Gender effects on the understanding kind and hostile intentions displayed by dyadic body movements.

Liang Huang

Minnan Normal University, China, Email: yeoo5860@163.com

Understanding different kinds of communicative intentions conveyed by others is essential for successful human interaction. However, the gender effects of the observers and actors/actresses in processing the kind and hostiles communicative intentions within social interactions are largely unknown.In order to explore the gender effects in understanding kind and hostile intentions (versus noninteractive intention) displayed by dyadic individuals??? whole body movement, we recorded the accuracy and reaction time (RT) when participants performed the intention inference task. Sixty college students were recruited to participate in the experiment.

Both significant main effects of the gender of observers and actors/ actresses on the accuracy existed, which showed female observers performed better than the males on intention understanding and demonstrated a prominent male actors??? advantage, respectively. The results also indicated higher accuracies and shorter RTs in hostile intention understanding, which were consistent with the negative bias theory. Notably, a significant interaction effect between the gender of actors/actresses and intention conditions on RTs was found. It showed longer RTs on understanding the kind intentions of actors than those of actresses while understanding hostile intentions showed a reverse pattern. Meanwhile, neither main effect of the gender of the observers nor interaction effects between the gender of observers and other independent factors on the RTs were found.

The evidence demonstrated that the behavioral processing underlying social intentions understanding may vary with different types of communicative intentions, which was also modulated by the gender of the actors/ actresses. The study may help to understand gender vulnerability to neuropsychiatric impairments in social intentions reading.

In either a kind or hostile way, just by looking at theirbodilyaction or their facial expression (Carter and Pelphrey 2008;Ekmanand O'Sullivan 1991). A large body of scholars such as Hess al. (2000), Hess and Bourgeois (2010), Sawada et al.(2014), and Švegar et al. (2018) have investigated the gen-der impact on ability to understand body movement.Nevertheless, to date, it remains unclear whether genderaffects the understanding of emotional (kind/hostile) bodyintentions within a social context. Therefore, to understandkind and hostile intentions versus neutral intention, we con-ducted a two-slide paradigm (action preparation-executionframe) which was validated by many previous studies.

A power analysis with G*Power (Faul et al. 2007)indicatedthat 56 participants would be sufficient to detect a mediumsized effect (Cohen'sf= 0.25) with 80% power. Sixty Chinesecollege students (30 males, Mage=21.37, SD = 1.65; 30 fe-males, Mage=21.07, SD = 1.74; with no significant age dif-ferences between males and females, Mann-Whitney test, U=382.5, p> .05), who were right-handed and had normal orcorrected vision, participated in the study. Likewise, the re-search was carried out according to the ethical principles re-garding human experimentation laid down in the "Declarationof Helsinki". Therefore, before commencement, informedwritten consent was obtained from all participants.

Implications from this study suggest that knowledgeon many psychiatric disorders characterized by intention andemotion reading deficits (e.g., autism, depression), and alsohave gender-specific patterns of prevalence and severity, maybe benefited by the study (He et al. 2018). Taken together,these lines of evidence extend our knowledge on genderbiases/stereotypes in perceiving emotional intents from bodypostures.Future research should explore the effects of the male andfemale actors stable traits (empathy, dominance, competence)transmitted by other channels; for instance, clothing on bodyintention understanding, together with the underlying driversof these effects. Future research along the lines of this re-search, maywell also examine the response accuracy regard-ing more ambiguous dyadic social scenarios. It will also be ofworth to conduct comparative research between Chinese andon a select group of Westerners on reading body intentionsfrom the cross-cultural perspective in the future.

To determine whether a statistically significant difference ex-ists, the participants'behavior performances (accuracy andRT) were submitted to a 2 × 2 × 3 repeated-measures analysisof variance, ANOVA with factors Gender of observers (fe-male/male), Gender of actors (female/male) and Intention con-ditions (kind, hostile and neutral). The Greenhouse-Geissercorrection was used when the assumption of sphericity ofthe repeated measure was violated In this study a two-frame design was adopted to examinegender impacts on emotional intention reading. The two-frame design, as a valid methodology, may help to understand ,under what type of bodily action effectively provides individ-uate information. The study also paved the way for unravelingthe gender differences of neural correlates underlying kindand hostile intentions. The results also highlighted the impor-tant role of gender-emotional stereotypes as well as a femaleobserver advantage in emotional

body intention reading.In conclusion, women performed better than men did onthe accuracy of body intention understanding. The hostile in-tention understanding outweighed "kind"in both accuracyand reaction times. Hostile intention understanding was fasterfor understanding a man's hostile intentions than those of awoman's, while slower for understanding a man'skindinten-tions than those of a woman'.