

Keynote Speech II

Why is L2 English Prosody So Hard? –A Quantitative Account of Stress, Focus and Information Planning

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Producing continuous speech in L2 is a challenging task because it requires simultaneous planning of L2 linguistic specifications, higher level discourse associations and information placements. We assume that higher level planning requires within-phrase chunking and cross-phrase paragraph phrasing while information arrangements through emphasis weighting assignment and allocation. The above involved planning is most notably delivered through distinct global melodic modulations and patterns. We conduct quantitative analysis of collected speech corpora and found that distinct Taiwan (TW) L2 features are (1) less consistent discourse chunking, (2) fewer distinct contours by prosodic words, (3) diverse patterns of word stress, (4) less distinguishable focus status and (5) less degree of emphasis contrast. While (1) and (2) are largely attributed to general L2 planning difficulties and much reported, our results showed the other three features merits more attention. Our F0 analyses found that the fundamental prosodic difference of the Taiwan Mandarin and American English in the pitch domain is that English requires sharper high/low contrast by higher-level prosodic units but less such contrast in accentuating lower-level prosodic units whereas TW Mandarin patterns are the exact opposite. As for speech tempo modulations, assuming that the composition of speech tempo involves multiple factors and assume that contributing factors include at least the intrinsic duration from segmental composition, word stress, boundary type and focus status, etc. , respective contributions in the speech signal could be better accounted for through normalization of acoustic contributions, and examined the English phonetic inventory, the way stress type (primary, secondary and tertiary), boundary type (non-phrase final, continuation rise, final rise and final fall), as well as focus status (non-focus, function words, broad focus and narrow focus). Analyses of speech data of L1 vs. Mandarin L2 English not only verified the contribution of each factor examined, but also demonstrate in what explicit ways the temporal composition of Mandarin L2 English differs from the L1 norm. They are (1) more varied phonetic realization of phoneme categories, (2) less robust degree of stress contrasts, (3) less robust and inconsistent boundary adjustments, and (4) little distinction of broad and narrow focus contrasts. The most interesting revelation is that knowledge does not guarantee execution. There exists a discrepancy between L2's phonological awareness and phonetic realization at every level of linguistic composition that collectively constitute output speech melody and tempo. But the gap could be better filled if we understood the reasons better than before.