

Notes and Comment

Recognizing the gender of walkers from point-lights mounted on ankles: Some second thoughts

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We and our associates have explored the recognition of the gender of walkers from dynamic displays of point-light sources (Barclay, Cutting, & Kozlowski, 1978; Kozlowski & Cutting, 1977). One of our most remarkable findings has been that the sex of a walker can be judged from only two lights—one on each ankle (Kozlowski & Cutting, 1977, Experiment 5). We would like to discuss the limitations of our own result and present the findings of another test of whether ankles-alone information is sufficient for the recognition of the sex of a walker.

Kozlowski and Cutting (1977) had only two male and one female walker in the ankles-alone condition. One male was seen as female (61% of guesses, $p < .05$). The other was seen as male (60%, $p < .05$). Of course, this pattern provides a totally inconclusive test of whether males can be recognized from ankles alone. Our one female was seen as female (61%, $p < .05$). Overall, the recognition of sex was accurate (54%, $p < .05$, $n = 259$), but these two successes out of three walkers would persuade only the faithful.

Discontent with the power of our first demonstration, we tried a second. We retaped the stimuli from Barclay et al. (1978, Experiment 1), blocking out all but the lights on the ankles. A random sequence of two tokens each of seven male and six female walkers was shown to 11 male and 12 female viewers. The study was conducted in small groups. The subjects were paid \$2. Overall, guesses were 46.3% correct ($SD = 9.99$, $t(22) = 1.78$, $p < .10$). If anything, this indicates that people tend to be wrong in their guesses. Further analyses showed that longer strides were seen as masculine [$r(11) = +.87$, $p < .01$].

This research was supported by grants from Wesleyan University to the authors. We thank two research assistants, Katherine Bloomfield and David Stier, who were supported by NSF Undergraduate Research Participation grants. Reprint requests should be sent to L. Kozlowski or J. Cutting, Department of Psychology, Wesleyan University, Middletown, Connecticut 06457.

(Reanalysis of the ankles-alone data from the previous study showed a similar effect, a rho of +1.00 between stride length and maleness for the three walkers.)

A rule that bigger steps are more likely to come from males is indeed reasonable if one is faced with a random sample of male and female walkers. In our study, however, such a rule would increase the number of incorrect guesses. Barclay et al. used relatively small males and relatively large females, to minimize the effects of obvious size cues on sex identification. The video-taping parameters made the females appear even larger than the males (see Footnote 1, Barclay et al., 1978).

Based on these stimulus size factors, we expect that viewers could judge the sex of a walker from ankles alone—if a random sample of males and females were used. The size confound is present in the displays in Barclay et al. that have lights on all the major joints, and yet viewers could judge gender accurately [66%, $t(56) = 11.0$, $p < .001$]. Some information in the full displays must override the confounding size information [here stride length has an almost significant *negative* correlation with maleness, $r(11) = -.52$, $p < .08$]. We have argued that center-of-moment differences between males and females are perceptible from dynamic displays (Cutting, 1978; Cutting, Proffitt, & Kozlowski, 1978). If this notion is correct, the relevant center-of-moment information in ankles-alone conditions may be unavailable to viewers or may be swamped by the more obvious stride-length cues.

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(Received for publication February 22, 1978;
accepted February 23, 1978.)