ACOUSTICS2008/2306 When and how disyllables are contracted into monosyllables in Taiwan Mandarin?

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In Taiwan Mandarin, a disyllabic word or phrase is often contracted into a monosyllabic unit in conversational speech, just as "do not" is often contracted into "don't" in English. The goal of this research is to a) test the hypothesis that contraction is directly related to time pressure, and so it can be elicited in the laboratory from nonsense disyllabic units, and b) search for the underlying mechanisms of contraction. We devised four groups of nonsense disyllabic combinations according to the level of obstruction in the intervocalic consonant: 1) zero obstruction - CV+V; CV+VN; CV+VV, 2) nasal consonant - CVN+V; CV+NV, 3) non-nasal consonant - CV+CV, where C is a stop, fricative or affricate, and 4) nasal + non-nasal consonant - CVN+CV. These disyllabic units were embedded in carriers that would impose different degrees of time pressure on them. Four speakers of Taiwan Mandarin read aloud these sentences at three articulatory modes: clear, natural and fast. Preliminary examinations showed that contraction occurred more frequently as speech rate increased and as intervocalic obstruction decreased. Detailed acoustic analyses are being conducted to search for evidence of the underlying mechanism of such contraction, and the results will be reported.