

Yu, K., Liao, Y., Fu, D., Chen, S., Long, Q., Xu, P., & Yuan, J. (2020). Androgyny eliminates sex differences in emotional reactivity: ERP and network coupling evidence. *Neuroscience Letters*, 720, 134776. <https://doi.org/10.1016/j.neulet.2020.134776>

The study focuses on how gender roles relate to biological sex differences in regard to emotional reactivity. Participants were divided into 4 groups being birth males who identify as male gendered, birth females who identify as female gendered, gender nonconforming males who identify as androgynous, and gender nonconforming females who identify as androgynous. So: man, woman, androgynous & androgynous. Event related potentials (ERP) ~ which measure the brain's response to stimulus as well as late positive potential (LLP) ~ which is a subset of (ERP) meant to measure emotional arousal, were the 2 neurobiological points of assessment within the piece. The measurement of both (ERP) and (LLP) was performed through sensors attached to an elastic cap. Each person was strapped to the cap, left alone in a room with a TV screen, and meant to view a series of images: one set were neutral pictures of humans and animals, the second set were pictures of humans and animals in distressed or mutilated settings. Block 1 being neutral images, block 2 being negative images. (ERP) and (LLP) were recorded of the 4 groups. Results of the man gendered as well as woman gendered group were typical according to the stereotype, that, “-typical females showed larger emotional reactivity than typical males in both behavior and LLP amplitudes.” (Yu et al 4). However, contrast to gender stereotype presents itself within the gender nonconforming male androgynous and gender nonconforming female androgynous groups, being, “-we found that there was no significant difference in emotional reactivity between androgynous males and androgynous females, irrespective of whether emotional state rates, LLP amplitudes, or network properties were concerned.” (Yu et al 7).

As Western society continues to evolve through the sex/gender system, research of information pertaining to neurobiological response is essential in regard to measuring the legitimacy of the popular yet questionable narrative that sex/gender are fused together. The biological reality that the chromosomal sex duality of typical XX and XY contains differences between in regard to hormonal cycle are completely true - however this is no excuse for the reinforcement of the masculine & feminine heteronormative sphere which we have become so accustomed to; there is no biological foundation for female sexed individuals to wear pink as much so as there is no biological foundation for male sexed individuals to wear blue jeans. The extension of sex into the gender sphere is far fetched. The study by Yu et al goes to show that

neurobiological response has much more to do with self-perception or lack thereof by means of androgyny compared to the narrative of typical XX and XY chromosomal sex driving everything.