Revisiting Melodic Intonation Therapy (MIT): A planned case study
Lindsay King

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Abstract
This paper describes the use of Melodic Intonation Therapy with aphasia. It is intended that the work introduced here will be written up for publication as a full case study in a speech and language professional journal.

Keywords
Melodic Intonation Therapy; case study; aphasia; speech and language therapy

Introduction: What is Melodic Intonation Therapy?
Melodic Intonation Therapy is a treatment used by Speech and Language Therapists that uses the musical elements of speech (melody and rhythm) to improve expressive language. It aims to capitalise on the preserved function (singing) and engage the language-capable regions in the undamaged right hemisphere (Norton, Zipse, Marchina & Schlaug, 2009).

The original programme is designed to lead the non-fluent aphasic client from intoning (singing) simple 2-syllable words to speaking phrases over 5 syllables in length. There are 3 levels of treatment; elementary, intermediate and advanced. Each level consists of 20 high-probability words presented with a visual cue (picture). The syllables are intoned on 2 pitches; ‘melodies’ are determined by the words’ natural prosody (rhythm). The stressed syllable is intoned with a higher pitch and the unstressed syllable is intoned with the lower pitch. For example, for the word ‘water’ the syllable ‘wa’ is intoned in a higher pitch and the syllable ‘ter’ in a lower pitch, for the word ‘television’ the syllables ‘tel’ and ‘e’ are intoned in a low pitch, the syllable ‘vis’ in a high pitch and the syllable ‘ion’ in a low pitch.

The client and therapist sit across a table from each other. The therapist holds the client’s left hand and taps the rhythm of the word with two fingers on the back of the client’s hand at a rate of one syllable per second. The therapist and client start by introducing the target word with the visual cue. In unison they hum the word, as the therapist taps the rhythm on the client’s left hand. This progresses to singing the target word in unison with tapping; gradually the therapist fades her voice. This stage is then followed by the therapist speaking with exaggerated prosody and tapping while the client listens. The client immediately repeats the word only assisted by the tapping.
Finally, in response to a question about the target phrase such as “What comes out of a tap?” The client responds with the target word spoken with natural pitch and prosody. “Water”. As the client progresses through the three levels of complexity, the words become phrases and the rhythm and melody lengthen. The therapist can also encourage the use of ‘Inner Rehearsal’ and ‘Auditory-Motor feedback training’ to help clients to gain maintainable independence as they improve expressive speech.

MIT first appeared in publication in 1973 with a report of its successful use with three people with chronic non-fluent dysphasia (Albert, Sparks & Helm, 1973). However the method has not become widely used and the neural basis for its effectiveness has remained unclear. Schlaug, Marchina and Norton (2008) demonstrated improvements on Naming Tests from a vocabulary of 10 words before an intensive eight week block of MIT to 50 words after intensive MIT suggesting functional improvement but no recorded carry over in to spontaneous speech.

What prompted the case study?
In October 2009, the author attended an Aphasia Special Interest Group being addressed by Kate Overy (Music Psychologist) and Matthew Dixon (Music Therapist). Overy gave a practical demonstration of the strict MIT methodology, as recommended by one of the original authors and principal advocate in USA, Nancy Helm-Estabrooks (1989).

In the seminar Overy described a pilot study from 2003 (SIG handouts 2009) which examined the neural basis for spoken words and melodically intoned words both pre and post a programme of MIT using Functional Magnetic Resonance imaging (fMRI). It was discovered that post MIT more neural activity was found in the right Superior Temporal Gyrus and there was increasing activation in the area surrounding the client’s lesion including Wernicke’s area and left Fronto Temporal Gyrus. This suggested that visible changes are occurring in brain functioning as a result of MIT.

The case study
On my caseload at the time was a client who fitted the candidacy requirements for MIT. I trained staff in his support team to use the MIT intervention. When he was referred to the service in June 2008 his spontaneous speech samples were 4 syllables per minute when picture cues were present and 1-2 syllables per minute when they were not. By the end of the intervention in November 2010 he had met his individual goals as his spontaneous speech samples were produced at a rate of 51.7 syllables per minute when picture cues were present and 35.8 syllables per minute when they were not.

I am writing his case up for a full case study for Speech and Language Therapy in Practice (www.speechmag.com). In the case study I will present more detail of the interventions and a detailed analysis of the results, I will also explore possible factors which have contributed to this exciting recovery in his spoken output and the documented changes in his effective use of non-verbal skills to supplement and further enhance his communicative competence.

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References


