Exploring Narrow Phonetic Transcription Training and Protocol

Background: Part 1

This preliminary research is meant to open the door to the comparison of training methods for narrow phonetic transcription, particularly evaluating the merits of what we will call "training by experience" and "direct training. The fundamental goals are to expedite and formalize the process of training and to increase intra- and inter-coder reliability. There is very little information in the literature regarding the actual process of training narrow phonetic transcription--the vast majority of references to the data-gathering method note its inherent challenges and the ways in which they might be overcome (transcription by consensus is a typical workaround). In addition, various protocols are used, many of which are not published in full. The use of "unidentifiable error" categories is also problematic, as demonstrated by Haley et al. (2001).

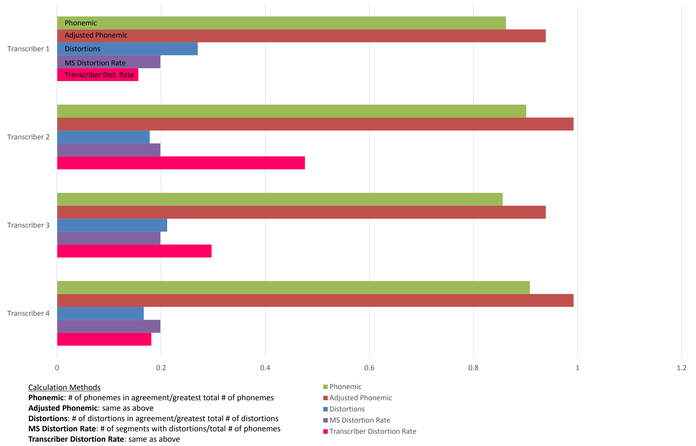
Methods

Four undergraduate students from SHPS530 were selected by the instructor at the conclusion of the semester to participate in an independent study. These undergraduates will be referred to as Transcriber (#). They were trained by Dr. Katarina Haley and Michael Smith in narrow phonetic transcription. The “direct training” components involved the following: a 20 minute introduction to the error, exercises with continua (when possible), quizzes and transcription discussion. Each week, a new distortion error was introduced, and the students were asked to use that error and those previously learned in their transcriptions when appropriate. The data discussed today comes from a single Motor Speech Evaluation of a person with APP and/or AOS. The students transcribed this evaluation during their second week of training and again during their final week of training. MS transcribed this evaluation in mid-April. The point-to-point calculations above and to the right depict comparisons between the second transcriptions of each undergraduate and that of MS.

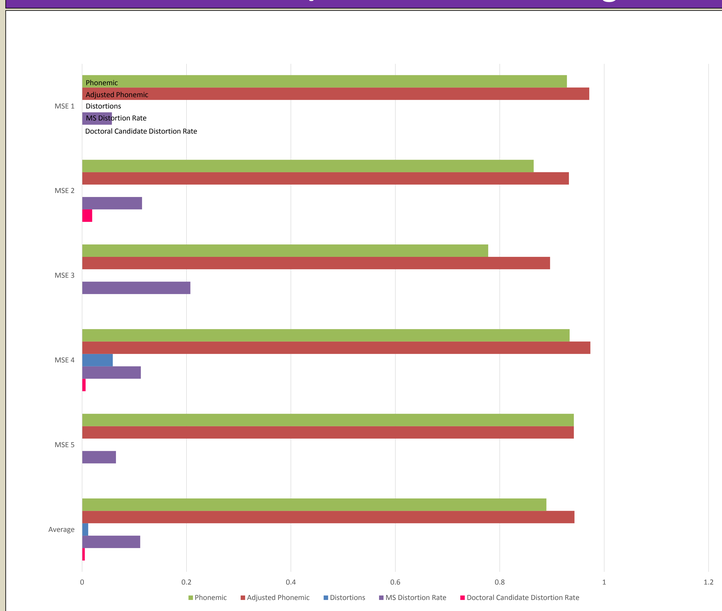
Transcription Protocol-Distortion Errors

1-frictionalized/weakened constriction
2-nasalization ambiguity
3-voicing ambiguity
4-centralized
5-retracted tongue body
6-advanced tongue body
7-raised tongue body
8-lowered tongue body
9-rhotacization ambiguity
10-lengthened
11-shortened

Undergraduates/MS Point-to-Point Agreement



Doctoral Candidate/MS Point-to-Point Agreement



Background: Part 2

In addition to the work regarding training, discussion with another academic institution introduced a second scenario requiring analysis. A doctoral candidate at the second institution narrowly transcribed five motor speech evaluations using a different transcription protocol. MS transcribed these evaluations as well using a protocol with 27 diacritic marks.

Protocol Comparison

MS Protocol	Doctoral Candidate Protocol
Nasalized, nasal emission, denasalized, rounded vowel, unrounded vowel, rounded consonant, unrounded consonant, dentalized, palatalized, lateralized, rhotacized, velarized, centralized, **retracted tongue body**, **advanced tongue body**, **raised tongue body**, **lowered tongue body**, fronted, backed, derhotacized, **partially voiced**, **partially devoiced**, frictionalized, **aspirated**, unaspirated, unreleased, **lengthened**, shortened	**Prolongation**, **partial devoicing**, **partial voicing**, **excessive aspiration**, other distortion, **tongue raising**, **tongue lowering**, **tongue fronting**, **tongue backing**, Porch coding ***BOLD: indicates common error type**

Discussion

While a direct comparison is problematic, some useful connections can be made. The rate at which the various transcribers mark distortions varies; however, the doctoral candidate marks almost no distortions, while the undergraduates and MS marked at least 11% and as much as 47%. Given the fact that the transcriptions come from different evaluations, this comparison holds little weight. That said, the fact that the undergraduates are closer to MS than the doctoral candidate is encouraging from a training standpoint.

Phonemic reliability is high among all transcribers, particularly when making adjustments for extremely subtle differences.

Distortion reliability is almost zero between MS and the doctoral candidate and hovers around 20% between MS and the undergraduates. While 20% is not high, it could indicate any of several things:

1) the training methods were not effective,
2) the training was implemented over too short a period of time, and/or
3) experience plays a more significant role than any direct training in improving transcription skill.

In addition, the low reliability could be related to the difficulty of transcribing this particular Motor Speech Evaluation. More data is required to make concrete conclusions regarding the value of “direct training.”

Acknowledgments

Many thanks to Dr. Katarina Haley for endorsing this project and to the four undergraduates for their patience and willingness to participate.

References

Haley, Katarina L.; Bays, Gina L.; Ohde, Ralph N. (2001). Phonetic properties of aphasic-apraxic speech: A modified narrow transcription analysis. *Aphasiology, Volume 15, Number 12, 1 December 2001, 1125-1142(18).*