second experiment, we explore this effect in English to see whether native speakers of English also exhibit such a correlative effect.

**EXPERIMENT 2: ACCENT PERCEPTION IN ENGLISH**

This experiment investigates whether or not $F_0$ peak location and $F_0$ fall rate influence the perception of accent location in declarative intonation in English. The focus of an English utterance, if any, is often expressed by placing the so-called contrastive accent on a certain syllable within the focused constituent (Bolinger, 1954, 1961; Halliday, 1967; Chafe, 1976; Lambrecht, 1986). For example, when one answers the question ‘Is this her net?’ the contrastive accent is on my in ‘This is my net’. On the other hand, in neutral (unmarked) intonation, e.g., responding to ‘What’s this?’, the nuclear accent, which is the most prominent accent in an intonation phrase, occurs on the last word, net. Due to the coupling with utterance-final lowering of $F_0$, the fall rate must be greater if the nuclear accent is on the final syllable than if it is elsewhere in the utterance (Olive, 1974; Maeda, 1976). Therefore, such utterances are likely candidates for observing a correlative effect of $F_0$ peak location and $F_0$ fall rate, if this effect occurs in English.

**Methods**

Using the same system as in Experiment 1, we synthesized ten variations of the English utterance, ‘This is my net’, with different $F_0$ fall rates on net. The duration and amplitude of each syllable were kept constant across the stimuli. The $F_0$ peak always occurred at the onset of /ɛ/ in net, because we did not know the limit of the $F_0$ peak location in English which allows an accent to be perceived on the previous syllable. The $F_0$ contour of the utterances started at 121 Hz, linearly rose to 150 Hz at the onset of /ɛ/ in net, and ended at 102 Hz: The $F_0$ difference between the peak and the end was 48 Hz. The duration of the $F_0$ fall varied from 11 csec to 2 csec in 1-csec steps, corresponding to fall rates between 4.4 Hz and 24 Hz/csec. Figure 4 illustrates the $F_0$ contours of two sample stimuli (1 and 10).

Thirty-four native speakers of American English, monolingual adults, participated in the experiment. The instructions were given in synthetic speech to allow the subjects to familiarize themselves with the synthetic voice. They were then asked to judge whether each utterance was more appropriate for responding to ‘What’s this?’ (inducing the accent on net in ‘This is my net’) or to ‘Is this her net?’ (inducing the accent on my): Hereafter, the former will be referred to as a net-response, and the latter as a my-response. Each subject listened to two sets of the ten stimuli, which were randomized in different orders.

**Results**

The results are summarized in Table 2. The second column indicates the fall rate: the third indicates the percentage of consistent judgments, i.e., a speaker making the same judgment in both sets, (the number of subjects appears in parentheses): the fourth