# Conversation Therapy: Interaction as Intervention

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## Introduction

This chapter presents an overview of the history, principles and clinical practice that might be labelled "Conversation Therapy" (henceforth, CT) in the context of aural rehabilitation (AR) for adults who have post-lingual hearing impairment (HI). Conversation is recognised as the major activity limitation/participation restriction arising from HI and as such, the therapy, as outlined in this chapter, is designed primarily to address the everyday conversation difficulties of adults who have HI. The focus on post-lingual HI implies that clients present with normal adult speech, language and conversational abilities limited only by the reduction in ease of speech reception as a consequence of their HI. While the AR work outlined here is by no means limited to this population, it is designed with the view that the individual had normal adult everyday spoken communication skills prior to the onset of their HI.

The hallmarks of the clinical activities included in CT are: (a) their focus on interaction rather than on speech reception, (b) the incorporation of the full range of structural linguistic, interactional, environmental and interpersonal context cues, (c) the incorporation of units of speech (or more appropriately, "talk") larger or longer than the syllable, word, phrase or sentence, (d) the use of tasks which can be designed with the client's situation specific difficulties in mind and (e) the increased attention paid to the role of the conversation partner in the resolution of conversational difficulties arising from the post-lingual HI.

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This chapter makes no claim that CT is a new therapy in AR, nor that it has been developed in a concerted or coordinated fashion. Rather, the term is applied retrospectively, grouping certain existing therapy activities by their focus on conversational or interactional consequences of post-lingual HI, including therapies such as environmental and hearing tactics (Kaplan, Bally, & Garretson, 1985) as well as communication therapy (Erber, 1996, 2002; Erber, & Lind, 1994) and psychosocial intervention (Pedley, Giles, & Hogan, 2005).

## A History of Conversation as Clinical Activity

The most widely cited clinical activity incorporating elements of conversationally-oriented assessment and intervention has been de Filippo and Scott's (1978) Continuous Discourse Tracking (or simply "tracking"). This technique introduced some of the key principles outlined above that underpin CT; namely, that conversationally-orientated stimulus material be comprised of units of text or talk longer than the sentence, and that tasks involve conversation partner strategies (Lind, 2009). Subsequent to tracking, Norm Erber's communication therapy texts (Erber, 1996, 2002) have provided a series of important conversationally-orientated assessment and interventions tasks, including ASQUE, Sent-Ident and QUEST?AR (both discussed below) and Topicon.

The clinical work of Erber and others has been supported by a body of research into patterns of conversational behaviour as it may be influenced by post-lingual HI. Nancy Tye-Murray (Tye-Murray, 1991, 1992; Tye-Murray & Witt, 1996, 1997; Tye-Murray, Witt, & Schum, 1995; Tye-Murray, Witt, Schum, & Sobaski, 1994), Kathy Pichora-Fuller (Johnson & Pichora-Fuller, 1994; Pichora-Fuller, Johnson, & Roodenburg, 1998) and Rachel Caissie (Caissie, Dawe, Donovan, Brooks, &

MacDonald, 1998; Caissie et al., 2005; Caissie & Rockwell, 1993, 1994; Caissie & Wilson, 1995, Spring) have provided an excellent foundation of research understanding by which clinicians may shape conversationally-oriented therapy. This research has led to a change of focus in clinical work, critical to CT, namely that work on conversational strategies can be applied to exercises that simulate everyday interaction, and the involvement of the conversation partner in therapy as a reflection of their role in the resolution of conversational difficulties.

It is a premise of this chapter that developments in AR clinical methods reflect developments in linguistic theory and that the adaptation of clinical methods from linguistic theory frames AR as a pursuit in applied linguistics. Prior to (and indeed for the time following) the incorporation of conversationally-orientated methods into AR therapy the majority of clinical material involved in speech reception tasks were of syllable, word and sentence length. From Jeffers and Barley (1971) onwards this led to the now common distinction between analytic and synthetic modes of speech reception. In turn, the therapy models of analytic speech reception led to tests and clinical activities designed and analysed on the basis of the theories of articulatory and acoustic phonetics (e.g., the source filter theory), as well as phonemic properties (Lieberman & Blumstein, 1988). Synthetic speech reception incorporated longer stimuli which were chosen on the basis of their contextual information provided primarily by within-sentence lexico-grammatical and semantic cues.

By contrast there is no comprehensive or widely accepted model of conversation behaviour which researchers and clinicians have applied to everyday spoken interaction (and, by extension, the manner in which it may be influenced by the presence of a post-lingual HI). Amongst the many competing theoretical models from which we might choose, one of the popular theories of conversation in other areas of communication disorders is Conversation Analysis (CA) (Sacks, Schegloff, & Jefferson, 1974; Schegloff, 1968; Schegloff, Jefferson, & Sacks, 1977). CA views talk as a social activity, applying detailed analytic techniques and focusing on both content and sequence in interactional behaviour. CA holds some currency for communication disorders as it: (a) provides analytic techniques which are specific to individuals or to identifiable patterns of communication difficulties, (b) recognises the roles of both/all participants in the interaction, (c) avoids concepts of "blame" or "error" in interaction, replacing them with the concepts of "local trouble" and "negoti-

ated understanding", (d) avoids the implications of psychology and motivation, focusing on observable sequences of behaviour and (e) implies talkers (are able to) alter their talk to their understanding of their conversation partner's needs and knowledge. These principles make CA a particularly useful model for understanding the practices of conversation. It is of note that CA has been used extensively in other adult communication difficulties particularly adult second language learning and adult acquired neurogenic disorders, such as aphasia (Damico, Oelschlaeger, & Simmons-Mackie, 1999; Ferguson, 1994; Perkins, 1995; Wilkinson et al., 1998), right hemisphere lesions (Chantraine, Joanette, Ska, & Tatta, 1998), Parkinson's Disease (Whitworth, Lesser, & McKeith, 1999), Senile Dementia of Alzheimer's type (Orange, Lubinski, & Higginbotham, 1996; Perkins, Whitworth, & Lesser, 1998; Watson, Chenery, & Carter, 1998) and traumatic brain injury (Togher & Hand, 1998; Togher, Hand, & Code, 1997). It is of note that for all these populations CA has provided a model by which: (a) the conversationally-oriented activity limitations/participation restrictions arising from these limitations may be analysed and understood and thus become the focus of therapy and (b) points of comparison and contrast may be made between the constellation of conversation behaviours arising in everyday interaction and the patterns of interaction arising for these groups. As a result, CA has provided an excellent candidate for both theoretical understanding and practical management of assessment and intervention in CT.

## Conversation Repair and Conversation Therapy

It is a key premise of this chapter that, from the point of view *of the listener*, spoken communication is simultaneously a sensory/perceptual, linguistic and social activity. More critically, conversation is fundamentally a sensory/perceptual task, it is mediated by linguistic structures, but it is ultimately a social activity. Three points arise from this, first, while there are several current models of AR, it is not the case that they are competing models, rather these models interlace and may be seen to reflect the complexities of everyday talk. Second, it is not surprising that the commonly recognised AR therapy models reflect these aspects of interaction. Finally, judgements of success of intervention are being made increasingly at the level of social activity, i.e., the lessening of participation restriction.

If a conversational focus is to be employed in adult AR, the question arises, what are the characteristic behaviours of conversation involving adults who have acquired HI that may be detrimental to their every participation and thus be the focus of the therapy. Research has indicated that some problems in conversation indicated by:

- Increased likelihood of (certain types of) breakdown and repair (Lind, Hickson, & Erber, 2006; Lind, Hickson, & Erber, 2004)
- Avoidance of talk (Stephens, Jaworski, Lewis, & Aslan, 1999)
- Increased use of monologues (Wilson, Hickson, & Worrall, 1998)
- More topic changes and less topic elaboration/discussion (Pichora-Fuller et al., 1998)
- Shorter turns with less semantic content (Johnson & Pichora-Fuller, 1994)
- Increased use of general fillers and back-channeling in lieu of full turns at talk (Pichora-Fuller et al., 1998).

Each of these sequential practices may be a worthy goal in CT, however the most commonly investigated of these behavior has been conversation repair (Caissie & Rockwell, 1993; Lind et al., 2006; Tye-Murray, 1991; Tye-Murray et al., 1995). Conversation repair tends to follow one of several conversation behaviour sequences, and amongst these, one particular repair sequences has been shown to be most "vulnerable to" the presence of HI (Lind, 2006; Lind et al., 2004). The extract in Table 1

is an example of the sequence recognised by many to be the archetypical interaction sequence arising from a mishearing of another's talk.

In this sequence, J is talking about her recent holiday to Queensland and her visit to a well-known local tourist site, the Big Pineapple at which she has bought some souvenirs for her son. In line 4, O utters a repair initiator (RI) by asking "Where did you get it from?" at which time it becomes apparent that O is not clear about the name of the tourist site. As a consequence of this repair initiation turn the phrase "the Big Pineapple" can be seen to be the most readily apparent candidate trouble source (TS), that is, the portion of text that has been miscommunicated. J replies with a straight repetition of this candidate TS in line 5. O then enquires as to the name of the place again, indicating that she has not heard it clearly in the first repair sequence. In this second request for repair (line 7) she reduces her question to a single word "Where?". In response, J repeats the name again and O utters a repair confirmation (RC) in line 9 to indicate her understanding.

Repair sequences such as in Table 1 are commonplace in everyday conversation, yet most adults are unable to recall their occurrence as repairs are required relatively infrequently and they are readily resolved when they do arise. However, HI adults report these sequences happening with sufficient frequency in their interaction so as to dominate it and render the conversation unrewarding (Gagné, Stelmacovich, & Yovetich, 1991). As such it has been a goal of CT to reduce the im-

**Table 1.** Repair sequence "The Big Pineapple"

| Line | Talker | Repair | Text |
|---|---|---|---|
| 1 | J | TS | yeah I bought that in the Big Pineapple ((laugh)) there was some of those and |
| 2 | J | | I thought oh I'll get one of them for Trevor you know for a change (0.3) I think |
| 3 | J | | I did last year buy one up there you know so |
| 4 | O | RI1 | where did you get it (0.3) from? |
| 5 | J | R1 | the Big Pineapple |
| 6 | | | (0.2) |
| 7 | O | RI2 | Where? |
| 8 | J | R2 | Big Pine[apple |
| 9 | O | RC | [oh ɛ Big Pine[apple] hm: |
| 10 | J | | [mhm mhm] |

O = HI adult   J = frequent conversation partner

pact of these events on perceptions of reduced conversational fluency and the HI adult's conversational competence (Gagné & Wylie, 1989). The remainder of this chapter outlines the principles of therapy designed to address breakdown and repair and some of the clinical techniques by which the practice of these strategies might be undertaken.

The broad principles of CT as clinical practice imply certain assumptions about the purpose, roles and conduct of the therapy. First, the practice and success of repair strategies will be specific to the individuals conversing and as such the clinician acts as facilitator rather than as interaction partner whenever the HI client is able to attend therapy with a conversation partner. As such, all intervention is designed to be conducted with frequent communication partners or significant others, with strangers (or unfamiliar conversation partners) or with difficult communication partners as interaction partners in therapy. This is particularly pertinent to the clinical situation in which one other or both conversation partners recognise that the significant other or frequent communication partner is doing most of the compensating for the other's HI. Further it allows the design of tasks to be built around the client's stated difficulties as they arise in everyday communication settings.

The second principle is that therapy techniques are designed around adaptive procedures (i.e., those in which breakdowns, miscommunications, or other local troubles are discussed and resolved). Therapy techniques involve mutually directed tasks, that is, tasks that require responses from the HI adult and that involve comprehension of the stimulus rather than simply repetition and also allow the HI adult to take conversationally relevant turns to resolve direct the conversation and to resolve miscommunications). Intervention is expressly conducted with compensatory strategy as the clinical method (i.e., to bring clinical techniques under the client's and his/her conversation partner's conscious control), and therapy activities are not limited to massed practice in the absence of compensatory strategies.

## Assessment and Intervention Techniques in CT

This section identifies some of the assessment and intervention techniques that may be used in order to meet the principles and practical considerations in the conduct of CT. Assessments for the purposes of evaluating receptive speech (and, by extension communication) abilities commonly take two forms; (a) direct clinical assessment of speech reception by clinically administered tests which assume some (but often indirect) relationship to everyday interaction abilities and (b) self- and other-reports of everyday communication and its consequences which provide a subjective view of the client's own and his/her significant other's perceptions of everyday interaction. Each type of assessment provides clinicians with an indirect view of the everyday communicative ability of the HI individual. However, there is currently no clinical tool by which clinicians in adult AR might assess everyday conversation such that direct commentary may be made about the conversational difficulties that arise as a result of post-lingual HI and which were outlined above, although interested readers are directed to a similar tool developed for aphasic adults (Lesser & Perkins, 1998).

### *Assessment*

To assess clients for AR purposes, speech reception tasks at sentence- and text-levels often provide useful views of the nature of the communication difficulty. These activities meet some of the criteria for inclusion in a CT model, namely that the stimulus materials are of the sentence level or longer, some also allow responses of more complexity than simple stimulus repetition. To this end, the adaptive technique used in Erber's (2002) Sent-Ident provides an excellent practical model for conversationally-oriented speech reception tasks. Sent-Ident comprises a series of unrelated sentences not dissimilar to other sentence-based speech reception tests. However the presentation and scoring methods distinguish it from most other assessments. Test items are presented until the client attains 100% accuracy and thus the scoring is measured in terms of number of attempts to reach criterion, rather than the number of words correct on a single presentation. This has clear conversational relevance as it is widely held as a common conversational behaviour that on either recognition that a turn at talk has been misunderstood or following a request for repetition most conversational partners respond by repeating the miscommunicated talk. It is also recognised that in these situations adults, and indeed children as young as 3 to 5 years of age, will also alter the content of the clarifying talk (Brinton, Fujiki, Loeb, & Winkler, 1986). In some cases, these clarification attempts may reside in the speech of the repeated turn, with phonetic and/or prosodic emphasis on key words and in other cases increased clarity may be attempted via the use of linguistic strategies, e.g., use of synonyms, or expand-

ing epenthesis for example. These responses to requests for clarification reflect some of the key repair strategies by familiar conversation partners (Lind, 2009). As a result not only are results scored by reference to the number of times a stimulus needs to be repeated until it is perceived with 100% accuracy, but it also directs the clinician to the response strategy that is most effective in resolving misperceptions.

Other speech reception tests of use in establishing therapy goals in CT include the Speech Perception in Noise (SPiN) test (Kalikow, Stevens, & Elliott, 1977) and de Filippo and Scott's (1978) tracking. The SPiN test allows comparison of scores with and without context cues (even thought these cues are limited to within-sentence syntax and lexico-semantic cues) and can be of great assistance in developing strategies by which the client may address miscommunications with his/her conversation partner. Similarly, tracking gives substantial insight into conversation partners' collaboration in resolution of conversation breakdowns. Although the stimulus repetition paradigm in tracking limits its conversational realism (see Lind, Golab & Okell, this volume; Okell & Lind, in preparation) it remains a useful assessment and intervention technique by which conversation partners may be orientated to the repair task.

Audiology's long history of self- and other-report scales has provided clinicians with strong client-focused information by which therapy goals might be set and later evaluated with respect to the array of situation-specific situational and/or person based difficulties perceived by the client (see Abrams, this volume, also Noble, 1998). The Client-Oriented Scale of Improvement (or COSI) (Dillon, James, & Ginis, 1997) remains amongst the simplest, client-driven self-report of everyday difficulties arising from post-lingual HI. The COSI allows client driven goals to be established as the form is completed by listing in as much detail as possible the specific situations that cause most difficulty in their view. Clients are also provided the opportunity to rank these if desired. The resultant information is a most fruitful guide to planning and ordering therapy. In addition it allows assessments of outcomes via questions of relative benefit and absolute improvement following intervention for each perceived activity limitation/participation restriction.

## Intervention

The selection of intervention activities outlined below reflects tasks for which conversational or interac-

tional competence is the focus. It is important to note that all tasks assume audiovisual skills sufficient for the HI adult to participate. The clinical strategies in these CT tasks focus on the participant and clinician views of the impact of miscommunications and their repair, for example, on fluency, ease or success of conversation (although these terms remain poorly defined).

### Barrier Games

Barrier games prove very effective tools in conversationally oriented therapy. These activities are based on the transfer of key information from one participant to another from a picture or object which is visible to the sender but not to the receiver (Chelst, Tait, & Gallagher, 1990). Commonly barrier games involve having the recipient; (a) follow a route on a map, (b) reproduce a drawing, photo or geometric shape, or (c) move around a picture board. These tasks require complex information transfer with its attendant requirements of (close to) 100% accuracy. They also allow the HI adult as recipient to take an active and creative part in directing the flow of information via questions asked to clarify missed information. Examples of barriers games may be found in Pedley, Lind and Hunt (2006).

### QUEST?AR

QUEST?AR (Erber, 2002) is an exercise in audiovisual reception of another's talk in a simulated conversational context. Prior to commencing the task the conversation partner selects a topic for discussion, commonly a recent event (e.g., holiday, visit, social gathering, or movie) in which the HI adult did not participate or with which he/she is not familiar. The HI adult is given a "half script" – a series of predetermined Wh questions from which he/she selects those that relate to the conversation partner's stated topic. The HI adult asks those questions pertinent to the topic and the conversation partner replies to each. The conversation partner's replies maybe of any length and may take any form. The HI adult's task is to clarify and check the key information following each of the conversation partner's turns. Miscommunications, identified by inaccuracies in the HI adult's clarification are then resolved. The task allows complex interaction, including repair and confirmation but limits the sequential aspects of topic control.

## Conversation Breakdown and Repair in the Clinic

Some HI adults (and their conversation partners) are competent and comfortable enough to undertake free and unstructured conversation as a therapy task. In these cases, the identification and analysis of breakdown and repair sequences in the conversation provides an excellent therapy exercise. It is not the aim of the intervention to rid the conversation of breakdowns, but to minimise the impact of time and effort spent in repair on the fluency of the interaction. The focus of the therapy is on the management of breakdown and repair with particular emphasis in the number of turns and the strategies taken to resolve the breakdowns.

While the exercises above all limit/control for certain of their conversational qualities, some clients are able to undertake conversation itself as the vehicle for practicing strategies. Wilson, Hickson and Worrall (1998) developed a clinical task in which conversation between an HI adult and a clinician was undertaken in a simulated everyday setting (e.g., post office, café, doctor's surgery). The participants used the setting as context for the conversation, asking questions and interacting on matters related to the simulated context. During the course of the interaction, the clinician purposefully creates miscommunications requiring clarification from the HI adult. These are then resolved using common repair or clarification strategies. This work may be enhanced by reference to prior discussion of strategies appropriate to the setting (see Tye-Murray, 1992).

The use of these activities in a principled and disciplined fashion in the clinic require the clinician to: (a) have a clear and overt understanding of the way conversation works, (b) develop a common vocabulary by which to discuss the content and conduct of conversation, (c) bring aspects of conversational behaviour under the client's conscious control and (d) create therapy tasks that are able to be easily/readily generalised to clients' everyday communication activities. Further, the development of CT as a therapy model and as a collection of clinical practices requires new research into the range of assessments that compliment the range of intervention techniques, as well as a clinically useful tool by which direct assessment may be made of conversation abilities to compliment self-report and clinical measures of speech reception. Finally, there remains a need for better evidence-based outcomes for the CT (and indeed other) AR intervention techniques.

## Summary and Conclusion

In summary, CT represents an attempt to identify and address the conversation difficulties that arise as consequences of post-lingual HI. It endeavours to bring together under one approach the assessment and intervention techniques by which these difficulties may be most directly addressed. Further, the model of CT outlined here uses CA as the guiding theory and method by which the conversation difficulties may be best understood and described. The key benefit of this approach is the inclusion/design of therapy tasks that address clients' everyday conversation difficulties such that the need for generalisation of skills learned in the clinic to everyday interaction is minimised. The limitations of CT lie in the research yet to be done to provide a strong evidence base for the conduct and assessment of the therapy. The therapy does not sit as an alternative to other models of intervention, rather it should be used in conjunction with both speech reception oriented paradigms and affective counselling work. The task for all audiologists is to develop and share a common understanding of the act of conversation and how this might be affected by post-lingual HI. The task for the therapist remains to decide which therapies and in what amount/combination they should be provided to best meet clients' needs as the client strives to overcome these difficulties.

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