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Social Vision: Visual cues communicate categories to observers

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update

by Kerri L. Johnson

social vision

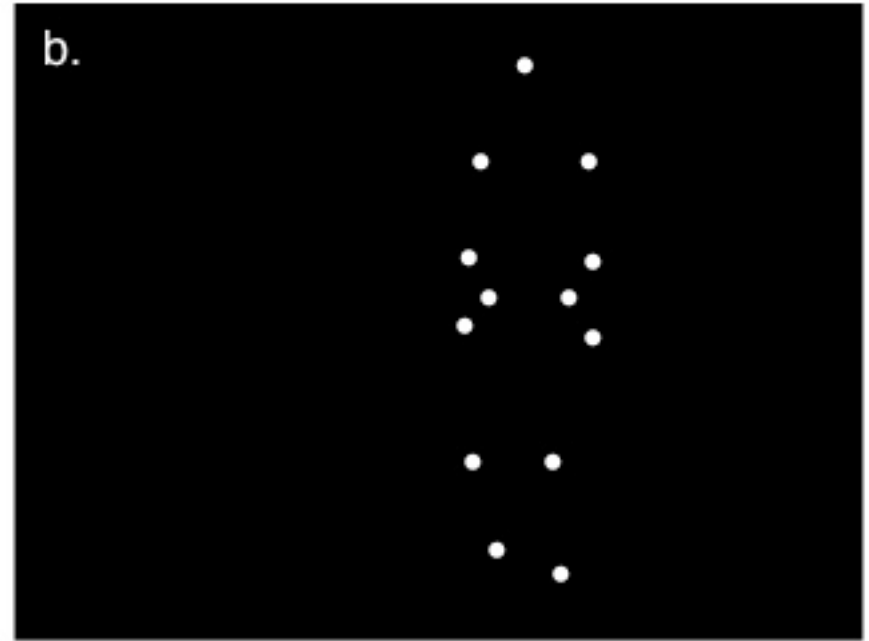
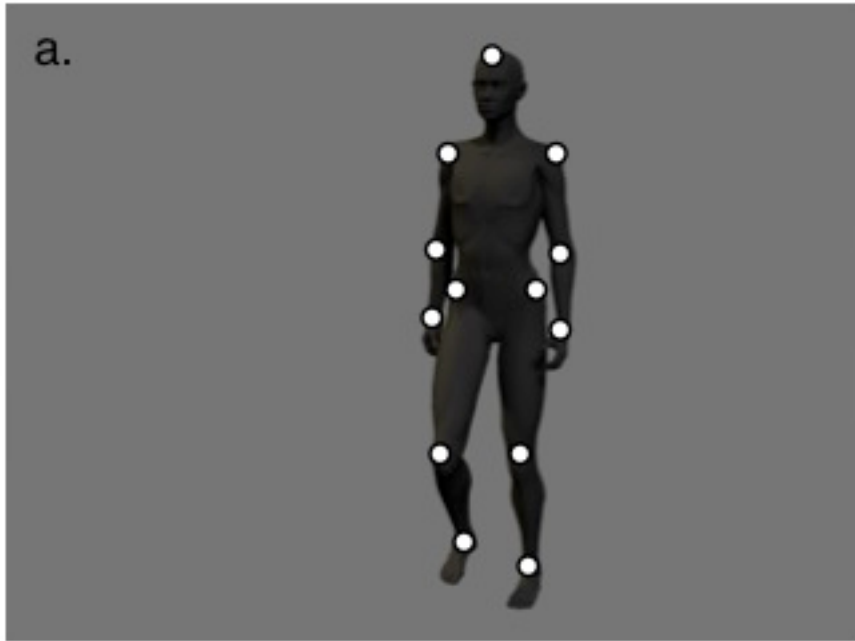
VISUAL CUES COMMUNICATE SOCIAL
CATEGORIES TO OBSERVERS

DORIS TROY FAMOUSLY SANG, “JUST ONE LOOK, THAT’S ALL IT TOOK.” INDEED, RESEARCH ON PERSON PERCEPTION CONFIRMS THAT MEANINGFUL SOCIAL INFORMATION IS RELIABLY DISCERNED FROM JUST ONE LOOK.

This information ranges from appreciating category membership to evaluating more enduring traits and dispositions. These aspects of social perception appear to be highly automated, some would even call them obligatory, and they are heavily influenced by two sources of information: the face and the body. From minimal information such as brief exposure to the face or degraded images of dynamic body motion, social judgments are made with remarkable efficiency and, at times, surprising accuracy.

Scholars have long recognized that one aspect of social perception in particular—social categorization—plays a critical role in our perception of others. Why might this be the case? In his early research, Gordon Allport suggested that people tend to think about others in categorical terms because knowing a person’s



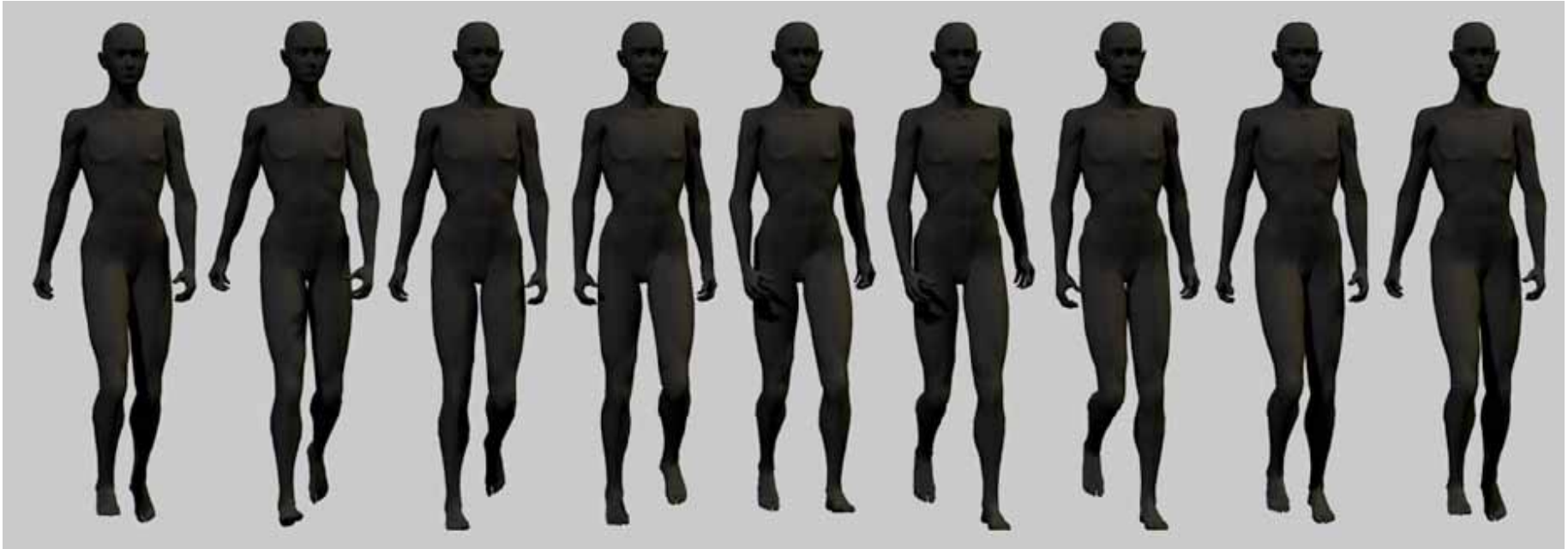


sex, race, or age is informative. Specifically, social categorization brings to mind stereotypes associated with the relevant social category (girls like pink, for example, and old people like Florida). Regardless of their veracity, stereotypes were presumed to affect social interactions by establishing expectations. The vast majority of such research has focused heavily on two aspects of this stream of events: a) determining the inevitability of social categorization, and b) examining the consequences of perceiving social categories. Only recently have scholars begun to appreciate the importance of understanding the process of social categorization beginning with the visual perception of others as a precursor

to the product commonly explored by social psychologists. This nascent field of Social Vision is providing key insights into these dynamics of social perception that are essential to understanding both intergroup perception and interaction.

As it turns out, not all social categories are equally likely to be perceived. Sociologists have described master status categories as those categories that provide a lens through which other aspects of social perception and interaction are viewed. In this way, social categories become context that has a pervasive impact on other aspects of social perception. Three categories emerge as the most likely candidates for social

perception: sex, race, and age. Evidence is mounting that sexual orientation is a likely candidate to be added to this list. Recent evidence, however, suggests that under some circumstances, perceivers may be able to resist the tendency to categorize others according to race and age, but not by sex. Perhaps this is not surprising given the pervasive importance of sex categorization in modern society. The importance of sex categorization begins even before birth, as parents proudly proclaim to friends and family, “It’s a boy!” or “It’s a girl!” The impact persists throughout the lifespan, dictating where we may go (for example, men’s room versus ladies’ room), what we may wear



(for example, neckties or skirts), and which traits and emotions are appropriate for us to express (for example, sadness versus anger; communion versus agency). An individual's conformity—or lack thereof—to such norms has implications for how they are evaluated by others. Put simply, sex categorization appears to be compulsory, and it provides a lens through which other social factors are perceived and evaluated.

Research being conducted in my Social Communication Lab at UCLA is examining how the perception of one social category contextualizes other domains of person perception. For instance, in one set of studies my colleagues and I examined how sex-specific

stereotypes of emotion expression bias the visual perception of body motion. We began with the observation that perceivers are able to extract meaningful social information about others based only on the body's motion. From films that depict only points of light affixed to the body's joints, observers readily perceive social information including sex category membership, identity, behavioral intent, and even emotion state. Of these domains, there is some evidence that the emotion state of a target can be processed without intent, and that its perception affects other aspects of motion perception.

We showed point-light displays that varied emotional body motion (angry, happy, neutral,

and sad) to research participants who judged the sex category of each target. Across multiple studies that implemented a variety of controls, the results were telling. Displays depicting angry body motions were overwhelmingly judged to be men, and participants were highly confident of their judgments; displays depicting sad body motions were judged to be women. Put simply, the gender typicality of the emotion being expressed in body movements biased observers' perception of sex category membership.

In other research, I have found that the perception of sex category is inextricably tethered to the perception of race category, even though the two factors vary orthogonally



in reality. In this research, my students and I reasoned that the perception of one social category (for example, sex) may be affected by another social category (for example, race) to the extent that the two share overlapping stereotype content. The stereotypes for Black and Men, for example, share characteristics such as aggressive and competitive, and the stereotypes for Asian and Women share characteristics such as soft-spoken and familial. We predicted that such overlapping stereotypes may exert a top-down bias on the perception of faces.

To test this, we generated a set of face stimuli that varied continuously from Black to Caucasian to Asian. In one study we found that when the gender of a face was ambiguous, participants' sex category judgments varied systematically with race category. Asian faces were more likely to be judged as women; Black faces were more likely to be judged as men. In another study, we tracked the trajectory of mouse movements as participants categorized faces to be men or women by clicking boxes that appeared in the upper portions of the computer monitor. Rarely did participants make mistakes when categorizing the faces, but the trajectory of their mouse movements as they rendered judgments was revealing. We found that when the sex and race categories of a target shared a high degree of stereotype overlap (for example, Asian Women and Black Men), mouse trajectories were relatively direct toward the correct sex category button. When the sex and race categories shared little stereotype overlap, in contrast, mouse trajectories were less direct. Instead, these trajectories revealed a significant departure from a straight line toward the correct category, instead veering toward the incorrect alternative that appeared on the opposite side of the monitor. We interpreted these effects as evidence for top-down mediation of sex categorization via stereotypes. Indeed, in an additional study we found that the degree of implicit associations between the categories

Black and Men and the categories Asian and Women predicted the interference of mouse trajectory on low overlap trials.

Finally, we have examined not only how the body communicates sex category membership to observers, but also the development of observers' ability to exploit such cues for making judgments, and the evaluative implications therein. In one set of studies, for example, my colleagues and I used corneal-reflection eye-tracking to determine where observers looked as they visually scanned bodies. Not surprisingly, observers concentrated their visual attention in a sexually dimorphic region of the body, the waist and hips. Yet this distribution of scanning changed when we pre-specified the targets' sex. Under these conditions, scanning of the waist/hips dropped to chance levels, highlighting the importance of the waist/hips for sex categorization. This pattern of visual behavior indicated that the body's shape was a critical cue that informed sex category judgments.

Having established the link between body shape and perceived sex category, I examined how sex categorization constrains the interpretation and evaluation of other gendered cues. Observers judged the sex, masculinity/femininity, and attractiveness of animations that varied in body shape and motion. Across multiple studies, sex judgments relied quite heavily on body shape; attractiveness judgments incorporated both perceived sex and masculinity/

femininity. Images that were judged to be men based on body shape were judged to be more attractive when they walked with masculine, relative to feminine, body motion. The opposite was true of walkers judged to be women. Sex categorization changed the evaluative implications of sexually dimorphic body motion.

In other studies, I have found similar effects for perceptions of a concealable social category in how observers use sexually dimorphic cues to judge the sexual orientation of others. In this research, I included both animated stimuli and videos depicting real people walking. Participants judged the sexual orientation of these targets that varied in body shape and motion. Once categorized according to sex, the gender typicality of walk motion determined whether perceivers judged a target to be gay or straight. This heuristic led to increased accuracy for judgments, especially for male targets. Once again, sex categorization provided the foundation for observers to determine whether a target embodied gender typical or atypical characteristics, and they used this to infer sexual orientation. It is important to note that although this categorization is not inherently evaluative, judging a person to be gay or lesbian assigns them to a stigmatized social group, and is therefore likely to have broad interpersonal implications.

Collectively, the results of the research I have described highlight an important role for sex

categorization as context for other aspects of social perception, including judgments of other social categories (for example, race, sexual orientation, and emotion state) and social evaluations (for example, attractiveness). Currently, my students and I are examining how individuals strategically exploit such tendencies (for example, by systematically altering the gender typicality of expressions, movements, and appearance) to communicate their identities to others.

Kerri L. Johnson is an Assistant Professor in the Department of Communication Studies and Director of the Social Communication lab at UCLA. Her current research interests include the communication of identity through nonverbal means, the production and perception of sexually dimorphic body motion, and the efficiency of "thin slice" modes of communication. Additional information about Kerri's research can be found at her website: http://web.mac.com/kerri.johnson/Kerri_L._Johnson,_Ph.D./Home.html. She received a Faculty Development Grant from CSW to support her research.

Works in Progress



A Symposium featuring
these recipients of CSW Faculty
Development Grants :

Gil Hochberg

Rachel Lee

Susanne Lohmann

Victoria Vesna

Kerri L. Johnson

Patricia Greenfield

Kendra Willson

Wednesday, May 12th,
4-6 pm, 314 Royce