PITCH STEREOTYPES IN THE NETHERLANDS AND JAPAN

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ABSTRACT

Dutch and Japanese female speakers were presented at three pitch levels (low, original, high) to Dutch and Japanese male and female listeners in order to make a cross-cultural comparison of pitch stereotypes. Low pitch was associated with the frequency code, Ohala's "frequency code" [1] there growl, mice squeak. According to Ohala, etc., and by which high pitch is associated with the attributes of the frequency code, we hypothesized that both the Dutch and Japanese listeners would associate high pitch with the attributes of the frequency code in the same direction (strong hypothesis). No interactions were expected between pitch and culture of speaker, nor between pitch and culture/sex of listener.

METHOD

Eight Dutch and eight Japanese women were selected as speakers; all were highly educated. The mean ages (ranges in parentheses) for the two groups were 33 years (20-48) and 29 years (21-42), respectively. The mean heights were 166 cm (161-171) and 163 cm (155-174). The differences in age and height, tested by means of t-tests for independent samples, were not significant at the 5% level.

RESULTS AND DISCUSSION

The interrater reliability was assessed, separately for the Japanese and Dutch listeners and the Japanese and Dutch speakers, using Cronbach's alpha [7]. 28 out of the 32 coefficients exceeded .80. This means that the listeners agreed well on the distribution of the ratings over the stimuli, not only for in-group speakers but also for out-group speakers. The existence of vocal stereotypes for listeners and speakers speaking the same language has been evident since the 1930's [8]. However, evidence for listeners and speakers speaking different languages is still scarce. Scherer [9] found fair reliabilities for Germans rating American speakers but low reliabilities for Americans rating German speakers. Van Bezooijen [10], presenting Dutch speakers to British, Kenyan, Mexican, and Japanese listeners, obtained high reliabilities in all cultures for attributes similar to the ones examined in the
The factor pitch had a significant (p=0.0025, namely 0.01/8 (the number of analyses)) main effect on all seven scales. There were no significant interactions of pitch with sex of listener, two of pitch with culture of speaker, and one of pitch with culture of listener. The two interactions with culture of speaker, pertaining to male-like and unattractive, were due to small deviations from parallelism and will be ignored. The interaction of pitch with culture of listener pertaining to prestige and will be dealt with separately below.

In Table 1 the mean ratings for the three pitch levels and results of post hoc comparisons (Tukey’s HSD) are given. For all seven scales derived from the frequency code the weak hypothesis (hw) was confirmed and for three the strong hypothesis (hs). It thus appears that the Dutch and Japanese listeners have identical associations of different pitch levels with speaker attributes in accordance with the frequency code. As expected, when speaking at a high pitch, speakers are cross-culturally perceived as less tall, less strong, less male-like, less adult, less independent, and less arrogant than when speaking at a low pitch. The perception of pitch is not obscured by listeners and speakers speaking different languages.

The only interaction between pitch and culture of listener, shown in Figure 1, pertains to prestige. The findings for the Dutch listeners are as expected: high pitch is associated with less prestige than low pitch. However, the expected effect is not found for the Japanese listeners, where high pitch seems to even raise prestige. The latter finding probably has to be placed within a more general framework of the role social prestige plays in the Japanese culture. The Japanese social structure is hierarchically structured to a high degree [11]. Pitch is one of the ways in which social differences can be signalled. Thus, the lack of prestige of Japanese women as compared to men has traditionally been reflected in high pitch. Although some changes have taken place in Japan in the direction of more western egalitarian principles, the pressure to conform to the traditional norms still seems to be high. It is not unlikely that in Japanese culture, with its emphasis on group behavior, conformation to norms may convey esteem and prestige. So, although high pitch may symbolize low status in a direct sense, it may in this case indirectly be associated with high status.

The scale unattractive was included to assess the subjective evaluation of pitch differences. There was an overall effect, with the original pitch of the speakers judged as the most attractive (see Table 1). If this effect is not due to artifacts of the pitch manipulations, politeness, and sexual role: an exploratory investigation into the pitch correlates of English and Japanese politeness formulae", *Language and Speech*, vol.24, pp.97-107.


