- wanted to invite_". Daisy permeates the incomplete TCU with laughter and an assertion of prior knowledge, "huh huh n' i w's there_" (line 9). Daisy's permeation is not projected, and overlaps Federico's completion of his own TCU. Daisy permeates Federico's TCU (non-projected) to assert her shared knowledge, and indicate that Federico need not continue the telling.

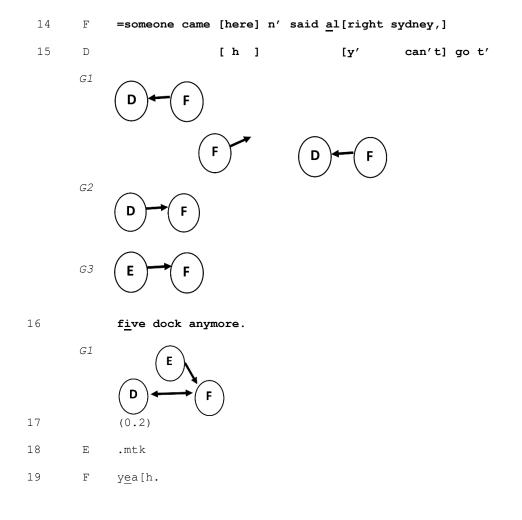
5.2.2.2 Aligning stance (potentially against another)

Non-projected permeation can bring together two participants in pursuing an argument against the third participant in the conversation.

In Extract 30, I focus on the action Daisy accomplishes through permeating Federico's turn. As seen in prior analyses of this extract (Extract 3), the participants are discussing political issues regarding national borders and colonization. Erin asserts an empathetic stance with the 'colonizers' and Federico initiates a contrasting stance.

Extract 30. Five Dock

1	E	[an' they] suffered a lot during the wa:r;=
2	F	[°>(but the)<°]
3	F	=but you c <u>a</u> n't just go n' (sn-)=y' know s <u>a</u> y t' peop- s-
4		$^{\circ}(y' \text{ know th-})^{\circ}$ (.) people in a country,=(n' go)< sorry;
5		>(w'll y' move outta) < the way we're gonna create ahh
6		a new nation he:re amongst your *lot,*
7		(0.3)
8	F	$m_{\underline{O}}ve move aw \uparrow [\underline{a}y;]$
9	E	[w']ll: we've [never had that] problem=
10	F	[how would ↑you feel.]
11	Ε	=in austral[lia;=have we.]
12	F	[how would y'] feel if the- if [the:y n']=
13	Ε	[kgh kgm]
	G1	E F
		D F
		F F
	G2	
	G3	E E F

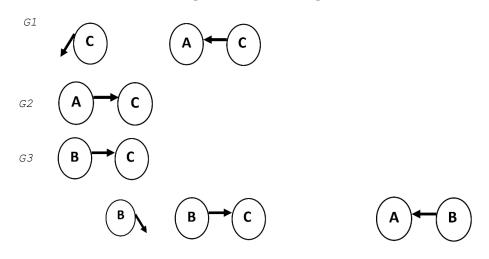


In line 1, Erin takes a stance on the issue, "they suffered a lot during the wa: r_{c} ". In lines 2-6, Federico takes a contrasting stance "but you can't just go n' (sn-)=y' know say t' peop- s- °(y' know th-)° (.) people in a country,=(n' go)< sorry; >(w'll y' move outta)< the way...". Federico continues his line of argument, leading into a hypothetical example in their own city "how would y' feel if the- if the:y n' someone came here n' said" (line 12-14). Daisy permeates Federico's turn with a syntactic completion "y'can't go t' five dock anymore." (line 15-16). Daisy's participation in the TCU is not projected. In permeating Federico's turn, Daisy aligns with Federico, taking a shared stance against Erin's stance.

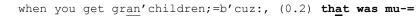
In Extract 31, I show a recipient's attempt take a shared stance with the speaker. Carli talks about the fear of being too old or lacking energy to play with grandchildren.

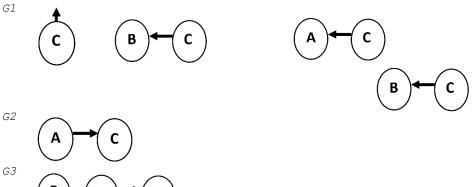
Extract 31. Grandparenting

1 С i think that's always th' fear *w-* y'know; .h w-

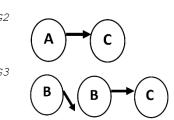


2



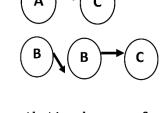


that's- been my fear >th't if it's< too o:ld i won't



С

В



С

С

С





G1

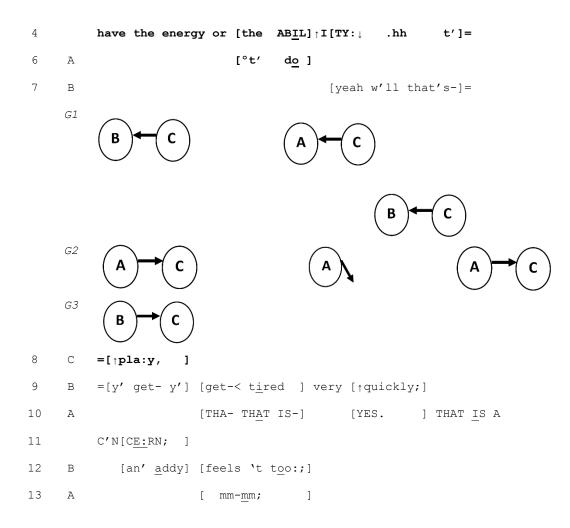
G2

GЗ

В

Α

В



In line 2, Carli speaks of her own fear of being too old, "that was mu-= *†*that's- been my fear". In line 4, Adrienne attempts to permeate Carli's TCU with a candidate completion "ot' do". Her participation is not projected, and Carli persists in the completion of her own TCU, overlapping and raising her pitch and loudness to compete for the floor. Adrienne withdraws. Permeating (or attempting to permeate) without speaker projecting recipient participation here serves to assert shared authority and stance. Adrienne is asserting herself as an equal on this issue. She persists with this action, reasserting in line 10 with raised loudness, "THA- THAT IS- YES. THAT IS A C'NCE:RN;". Adrienne's attempted, non-projected permeation of Carli's TCU can be seen as a claim to shared epistemic authority on the topic of grandparenting.

5.2.2.3 Supplying a turn element

Non-projected supply of a turn element is not welcomed by speakers. Speaker's resist the collaboration by maintaining the turn space with persistent overlap, or reclaiming their turn through completion post-permeation.

In Extract 32 (previously encountered as Extract 13), Bill and Carli are discussing the historical setting of the production of Satsuma pottery. I will revisit this extract, showing that the recipient, Bill, supplies a turn element that is not projected by the speaker, Carli.

Extract 32. Enlightenment

10

1	В	=[exa]ctly an' that's what i love about it b'cause
2		it's japa:nHH around about nineteen \uparrow hundred;=
3		=what was it \uparrow likeh (0.3) t'b- t' be living in-
4		(0.3) in luxury in japan; .h (0.4) around nineteen
5		<code>thundired before</code> .hh th' period of industrialistation;
6	С	.H AN' BEFORE b'f- is that before - is that before the um
	G1	$(B) \leftrightarrow (C) \qquad (B) \rightarrow (C) \qquad (B) \leftrightarrow (C)$
	G2	
	G3	
7		(0.3) .mTK [english]come in
8	В	[th'enlight°m°-]
	G1	
	G2	
9		(0.1)

B >y- th- th' vericans'd come< (.) .h °in° in eighteen

77

11	L	fifty f <u>ou</u> r;
12	2 В	.h[hh]
13	3 C	[the] <u>e</u> nglish come in [tha- tha- the-]
14	4 A	[>no the ameri- the a]mericans.<=
15	5 C	=oh the am[ericans w'ch- which bad guys it w's someb'dy.]
10	б В	[°*e:*° there'wz- u- m- p- °>ye- ye- ye-<°]

In line 6 Carli forms a question directed (with gaze and topic) to Bill "is that before- is that before the", yet in lines 6-7 Carli exhibits word finding difficulties "um (0.3) .mTK ". Her upward gaze (line 7) does not project recipient participation, but in line 8 Bill attempts to collaborate in Carli's word search, offering "th'enlight^om^o-". Consistent with non-projected participation, Carli persists with her own TCU and Bill withdraws. Carli maintains her turn space through completion of her own TCU in overlap with the recipient. Thus, in this example, the recipient's non-projected supply of a turn element is resisted by the speaker.

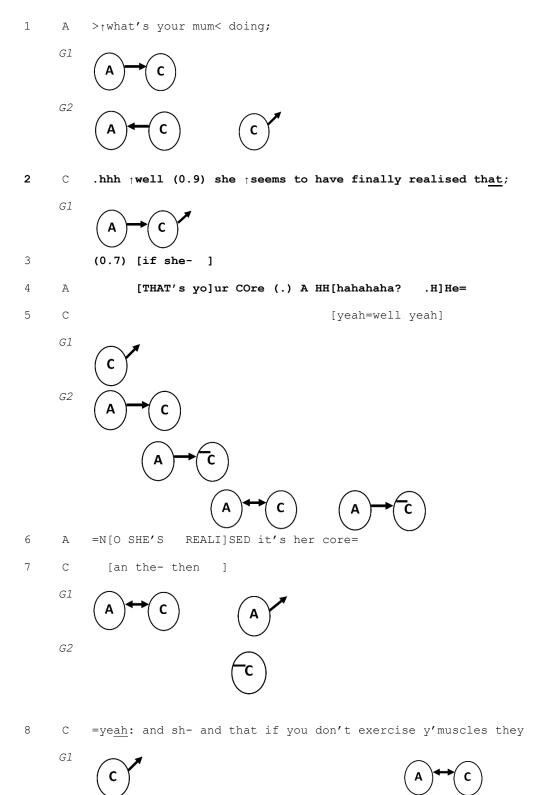
5.2.2.4 Subversion

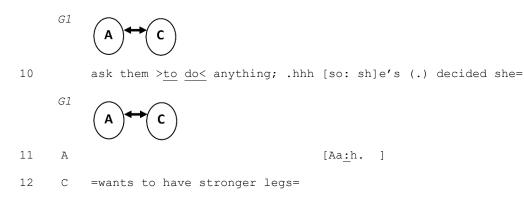
A further action seen in non-projected participation is subversion of the projected turn development.

In Extract 33, Caroline is telling Annie about her mother's new fitness routine, which Annie asserts is similar to her own. Caroline asks about Annie's specific exercises and after describing these, Annie goes on to ask about Caroline's mother's exercises.

Extract 33. Your core

G2





In line 2, Caroline begins a response to Annie's question ".hhh †well (0.9) she †seems to have finally realised that;". Prior to syntactic completion of the TCU, Caroline pauses (0.7, line 3), and Annie takes this opportunity to permeate the TCU with a subversive completion "THAT's your COre (.) A HHhahahaha? .HHh " (line 4). Annie's participation is not projected. While there was an opportunity space for her participation, Annie was not addressed with gaze or a pronoun and her permeation overlaps with Caroline's resumption of her TCU (line 3). Caroline withdraws from her resumption. The subversive nature of this permeation is seen in Annie's laughter (line 4) and retraction of the completion (line 6). The permeation is syntactically fitting, yet semantically ill-fitted for comedic effect, subverting Caroline's TCU trajectory (Bolden et al., 2019). Caroline's post-permeation response is further explored in Section 5.3.

5.3 Post-permeation phase action accomplishment

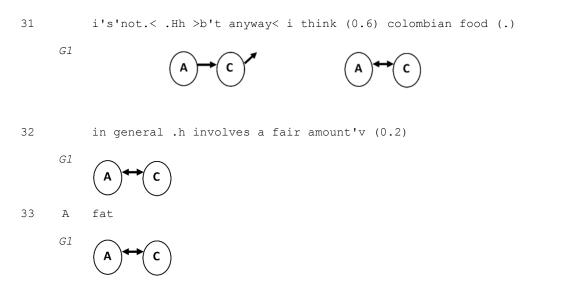
The post-permeation phase, as noted above, has an evaluative role. This space is used to evaluate the permeation of the initial turn and/or 're-negotiate' speakership. In broad terms, the speaker can 'accept' or 'reject' the permeating response. It also serves as an opportunity for the speaker to reclaim their permeated turn. An absence of response post-permeation can also be meaningful. No post-permeation response is often a result of the speaker persisting with the completion of their TCU in overlap with the permeation, in which case the speaker 'maintains' their turn, which can be seen as a form of rejection. Rejecting the the permeation of a recipient can have the effect of 'excluding' the permeating recipient. Note here that 'turn maintenance' is seen when the overlapping talk (speaker and recipient) in the permeation phase is different syntactically, in contrast to choral completions (Lerner, 1987, 2002; Falk, 1979).

5.3.1 Acceptance

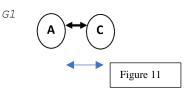
"Acceptance" is achieved through repeating the completion from the permeation phase and/or an agreement token, and/or embodied action (e.g., nod that accompanies talk). It is also seen in cases of 'choral completion' (Lerner, 1987) where the speaker and recipient's overlapping talk matches syntactically (this can be projected or non-projected).

In Extract 34 (previously encountered as Extracts 2 and 24), the post-permeation response consists of a repetition of the permeation phase response and is accompanied by a nod and laughter (Figure 11). In this instance the speaker's post-permeation conduct 'accepts' Annie's permeation.

Extract 34. Fat



34 C fat hHHh ((laughter))



Caroline closes her eyes tightly and tilts her head down, laughing.

Annie nods and looks forwards/away from Caroline, with lips closed tightly (spread laterally).



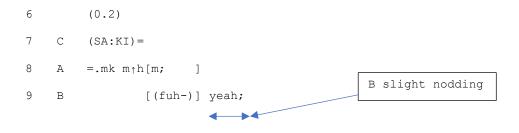


This is also seen in Extract 35, Sake (previously encountered as Extracts 1 and 11), where projected participation in a word search is accepted by the speaker with the response token "yeah" (line 9), accompanied by a subtle nodding action.

Extract 35. Sake

```
1 B b'cos (0.5) .mTK the floo1:r is the place where people
2 (sleep) (.) .mtk an' sit;
3 (0.5)
4 B an' drink their sa:- y'know .hh (0.2) th- y['h- ]
5 C [(mm ] .ghm)
```

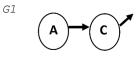
82



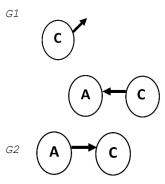
Acceptance in Extract 36 differs in that it is an example of 'choral completion'. Following on from Caroline's story in Extract 10, 'A tizz', in which Caroline is telling Annie about her daughter's boyfriend planning a special outing. Caroline indicates that she suspects the boyfriend is planning a proposal.

Extract 36. Pop the question

1 С "uh" he w'z (.) in a in a (0.7) "y'know, "=

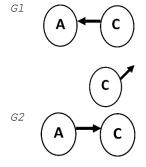


2 А =a <u>ti</u>zz



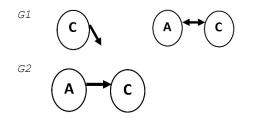
3 С

a ↑tizz .hh about h y'know wanning it t'go u- h- >i really



```
4 hope it goes alright'n philomena's a really lovely partner
5 n'stuff< .h an <u>i</u> said to <u>wi</u>lliam (0.5)
6 C y'don't think 'es (0.8) ↓g'nna (0.3) [pop the question]
7 A [pop the question]=>w'll
```

8 wait'a min't what'she ↑doing? she's< uni



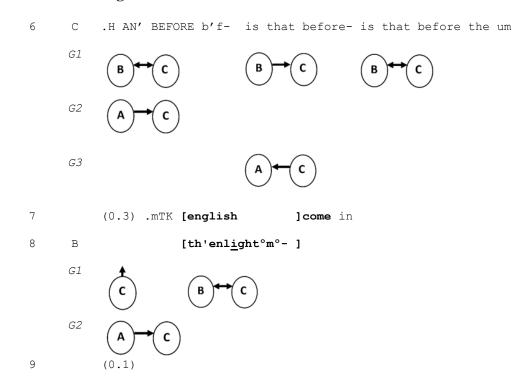
In this instance Caroline and Annie complete the TCU in synchrony with the same lexical choices and timing, in lines 6 and 7, "pop the question". The synchrony and matching syntax accomplishes acceptance.

5.3.2 Maintaining and reclaiming the turn space

Maintaining the turn space is a subtle form of rejecting the recipient's permeation, and reclaiming can subtly either reject or accept the permeation. Both maintaining and reclaiming are achieved through a speaker completing their own TCU post-permeation. This includes "redoing" of the permeating response, in which the redoing is prefaced with a marker of dispreference, such as "well", "yeah but" or "yeah well". In these instances, some form of syntactic completion is offered post-permeation, yet it differs from the completion offered in the permeation phase. Maintaining the turn space can be differentiated from reclaiming the turn space, in that the speaker persists with their TCU in overlap. In

reclaiming, the speaker yields their turn (e.g., withdrawal from overlap) and subsequently resumes their TCU. Rejection can also be achieved through no response post-permeation.

In Extract 37 (previously encountered as Extracts 13 and 32), in which Bill attempts to supply a turn element, Carli maintains the turn space by persisting in completion of her TCU in overlap with the permeating response.



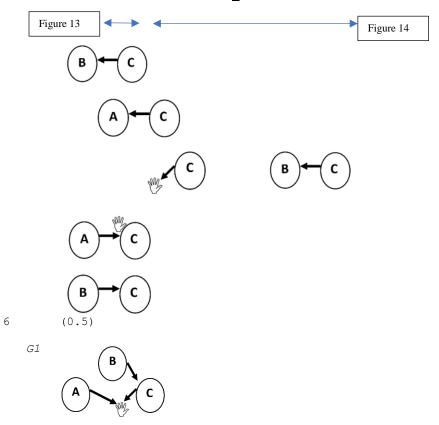
Extract 37. Enlightenment

Carli's persistence with her TCU in line 7 serves to maintain her turn space, and implicitly reject Bill's permeation.

In Extract 38 (previously encountered as Extract 20), in which Carli describes Giacometti's sculptures she reclaims her turn space post-permeation.

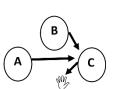
Extract 38. Elongated

- 1 С =<u>a</u>fter that peri[od;] 2 А [(yup)] .h B'T ANYWAY THEY'RE VERY .h (0.5) 3 С G1 Figure 12 В В С C G2
- 4 A <u>e</u>lon[gated.]
- 5 C [su-] sometimes very tall an' thin,



7 B mm[hm,]





Carli gestures a tall thin sculpture, by holding her thumb and forefinger close together during an upward movement of her hand.



Figure 12.



Figure 13.



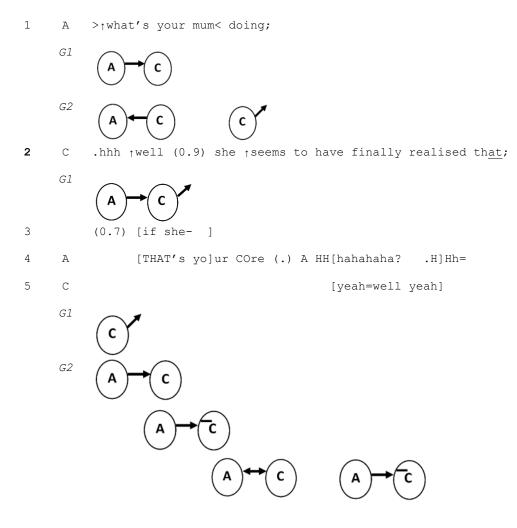
Figure 14.

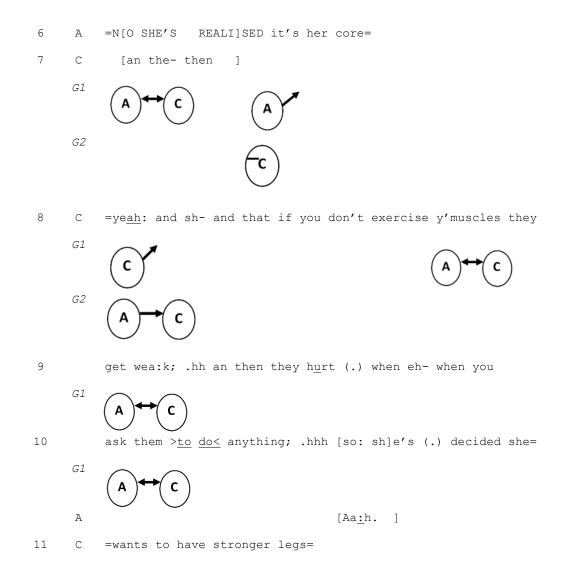
In line 3, Carli's initial TCU is syntactically incomplete, yet completed with a gesture during a 0.5 second silence ".h B'T ANYWAY THEY'RE VERY .h ((hand gesture/(0.5)))" (Figure 12). Adrienne observes the gesture, yet orients to the incomplete syntax, and permeates the TCU to complete it syntactically with "elongated." in line 4. Post-permeation, Carli resumes her TCU with talk (line 5), redoing Adrienne's completion "sometimes very tall an' thin,", and thereby reclaims her turn and continues her telling. Caroline subtly acknowledges Adrienne's contribution with a nod (Figure 13). In

redoing Adrienne's permeating response, Carli also redoes her gesture, this time reaching her hand above her head, in a more exaggerated gesture, reflecting the adverb "very" (Figure 14).

In Extract 39 (previously encountered as Extract 33), following Annie's subversive completion, Caroline reclaims her turn following a weak acceptance of Annie's permeation and retraction.

Extract 39. Your core

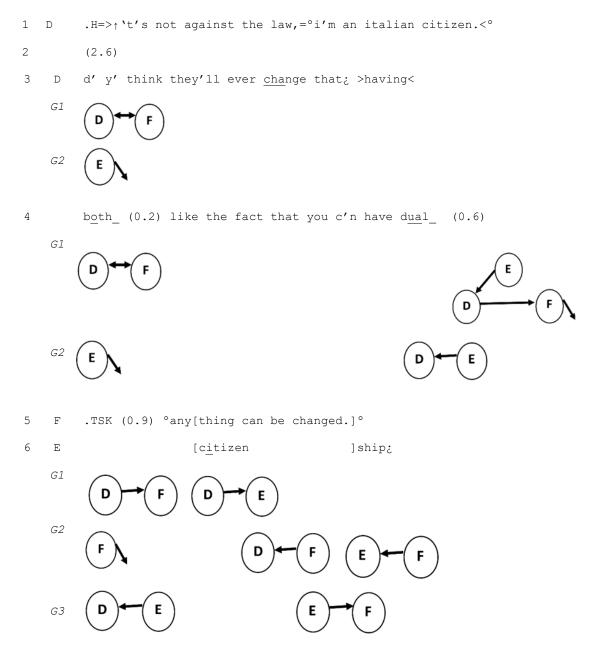


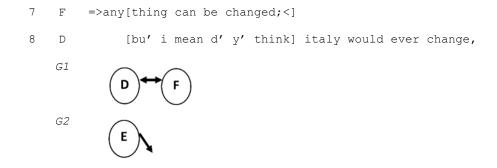


In line 4, Annie's subversive response receives an accepting post-permeation response from Caroline, which is weakened with a marker of upcoming dispreference "yeah=well yeah" (line 5). The 'well' token alerts Annie to a possible rejection of her permeation, and she retracts it in line 6, "NO SHE'S REALISED it's her core=". Caroline overlaps with this retraction but withdraws. Caroline accepts the retraction with "yeah: and sh-" in line 8. The stress and elongation of the agreement token, coupled with "and", 'moves towards' the action of reclaiming her turn. Caroline resumes her TCU with "and that if", connecting her ongoing talk to the incomplete TCU from lines 2-3 ".hhh ↑well (0.9) she ↑seems to have finally realized that; (0.7) if she- ". In summary, this instance shows a complex process of rejection post subversive permeation.

In Extract 40, Citizenship (previously encountered as Extracts 6, 14, 16 and 27), Erin's permeation is rejected through no post-permeation response. Daisy directs her TCU to one recipient, yet two recipients permeate in overlap.

Extract 40. Citizenship





Erin's participation in the TCU is not projected. She attracts Daisy's (i.e., the speaker's) gaze in line 6, yet the response post-permeation, in talk (line 8), relates to and is directed with gaze to Federico. This lack of response to Erin's permeation and continuation of talk between Daisy and Federico is a 'rejection' of her participation, and excludes Erin from participating in this stretch of talk.

5.3.3 Accountability in post-permeation actions

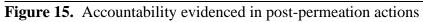
Drawing together the examples above, it can be seen that the speaker's right to a complete TCU (Sacks et al., 1974) entitles the speaker to ratify any talk that permeates their TCU. This is evident in post-permeation actions. The meaning of the recipient's permeating action is consummated by the speaker's response during and post-permeation. For example, affiliation or alignment of stance through a permeating response is only accomplished if the speaker accepts the permeation, as seen in Extract 30, Five Dock, in which affiliation is achieved. This is in contrast to Extract 31, Grandparenting, in which the affiliation is rejected.

As outlined in Figure 15, particular evaluative actions in the post-permeation phase are linked to permeating actions. The action is collaboratively accomplished. Actions in instances where participation is projected are overwhelmingly met with 'accepting' post-permeation response or a next turn in the sequence (16 instances). Actions in instances where participation is not projected are more often met with the speaker 'maintaining' or 'reclaiming' their turn (26 instances). Acceptance occurs in only two

91

instances of non-projected participation. There is only one instance of explicit rejection in this collection, and it will be discussed in detail in Chapter 6.

	Permeation Action	Post-Permeation Actions
Projected participation	supplying a turn element	accept permeation
	agreeing/adopting the same stance	accept permeation
	avoid delicate topic	accept permeation
	next relevant action	
Non-projected	supplying a turn element	reject permeation
participation		maintain turn space
		reclaim turn space
	aligning stance	accept permeation
		maintain turn space
	indexing problems in recipient design	maintain turn space
		reclaim turn space
		accept permeation
	subversion	reclaim turn space



Chapter 5 has examined the variety of social actions accomplished through permeation, and in particular differentiated between the actions accomplished in projected and non-projected permeation. The post-permeation phase has been explored as a means of consummating action formation through its role in evaluating or ratifying the permeation. In Chapter 6, I will apply all areas of analysis explored in Chapters 3-5 to the participants with a cognitive-communication disorder.

6 Turn permeability and cognitive-communication disorders

In Chapters 3-5, I have explored participant conduct relating to turn permeability without consideration of cognitive-communication disorders or potential related atypicalities. In this chapter, I will focus on participants with a cognitive-communication disorder. I will offer observations regarding these participants as a group, and subsequently explore specific instances for each participant.

6.1 Overview of findings

The analyses undertaken revealed few obvious differences in turn permeation practices between participants with and without a cognitive-communication disorder. However, there were some possible, but heterogeneous differences noted in the permeation phase. The post-permeation phase highlights the role of typical participants in promoting or supporting typical progression of the interaction. Possible evidence of atypical participation in turn permeation is shown separately for each participant with a cognitive-communication disorder due to variation in these patterns.

6.1.1 Pre-permeation and permeation phases

There are no notable differences, in terms of turn design, between participants with and without cognitive-communication disorders in the pre-permeation phase. All participants formed incomplete TCUs across both assertions and questions. Initiation of self-repair is evident for both typical and atypical participants. Permeating talk by all participants orients to syntactic and prosodic aspects of the pre-permeation turn design and, as relevant, to delayed progressivity. In these data, there is evidence of seven participants orienting to projected participation, but this is absent for one atypical participant.

Across all 45 instances, typical participants are more frequently 'speakers'. Atypical participants are in the role of speaker in only 12 instances. This may suggest typical recipients refraining from intervening in atypical speakers' turns (or the reverse), but this count should be interpreted with caution

given the unequal numbers of typical and atypical participants in the present data. Of these 12 instances, proportionally more were permeated with a sequential response (7 instances). Sequential responses in the permeation phase predominantly accomplish the action of non-projected 'indexing problems in recipient design' (5 instances). But, again, some caution is required in drawing conclusions about whether this quantitative pattern is a meaningful reflection of atypical participation.

6.1.2 Post-permeation phase

As outlined in Chapter 5, the post-permeation phase plays a significant role in ratifying the permeation. The actions of participants in this phase are significant for the ongoing progression of the sequence in general, and could be particularly relevant in ensuring progression following unusual interactional moments. In this phase, typical participants can highlight atypicalities (and allow them to hinder progression), or they can adapt to atypical conduct (promoting progression). The latter is the most frequent in the present collection. As per analyses in Section 5.3, the post-permeation response 'adapts' to permeations through 'accepting' the permeation or delicately 'maintaining' or 'reclaiming' the turn space. In this collection, explicit 'rejection' of the permeation only occurs in one instance, in which the permeating response was ill-fitted. So, it seems that the post-permeation response is principally a resource for managing progressivity in both typical and atypical instances of permeation, and can on occasion be a potential indicator of problems caused by permeations from participants with a cognitive-communication disorder.

6.2 Bill

6.2.1 Bill as speaker

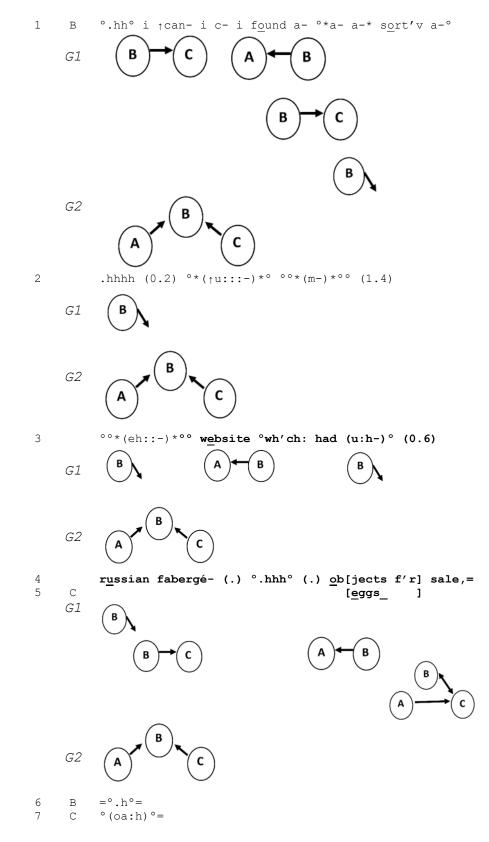
In three of the five instances where Bill is the speaker, Bill's post-permeation response does not orient to the recipient permeation (e.g., Extract 18, Eggs). Bill completes his own TCU regardless of the

recipient's permeation, which is consistent with non-projected participation in typical participants. His lack of post-permeation response or acknowledgement of their proffered completions could be a rejection of their permeation through maintenance of his turn space. In the remaining two instances in which Bill is the speaker (one projected and one not projected), he responds in the post-permeation phase with an agreement token "yeah" (Extract 11, Sake, projected), accepting the permeation (projected), and by withdrawing from the TCU (non-projected).

Gaze in the three instances where Bill does not accept the permeation is complex. In these instances, Carli permeates Bill's TCUs. Bill's gaze is to Carli in the pre-permeation phase and shifts to Adrienne, or is averted in the 'opportunity space' and permeation phase. Adrienne orients to Bill's gaze (shared or averted), but does not permeate the TCUs with talk. Several possible functions can be attributed to this gaze. Bill may be seeking support from Adrienne, acknowledging their shared knowledge, or taking 'time out' for a word search. The gaze shifts may also simply reflect the multiple addressees of the turn in general. Post-permeation, Bill (and once Adrienne) re-orients his gaze to Carli, suggesting that the TCUs as a whole are directed to Carli. This gaze could also be a possible acknowledgement of Carli's permeations.

In Extract 41, I will re-examine 'Eggs' (previously encountered as extract 18), focusing on the participants' gaze, thereby highlighting complexities relating to projection of participation and potential judgements of atypical participation.

Extract 41. Eggs



From lines 1-3, Bill's TCU is interspersed with self-initiation of repair in the form of cut offs, restarts, pauses and fillers (e.g., um). In line 4, the syntactic construction of Bill's TCU reaches a projectable point with "...russian fabergé-", followed by a further opportunity space "(.) °.hhh° (.)" (line 4). Carli offers a candidate completion "eggs_". While Bill's talk creates markers of opportunity, Carli's participation is not projected by terms of address or Bill's gaze. In line 4, Bill directs his talk to Carli with his gaze, but turns his gaze to Adrienne during the second micropause. Bill completes his own TCU in persistent overlap with Carli's completion, supporting the interpretation of non-projected permeation. In summary, while this appears to be a clear instance of non-projected permeation by Carli, Bill's gaze shift and persistent overlap, which appear to disregard Carli's permeation, may be subtle evidence of an atypical response to Carli's permeation. That is, Bill may be persisting with his own action without actually orienting to Carli's permeation, rather than rejecting her permeation through maintenance of the turn space.

6.2.2 Bill as permeating recipient

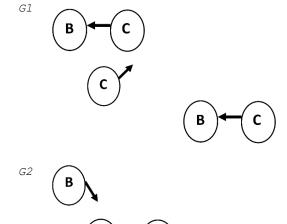
Bill is a permeating recipient in two instances. In one of these, Extract 42, Bill's permeation is unusual in that it does not conform to patterns of permeation described so far.

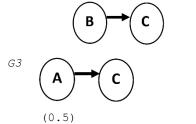
Extract 42 follows on from Bill and Carli's talk in 'Sake' (Extracts 1, 11 and 35), in which Bill has been describing the simple interior design of traditional Japanese homes.

Extract 42. Hibachi

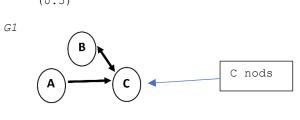
```
.mK well they had tables (.) b't very low tables >b'coz
1
    В
2
        they all sat on th' (floor), <
3
         (.)
4
    С
        righ';=
5
    В
        =.hh=
        =°right°;
6
    С
```

7		(.)
8	В	>an' they sat on< mats, (.) that's why you have to take
9		y' sh <u>o</u> es off at the dt <u>oo</u> r;=
10	С	= [m <u>m</u> :;]
11	A	[mm.]
12		(0.3)
13	В	b'cos (0.5) .mTK the floo \downarrow :r is the place where people
14		(sl <u>ee</u> p) (.) .mtk an' s <u>i</u> t;
15		(0.5)
16	В	an' dr <u>i</u> nk their sa:- y'know .hh (0.2) th- y[`h-]
17	С	[(mm] .ghm)
18		(0.2)
19	С	(SA:KI) =
20	A	=.mk m ₁ h[m;]
21	В	[(fuh-)] yeah;
22		(1.5)
23	С	well (i- uh- w'n-) when we wen'- when i went with the
	G1	
	G2	B
24		k <u>i</u> ds to; (.)
	G1	\bigcirc
		$(A) \xrightarrow{} (C)$
		$(A) \longrightarrow (C)$





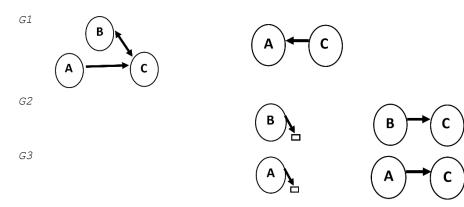
26

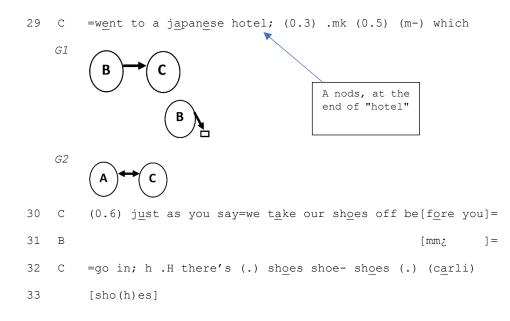


27 C .mk .hh (0.2) t[o: ja]pan_=.H (0.2) .mk (0.2) (a') we=

28 A

[°↑<u>m</u>m.°]





In line 25, Bill permeates Carli's TCU with an addition to his prior TCU "there'd be ha- hibachi there too_". The prior TCU is completed collaboratively in lines 16-19 (explored in Extracts 11 and 35, Sake), and the sequence appears complete at line 21. In line 24, Bill orients to a point in Carli's TCU, where, prosodically, Carli projects further talk, but there is a micro pause, creating a permeable opportunity space. Bill's addition in line 25 does not relate to Carli's TCU or the action underway. TCU increments and additions typically occur following a TRP in which no-one else takes the floor (Bolden, 2009; Couper-Kuhlen, 2012). Such talk can accomplish a "delayed action" (Bolden, 2009) or "postcompletion musing" (Schegloff, 2007), which typically occur after the apparent closure of a sequence. This talk is linked lexically to prior talk, and while it can be seen that Bill's talk is lexically tied to his prior turn in that he uses "too" (line 25) to indicate an addition to his prior list (lines 14-19), the placement of the TCU is unusual. Schegloff (2007) classifies this sort of talk as "out of bounds" and Bolden (2009) found that delayed actions may be 'off topic' but usually relate to the current 'action' underway. Bill's talk in line 25 is out of bounds, off topic and 'off action', and could therefore be considered as an atypical way of participating at this moment in the interaction. Carli acknowledges Bill's talk in line 26 with gaze and a slight nod. She then pursues her own action trajectory, developing her incipient telling. She does

not respond or divert to Bill with talk. Adrienne does not acknowledge Bill's addition. This contrasts with other instances in the collection where the addition is responded to by the speaker in talk and gaze, and by bystander's in gaze.

In summary, Bill's conduct explored in Sections 6.2.1 and 6.2.2 can be seen as a sporadic tendency to not orient to the current sequence or action. This resembles Bill's atypical conduct in an instance of response mobilization (see Barnes et al., 2019).

6.3 Erin

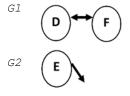
6.3.1 Erin as permeating recipient

Erin permeates the TCUs of other participants on six occasions in the present data. In each of these instances, Erin completes the permeated TCU syntactically. When permeating TCUs, Erin appears to orient consistently to syntactic incompletion and silence, regardless of other cues such as gaze to another recipient. It is possible that she orients to pronouns as a cue to participate, but she does not orient to the corresponding gaze. Erin is frequently looking down when the participation of other participants is being projected using gaze. Erin is not the recipient of speaker gaze in any of these six instances. The one instance in which her participation is projected does not involve gaze (Extract 12, Gianni Versace).

Extract 43 (previously encountered as Extracts 6, 14, 16, 27 and 40) exemplifies Erin's orientation to what is projected syntactically, and her lack of orientation to whose participation is projected.

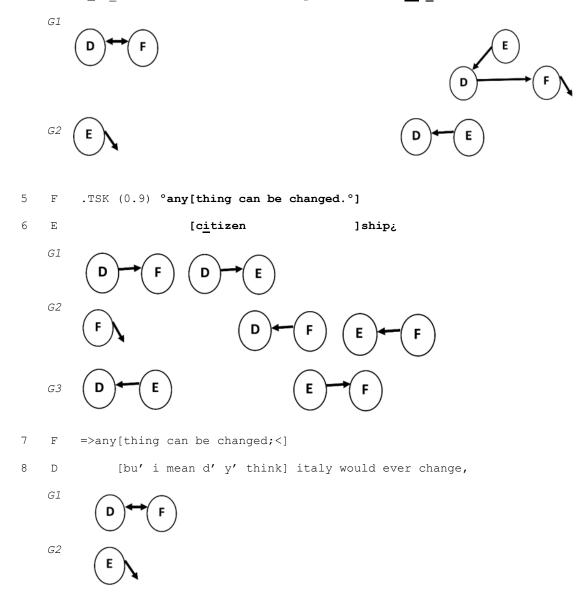
Extract 43. Citizenship

```
1 D .H=>^`t's not against the law,=°i'm an italian citizen.<°
2 (2.6)</pre>
```



4

both (0.2) like the fact that you c'n have dual (0.6)

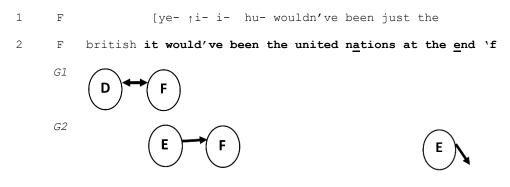


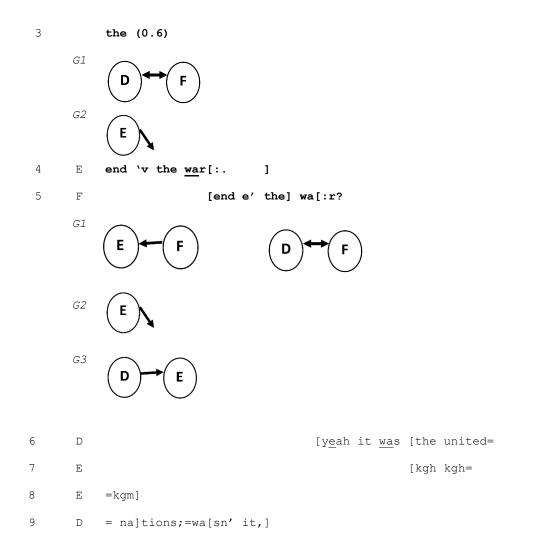
In lines 3-4, Daisy addresses a question to Federico "d' y' think they'll ever change that; having both_(0.2) like the fact that you c'n have dual_(0.6)". While syntactically incomplete, this TCU projects Federico's participation through lexical elements of turn design including pronoun 'you' in "d' y' think",

gaze and a 0.6 second opportunity space. Federico responds with the next relevant action, "^oanything can be changed.^o" (line 5) in answer to Daisy's question. In the 0.6 second opportunity space, Erin orients to the incomplete syntax, offering "citizenship_i," (line 6) as a syntactically relevant, yet non-projected form of participation in Daisy's turn. Erin's shifting gaze is consistent with her participation in Daisy's turn, as opposed to taking a next turn. Erin gazes at Daisy in the first part of her completion "citizen" and shifts her gaze to the addressed recipient Federico during "ship". Additionally, in Extract 43, Citizenship, Daisy's turn in lines 3-4 has an 'analeptic turn design' (Deppermann, 2018). Her turn appears designedly incomplete. As seen in Federico's sequence level response (line 5), the completing noun 'citizenship' can be inferred, yet Erin persists in completing the TCU (line 6). Analeptic turns typically project a 'next relevant response' (Deppermann, 2018). Erin's response is subtly ill-fitted, while Federico's projected response is fitted. As I highlighted in 'Citizenship' Extract 40, Erin's permeation receives no talk-based response post-permeation, while Federico's permeating response continues the sequence. Daisy's post-permeation conduct supports the analysis of Erin's permeation as ill-fitted, and as possibility related to her cognitive-communication disorder.

In Extract 44 (previously encountered as Extract 8), Erin similarly orients to incomplete syntax. However, in this instance, her permeating completion is accepted as fitting.

Extract 44. End'v the war

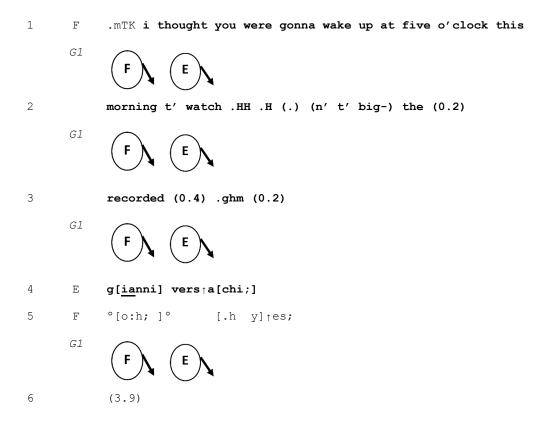




In lines 2-3, Federico is directing his TCU with gaze to Daisy "...it would've been the united nations at the end 'f the (0.6)". As in the prior example (Extract 43), Erin orients to the incomplete syntax and pause, completing the TCU with "end 'v the war:." (line 4), in the absence of her projected participation. In this example, Erin's gaze remains downwardly directed, and she does not orient to projected participation. However, in reclaiming his turn space "end e' the wa:r?" (line 5) Federico's post-permeation talk repeats Erin's completion, acknowledging her contribution and the sequence progresses. Erin's contribution is not, therefore, problematic.

In Extract 45, Erin's lack of orientation to gaze is also not problematic. In this example, both speaker and projected recipient gaze downwards throughout the extract, but Erin's response is projected, i.e., she is the selected next-speaker.

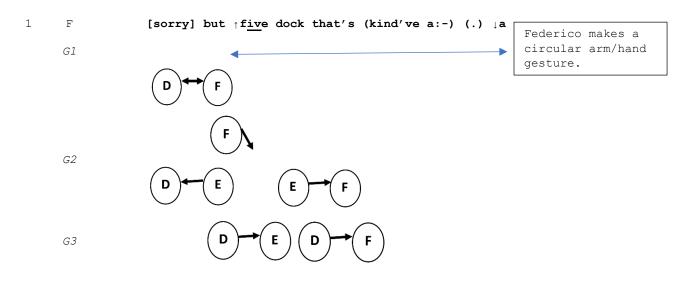
Extract 45. Gianni Versace



In line 1-2, Federico begins with an assertion "i thought you were gonna wake up at five o'clock this morning t' watch". At this point, there is a projectable noun to complete the TCU (potentially the name of the program Erin was going to watch). Federico initiates self-repair ".HH .H (.) (n' t' big-) the (0.2)" (line 2) and provides an adjective "recorded (0.4)" (line 3) followed by further pauses "(0.4) .ghm (0.2)". Erin orients to the incomplete syntax, and completes with "gianni vers†achi;" (line 4). Federico does not gaze at Erin, although it is apparent from the pronoun and topic of the TCU that he is addressing Erin (Blythe et al., 2018; Lerner, 2003). Effectively, Erin is selected as 'next speaker', however, she

permeates the TCU before the TRP. Her participation in the TCU is not necessarily projected. Regardless of this, Federico accepts Erin's participation in his TCU with "y↑es;" (line 5) closing the sequence. Erin orients to the TCU completion and not to Federico's FPP. The projected SPP is not produced. This instance is unusual in that Federico accepts Erin's participation in his TCU, and no response to Federico's assertion occurs. This extract also shows that Erin's lack of orientation to gaze is not consistently problematic.

In Extract 46, Erin's permeation is fitting syntactically, yet demonstrates an ongoing misunderstanding of the hypothetical nature of the talk. In the preceding talk (see Extract 30, Five Dock), Federico suggests a hypothetical situation in which the suburb of Five Dock might be treated as a nation with restricted borders.



Extract 46. Italian

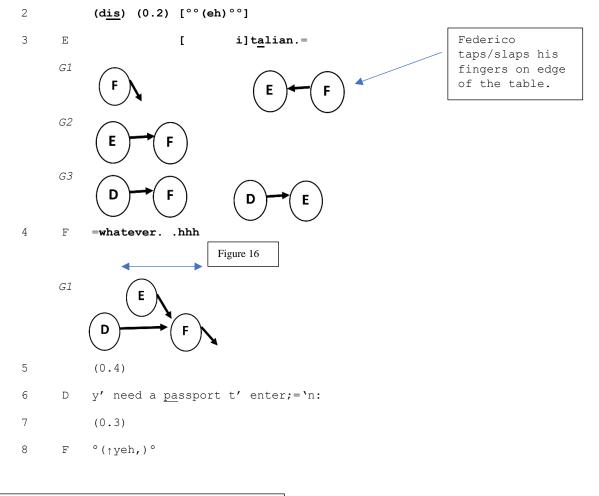




Figure 16.

In lines 1-2, Federico encounters word finding difficulty in expressing this suggestion "sorry but \uparrow five dock that's (kind've a:-) (.) \downarrow a dis) (0.2) ^{oo}(eh)^{oo}". Erin offers "italian." in line 3. Her participation in the TCU is not projected. While syntactically fitting, Erin's response highlights a lack of understanding of the hypothetical nature of the argument asserted. In line 3, Federico's taps or slaps his fingers on the edge of the table. He rejects Erin's permeating response with "whatever." (line 4) with further embodied

action suggesting 'dismissal' of the response "((waves right hand))" (Figure 16). This rejection contrasts with other instances of Erin's non-projected permeation. As noted previously, the post-permeation response in this collection mostly adapts to non-projected permeation by accepting the permeation or maintaining or reclaiming the turn space. Daisy's talk in line 6 is a fitting continuation of Federico's TCU (lines 1-2), perhaps offered in place of Erin's ill-fitted completion to progress the talk. In this instance Erin's permeation is ill-fitted and is treated as inappropriate through Federico's more explicit rejection.

6.4 Annie

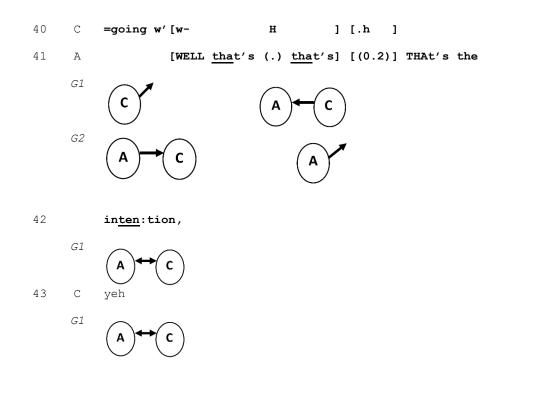
Annie's participation in permeable turns generally conforms with the patterns outlined in Chapters 4 and 5. Moreover, as seen in the example of 'subversion' (Extract 33, Your core), she is able to 'play' with turn permeability to accomplish humorous actions. In one instance, however, the unusual timing of her talk results in a potentially atypical instance of permeation.

In Extract 47, Annie and Caroline have been discussing Annie's plan to take her husband on a holiday to Tasmania in celebration of his 60th birthday (see also Extract 28, Snag thingo). The discussion leads into deliberations over flights to the holiday location. The sequence comes to an apparent close and long silence (lines 37-38) following an agreement relating to the undesirability of flying with a budget airline (i.e., Jetstar).

Extract 47. The intention

```
1 A i'd giv'im two nights'*ere so:*=
2 C =yeah
3 A yeh .hhhh °*anyway*° so THAts: the idea.
4 C [that sounds] lo::vely.=
5 A =that's my *plan_*
```

6	С	yeah; [that sounds really lovely,]
7	A	[.hh sa'sw- yeah- a'] b't i don't know th't-
8		<pre>(0.5) >°*we'd go in october*°< (0.2).hh >>y'know wh't'e's</pre>
9		like<< (0.4) w- in t <u>er</u> ms'v; (0.5)
10	С	.hh oh it'd be fun if you did tho[ugh; c'z then we c'd all=
11	A	[YEAH Y <u>EA</u> H i w's=
12	С	=get t']gether in hobart'n .HH y'know .hhh [\uparrow have fun? \uparrow]
13	А	=eh] [uh w'll e-]
		((16 lines omitted))
30	A	<code>†i</code> wonder:'f (.) what inez'n i <code>†</code> did. (0.7) <code>†</code> we
31		went'launceston? (0.3) with $j etstar$ i think?
32		(0.2)
33	С	.hhh $\underline{a}h$ (.) well >'f course it can be done if y'prepared
34		t'fly jetstar b't <hhhhh [b't="" [hahahaha]="" he="" hn.]<="" i'm="" not.="" td=""></hhhhh>
35	А	[aHHHHHHH] [hh .HH hh hhhh.hh]hh
36	А	°well we shouldn't be b't yeah.°
37		(0.5)
38	С	\underline{um} .hhh (1.2) $_{\uparrow}$ OH that'd be funny¿ [c'z we're GO-] we're=
39	A	[уе-АННН]
		Figure 17
	G1	
		$ \begin{array}{c} C \\ \bullet \end{array} \\ \bullet \\ \bullet$
	G2	







In line 38, Caroline initiates a new, related sequence restating the possibility of meeting in Tasmania, as she too will be holidaying there, "um .hhh (1.2)↑OH that'd be funny¿ c'z were GO- we're going w'w-". Annie acknowledges Caroline's TCU with a wide, open mouthed smile and agreement token "[ye-AHHH]" (line 39, Figure 17), overlapping Caroline's next TCU "c'z we're GO-" (line 38). Caroline restarts her TCU in the clear, "we're going w"" (line 38 and 40), but Annie proceeds to compete with Caroline's talk, disregarding Caroline's assessment. Annie overlaps this trajectory with a loud,

competitive "WELL that's (.) that's (0.2) THAt's the intention," (lines 41-42). This overlapping talk is similar to Extract 42, Hibachi, involving Bill's lack of orientation to the current sequence and action. Annie's assertion can be seen as a delayed action relating to the prior sequence (a repetition of her assertion in line 3 "so THAts: the idea.", and line 5 "that's my *plan_*"). The preface "well, that's..." (line 42) refers back to her talk of the birthday plan. As noted in Bill's examples, delayed actions usually occur when no one takes the floor, and relate to the current action (Bolden, 2009). Here, Annie overlaps Caroline's talk with a delayed action, which differs from Caroline's current action. Caroline withdraws and orients to Annie's permeation with an accepting post-permeation response "yeh".

7 Discussion

7.1 Summary of findings

This study has adopted an enchronic approach to exploring the effects of cognitive-communication disorders in everyday conversations with familiar people. Turn permeability was analyzed in depth with respect to turn-taking and sequential organization, with findings relating to the organization of turn permeability across all participants, before focusing on participants with a cognitive-communication disorder. Turn permeation highlights the collaborative nature of turn-taking at a micro level of granularity. Participants continuously orient to projection through syntax, prosody and embodied action, enabling recipient participation or speaker change prior to a TRP. This 'sub-TCU participation' can be projected or non-projected (similar to organization of speaker selection at TRPs). Turn permeation is a resource for accomplishing a range of social actions, differentiated by projected or non-projected participation. The post-permeation response plays a role in evaluating and adapting to the permeation. Participants with a cognitive-communication disorder were seen to engage typically in turn-taking and turn permeation. Mild atypicalities were noted in the permeation phase, characterized by a sporadic lack of orientation to the current sequence and action, presenting heterogeneously in each of the three participants with cognitive-communication disorder. The post-permeation response is a resource for promoting progressivity in interaction. By accepting permeation, or maintaining or reclaiming the turn space, the speaker progresses the interaction, even if the permeation is atypical in some way. Rejection in the post-permeation phase could be a potential indication of atypical permeation.

7.2 Turn permeation phases

Prior explorations of collaborative completion phenomena, involving TCU completion, are consistent with current findings. The features of projection and collaboration are also shown to apply more broadly in turn permeability, specifically TCU and sequence level completion. The three phases

identified in this study (i.e., pre-permeation, permeation and post-permeation) correspond to Lerner's (2004) collaborative turn sequence. Lerner's sequence, with its focus on TCU completion, forms one type of instance explored in the present collection. The pre-emptive completion (Lerner, 2004) (here permeation) can take the form of TCU completion as seen in Lerner (1987, 1989, 2004) but can also take the form of a sequence level response as shown in the present study, Chevalier and Clift (2008) and Lerner (1987). The present findings show that permeation in the form of TCU completion can accomplish specific actions (e.g., supplying a turn element), that differ from permeation in the form of a next turn in the sequence. However, some actions can be accomplished in both forms of permeation (e.g., affiliation, indexing problems with recipient design).

7.3 **Projected participation**

The findings of the present study provide evidence that the resources associated with speaker selection at the TRP (see Lerner, 2003)—namely talk-based and embodied forms of address—can also be employed at sub-TCU level, generating opportunity spaces, or interactive turn spaces for recipient participation pre-TRP (Iwasaki, 2008). Participant orientation to the unfolding nature of turns in conversation, demonstrated in the present analysis of turn permeation, is consistent with continuous moment to moment collaborative construction of interaction (e.g., Auer, 1996; Ford & Thompson, 1996; Lerner, 1996; Local, 1996; Schegloff, 1996; Selting, 1996, 2000). Orientation on a micro, sub-TCU level to syntactic, prosodic and embodied projection facilitates this, as seen in Iwasaki's (2008) sub-TCU analyses. Iwasaki (2009) showed how speakers create an interactive turn space through a combination of Japanese syntax, gaze, intonation, silence, slowed rate and sound stretches. This is described as projected participation in the present study, suggesting that these features also serve to form interactive turn spaces in English conversation, thus indicating a more universal phenomenon extending beyond Japanese grammatical structure.

Iwasaki (2008, 2015) demonstrated permeability on a more granular level than Lerner (1996), focusing on collaborative interaction within the TCU and therefore included minimal receipts and recipient facial expressions that were not addressed in the present study. Nevertheless, the same micro collaboration, particularly in relation to projected participation in the TCU, is seen to occur in instances where the recipients participate through continuation of the TCU or taking a next turn pre-TRP in this collection.

7.4 **Projected participation and action formation**

The present study found many of the same actions reported in the literature to date (e.g., supplying a turn element, affiliation, subversion), with the added distinction of projected and non-projected participation. This offers a novel way of exploring recipient actions accomplished through turn permeation. Non-projected permeation, in this collection, accomplishes 'indexing a problem in recipient design' (13 instances), supplying a turn element (10 instances), aligning stance (2 instances) and subversion (1 instance). This form of participation predominantly occurs in overlap and is consistent with Jefferson's (1983) recognitional overlap. In these instances, recipients orient to shared knowledge and epistemic stance (Vatanen, 2018). Recipients can use permeation to align with or challenge this stance (Kangasharju, 2002; Vatanen, 2018). Vatanen's (2018) analysis of recognitional overlap (or, in the present terms, non-projected participation) as a recipient resource for demonstrating epistemic stance or authority are well-aligned with the findings in the present collection.

Lerner (2004) viewed instances of overlap due to the speaker persisting with TCU through recipient permeation as 'failed' collaborative completion, and instances of 'delayed completion' (or other post completion response tokens) by the speaker as a claim to authority, thus highlighting similar phenomena to the present study. Lerner's (1996) instances of non-projected completions, however, are limited to breaks in progressivity, which create opportunity spaces for completion (similar to Jefferson's (1983) progressional overlap). The findings of the present study extend the notion of projected and non-projected completion to the presence or absence of interactive turn spaces that are created through speaker gaze and features of talk (similar to resources for next speaker-selection), and reveal the importance of this projected participation in shaping the actions formed by speaker and recipient.

Recipients are accountable for turn permeation due to the speaker's entitlement to produce at least one complete TCU (Sacks et al., 1974). Recipient permeation of the speaker's TCU can accomplish a prospective or retrospective action. Projected participation accomplishes actions prospectively indexed by the speaker, while non-projected participation accomplishes retrospective actions indexed by the recipient. Consequently, actions accomplished in instances of projected participation are mostly 'accepted' post-permeation, while non-projected actions are less likely to be accepted. Most frequently, the turn space is maintained or reclaimed. In instances of projected participation, the speaker designs their turn to create a participation space prior to syntactic completion, prospectively indexing recipient participation. Accordingly, recipient participation, through completing the TCU or implementing the next relevant action, is accepted by the speaker. In the absence of projected participation, the recipient takes a risk in permeating the speaker's TCU. This is reflected in the low frequency of acceptance postpermeation. Action accomplishment through turn permeation, as in standard turn-taking at TRPs, is a collaborative act of both speaker and recipient (Enfield & Sidnell, 2017), with the post-permeation response of the speaker playing a crucial part in the process.

7.5 Turn permeation and cognitive-communication disorders

Participants with a cognitive-communication disorder manage turn permeability successfully in the present data. However, each participant with a cognitive-communication disorder experienced some problems managing moments of turn permeation, some of which were likely symptomatic of their communication disorders. While these atypicalities presented differently for each participant, a potential

commonality is evident; specifically, a lack of orientation to the current sequence and action underway. This is evident in: 1) Bill's unusually timed turn addition, which permeates the speaker's TCU, but is not related to the current sequence or action (Extract 24, Hibachi); 2) Erin's consistent lack of orientation to sequence and persistent TCU level completion irrespective of projected participation or projected action sequences (e.g., Extract 6, Citizenship; Extract 45, Gianni Versace); and, 3) Annie's permeating a new sequence and TCU, to re-open an apparently closed prior sequence with an action unrelated to the current one (Extract 26, The intention). This pattern of persisting with a TCU or action irrespective of the current action is also seen in an instance described by Barnes et al. (2019) involving one of the same participants (Barnes et al., 2019, p. 16). This pattern is observed sporadically in different forms across the data and warrants further investigation.

A further observation in relation to cognitive-communication disorders is that typical participants can be seen to promote progressivity by adapting to atypicalities in the post-permeation phase. In this data, participants either maintain the turn space by ignoring permeating responses, reclaim their turn space post-permeation or evaluate the permeation. This pattern is consistent across instances in which the permeation is atypical, suggesting that typical participants proceed with the interaction and minimize the impact of the atypical talk. Barnes et al., (2020) have also observed that 'not responding' to potentially atypical action is a resource that may be used to manage these kinds of instances. Progressivity is maintained through avoiding topicalizing problems related to communication disorder, but this has the effect of reducing the participation of people with communication disorders (Barnes et al., 2020). In the present collection, there is only one instance in which the atypical permeation is explicitly rejected, which temporarily halts the interaction (Extract 25, Italian). In this instance, Erin's inferencing difficulties culminate in an ill-fitting permeation, that is rejected with "whatever" and a long silence before another recipient resumes the sequence. In this collection, then, outright rejection is reserved for this instance of significant misunderstanding. These findings support Barnes and Ferguson's (2015) finding regarding the facilitative and inhibitive roles of conversation partners in interactions with persons with aphasia, with minimal and inexplicit responses similarly negatively impacting participation. Garcia, Metthe, Paradis, and Joanette (2001) also state that communication partners play a role in determining the 'relevance' of atypical participants' talk. However, these findings also have the potential to problematize measurement of cognitive-communication disorder in conversation. That is, truly atypical moments in interaction may be handled very inexplicitly, which can be difficult to systematically identify and analyze using conversation analysis (Barnes & Ferguson, 2015).

7.6 Limitations and future directions

The present study is a preliminary step towards a deeper understanding of cognitivecommunication disorders in everyday interaction, with findings also contributing to our knowledge of turn permeation in typical populations. A thorough and consolidated body of knowledge regarding turn permeation in typical populations would provide a stronger basis for comparison at this granularity of turn-taking for people with a cognitive-communication disorder. Potential avenues for developing this knowledge base include a deeper exploration of the manifestations of turn permeation in different participation frameworks (e.g., dyadic, triadic), and finer comparison of the relationship between turn permeation and the mechanisms of repair. Instrumental measures (e.g., PRAAT; Nu et al., 2013) could further the understanding of prosody and phonation as resources for projection at a sub-TCU level. Thorough analysis of embodied actions including gaze, gesture and body positioning, could enhance understanding of projected participation in a TCU. Cross-linguistic exploration of turn permeability and projected participation could deepen knowledge of these processes, and potential universalities across them. Additionally, the intermittent lack of orientation to the current sequence and action through nonprojected permeation, specifically in participants with a cognitive-communication disorder should be further investigated. Focusing on non-projected participation in TCUs or sequences, and specifically in delayed actions (as described by Bolden, 2009) following apparent sequence closure or turn completion in a larger sample, may reveal more consistent evidence for this potential source of difficulty in interaction.

Convenience sampling in the present study resulted in participants with cognitive-communication disorders from a range of aetiologies and time post-onset. Purposive sampling of larger numbers of participants may allow for reduced heterogeneity across participants, and increase the chances of finding systematic differences between typical and atypical performance.

7.7 Conclusion

This study has investigated turn permeability in conversations involving people with and without a cognitive-communication disorder. Its findings suggest that participation management mechanisms are active at a sub-TCU level, and that these processes are aligned with those relevant for managing participation at TRPs. The activation of these mechanisms—particularly with regard to projected and non-projected recipient participation—facilitate differentiated social action accomplishment. A potential pattern of intermittent lack of orientation to the current sequence and action was revealed for participants with a cognitive-communication disorder, as was the role of communication partners in promoting interactional success. Each of these issues warrants further exploration with a larger group of participants and in different interactional contexts with a view to the development of clinical assessment and intervention resources for people with cognitive-communication disorders and their familiar communication partners.

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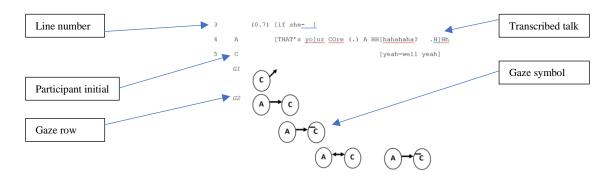
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9 Appendix A - Symbols for gaze orientation

Adapted from Rossano, Brown & Levinson (2009) and Rossano (2013).

Participants are depicted facing the reader. At times each participant's gaze is depicted separately, while at other times the symbols depict all participants. Key examples are shown in the glossary. Further combinations appear in the transcripts.

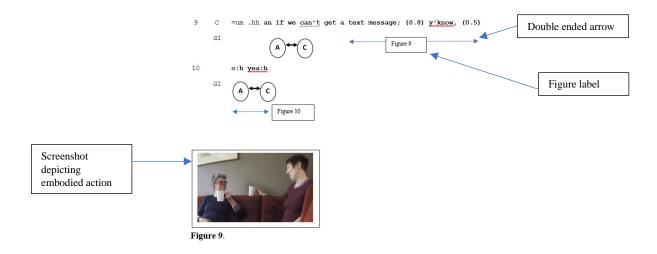
Gaze is presented in one to three rows labelled G1, G2 and G3. The gaze symbols align with the transcribed talk in the row above. The left side of the symbol aligns with the point at which the depicted gaze begins and continues until a change of gaze is shown. Two sample transcripts are provided below.



Sample transcript 1.

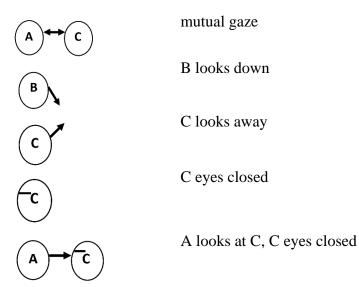
In Sample Transcript 1, gaze row, '*G1*', depicts 'Caroline looking away' throughout the transcribed talk in lines 3-5. Gaze row, '*G2*', depicts 'Annie looking at Caroline' from the beginning of line 3 until the change of gaze 'Annie looking at Caroline, Caroline eyes closed' that coincides with "THAT's yo..." (line 4). A further change of gaze is depicted, 'Annie and Caroline mutual gaze', aligning with "...our COre..." (line 4). The final gaze shift for *G2* begins at "yeah=well..." (line 5) and continues until the end of the transcribed talk (lines 4-5).

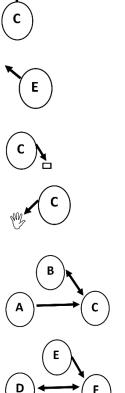
Sample transcript 2.



Where embodied action is depicted in a screenshot from the video recording, double ended arrows indicate the timing and duration of the depicted actions. The arrows align with the transcribed talk in the rows above. Arrows are labelled with a figure number, and the figure appears at the end of the extract. In Sample Transcript 2, Annie's facial expression is shown in figure 9. This facial expression aligns with Caroline's talk in line 9 "text message; (0.8) y'know, (0.5)". At times embodied action is described with no accompanying figure.

Glossary of symbols





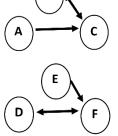
C looks up

E looks away

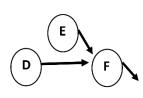
C looks at object

C looks at own hands

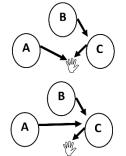
B and C mutual gaze, A looks at C



D and F mutual gaze, E looks at F

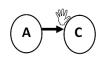


D and E look to F, F looks down



B looks at C, C looks at own hands, A looks at C's hands,

B looks at C, C looks at own hands, A looks at C



A looks at C's hands

10 APPENDIX B Ethics Approval

Appendix B removed from Open Access version as they may contain sensitive/ confidential content.