Introduction

While the concept of voice in speech-language pathology has most often referred to the physical voice, recent papers in the communication disorders literature have extended it to include more metaphorical meanings, linking it to, for example, concepts of identity or of social exclusion where the 'voices' of people with aphasia are 'silenced' versus social inclusion where they are 'heard' (see Duchan & Leahy, 2008, for discussion). Our metaphorical voices can be interpreted as the subjectivity of our individual selves, expressed within the social language of our community, but it is our literal voices that are the "immediate embodiment of personal character" (Rée, 1999, p. 16). For people with aphasia, the voice in both senses can be at risk.

The computer software program SentenceShaper^{TM} (Psycholinguistic Technologies) has been described as a cognitive processing prosthesis that allows individuals to construct and record messages off-line in their own voices (Linebarger, Schwarz, Romania, Kohn, & Stephens, 2000). While the primary goal of the program is to facilitate more grammatical production, either aided or unaided, the experience of hearing this improved production in the voice of the person with aphasia, even if only as a recording, has been identified as a significant feature of the program (Albright & Purves, 2008; Fried, 2002). Such findings raise intriguing questions about the intersection of metaphorical and literal voice. This study explores those questions in a case study about a man with non-fluent aphasia, complicated by apraxia, who chose to use SentenceShaper^{TM} to record a text reading for a specific purpose.

Methodology

This qualitative case study used participant observation with fieldnotes as a primary source of data collection (Emerson, Fretz, & Shaw, 1995) and principles of interpretive description for thematic analysis (Thorne, 2008). A third key component of the study's theoretical framework was to incorporate principles of a social model of intervention (Byng & Duchan, 2005). This was particularly important because the initial request to undertake this project came from the participant.

Participant

The participant, K. was 59 years old at the time of the study with a moderate-severe nonfluent aphasia, complicated by apraxia of speech, resulting from a left CVA seven years previously. His speech is limited to short, high frequency phrases (e.g., "how are you?) and some single words, often with distorted sound substitutions. Despite this very limited speech output, he communicates effectively by a combination of strategies including drawing, writing single words, and gesture. He is also a skilled computer user and has developed a repertoire of power point presentations and written texts, many of which he uses to advocate for people with aphasia through public presentations in a variety of settings.

Procedures

K, who was familiar with the SentenceShaper^{TM} program, requested assistance in using it to record a text passage for a twelve-step program in which he has been a long-time participant (predating his CVA). Typically, K uses text-to-speech software to 'read' text that he has written, and has done so at twelve-step meetings. However, the text he wished to read on this occasion was not his own but, rather, a specific reading adopted from Alcoholics Anonymous by many twelve-step programs and often read aloud by one of the members at the beginning of a meeting.

K. worked with one of the authors (HO), meeting once weekly for one to two hours for a total of 11 sessions and 17 hours. Together they negotiated strategies for using SentenceShaper^{TM} to record, evaluate, and revise utterances. After the final product was complete, two listeners, one of whom was familiar with the text and one of whom was not, transcribed the recording in order to evaluate intelligibility. On the basis of that input, K. worked with HO for an additional four hours to revise the recording further, with K. always making final decisions about what and why to revise. HO then transferred the recording to a CD that K could use in his meetings.

Findings

Three broad themes emerged from analysis of fieldnotes including: 1) contexts in which metaphorical voice requires literal voice; 2) therapeutic process as a way of supporting metaphorical and/or literal voice; and 3) implications of changes in power structure of therapy for clinicians.

With respect to the first theme, it was clear from K.'s commitment to the recording process that reading the selected text in his own voice, even if recorded, was critical to him. This was emphasized in his editing process as he elected, sometimes with humorous intent, to leave in some phrases with exaggerated prosodic features (e.g., a very slow rate or a sudden change in volume on a particular word). It was also clear that intelligibility was not a critical concern for him, as he elected to leave in several passages that were unintelligible to both transcribers. Familiarity is an important point here: the listener more familiar with the passage understood 84%; the other, with no familiarity, understood only 72%. The intended audience, however, is completely familiar with the text, with access to printed copies during the reading, so that intelligibility may not be their major criterion. It is the act of reading itself, not the content, that matters here.

With respect to the second theme, the process of therapy used in this study illustrated Byng & Duchan's (2005) five principles of therapy, including: equalizing the social relations of service delivery; creating authentic involvement, creating engaging experiences; establishing user control; and being accountable to the user. In following these, HO supported K.'s metaphorical voice, in particular by giving him final decisions regarding what was sufficiently intelligible, despite her own preference to encourage him to make productions 'better'. The selected text also imposed constraints, with its low frequency multisyllabic

vocabulary and atypical grammatical constructions (e.g., "half measures availed us nothing"; Alcoholics Anonymous, 2001, p.59). HO also supported K.'s literal voice through numerous strategies, including visually cued productions, repetition, sometimes with exaggerated intonation, and joint production with clinician fading. Finally, the format of the SentenceShaper^{TM} program facilitated K.'s independence, allowing him to easily record and review single words or short phrases multiple times, often improving his production with successive repetitions.

With respect to the third theme, HO identified the challenges that Byng & Duchan's principles can pose for clinicians, in particular, for student clinicians. This was exemplified with respect to perspectives on intelligibility, which HO was more reluctant to leave compromised than was K.

A final finding emerged from K.'s report of playing the recording at a meeting. He reported that although the recording impressed members, some commented that it was too long. K. is again motivated to revise the recording further, a process which is now underway.

Discussion

Findings from this study offer insight into the intersection of metaphorical and literal voice, identifying circumstances in which the literal voice itself is required for the expression of metaphorical voice. The study also contributes to a growing literature exploring how therapeutic interventions themselves can either support or suppress metaphorical voice, (see, for example, Simmons-Mackie & Damico, 2008) while at the same time considering the implications for clinicians working within new frameworks. Finally, it draws attention to how people with aphasia can independently identify new possibilities in treatment approaches, in this case SentenceShaper^{TM}, to help them to achieve their personal goals.

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