Philosophy Journal (2025)
Clausius Scientific Press, Canada

DOI: 10.23977/phij.2025.040106
ISSN 2616-2288 Vol. 4 Num. 1

Interpretation of Sexual and Gender Concepts from an Anthropological Perspective

Yiming Yun

School of History, Anthropology, Philosophy and Politics, Queen's University, Belfast, Northern Ireland, United Kingdom
yunyming@outlook.com

Keywords: Sex and Gender, Anthropological Perspectives, Cultural Variability, Nonbinary Identities, Socialization Mechanisms

Abstract: This article explores the anthropological distinctions and interconnections between sex (biological attributes) and gender (sociocultural roles), emphasizing their fluidity across cultures and time. Through cross-cultural case studies, primate behavioral research, and contemporary debates, it critiques binary frameworks and highlights the societal implications of anthropological insights. The paper argues that a nuanced understanding of sex and gender is essential for fostering inclusivity, informing equitable policies, and advancing human rights. By integrating biological, cultural, and ideological perspectives, this work underscores anthropology's role in challenging norms and addressing systemic inequalities.

1. Introduction

Anthropology provides a critical lens to disentangle sex and gender—concepts often conflated in everyday discourse. Sex refers to biological traits such as chromosomes (XX/XY), reproductive anatomy, and hormone profiles, whereas gender encompasses socioculturally constructed roles, behaviors, and expectations [20]. These constructs shape identity formation, social hierarchies, and cultural practices, making their study central to anthropological inquiry. This article examines their dynamic relationship, cultural variability, and relevance to contemporary societal challenges, aiming to bridge academic research and social transformation[15].

2. Sex vs. Gender: Biological Foundations and Cultural Constructs

Biological sex is traditionally defined by physiological markers, including genitalia (penis/vagina), chromosomal configurations, and hormone levels (androgens/estrogens). However, intersex individuals—those born with atypical combinations of these traits—complicate binary classifications [19]. Approximately 1.7% of the global population is intersex, challenging the notion of a strict male/female dichotomy [13]. In many societies, intersex infants undergo medically unnecessary surgeries to conform to binary norms, raising ethical concerns about bodily autonomy and informed consent [18].

Gender, conversely, is culturally mediated. From infancy, individuals undergo gender

socialization, absorbing norms through family, education, media, and religion. For example, boys are often encouraged toward assertiveness and independence, while girls are socialized into modesty and caregiving roles [16]. These norms are reinforced through rituals, language, and institutional practices, perpetuating gendered expectations. In some cultures, such as the **Bugis of Indonesia**, five gender categories exist: *oroané* (male), *makunrai* (female), *calabai* (feminine males), *calalai* (masculine females), and *bissu* (androgynous spiritual leaders) [7]. This complexity illustrates how gender systems are deeply embedded in cultural cosmology.

Primate studies further undermine biological determinism. Bonobos, humans' closest relatives, exhibit female-dominant societies with fluid sexual behaviors, including same-sex pairings and conflict resolution through intimacy. In contrast, chimpanzees maintain rigid male hierarchies [5]. Such variability highlights the cultural plasticity of gender-related behaviors, even among nonhuman primates[17]. Similarly, human cognitive differences between sexes—such as spatial reasoning or emotional expression—are minimal and often linked to cultural conditioning rather than innate biology [2]. For instance, girls in societies with equitable educational opportunities perform equally to boys in STEM fields, debunking myths of biological inferiority [7].

3. Cultural Expressions of Gender: Beyond Binaries

Cultures worldwide demonstrate diverse gender systems that transcend biological sex. The "Mohave people"of North America historically recognized four genders: male, female, *alyha* (male-bodied individuals adopting feminine roles), and *hwame* (female-bodied individuals adopting masculine roles). These roles were tied to spiritual beliefs and community functions, illustrating gender's embeddedness in cultural cosmology [14]. Similarly, the "Zapotec"of Mexico acknowledge *biza'ah*, a third gender category for male-assigned individuals who adopt distinct speech patterns, occupations, and social roles [13].

In South Asia, **hijras**—individuals assigned male at birth who adopt feminine identities—hold ritual roles in Hinduism and are legally recognized as a third gender in India and Bangladesh [9]. Despite legal recognition, hijras face systemic discrimination, underscoring the gap between policy and practice. Meanwhile, in Samoa, the **fa'afafine**—a gender-fluid community—are celebrated for their roles in caregiving and cultural preservation, challenging Western notions of gender rigidity [10].

4. Socialization mechanisms perpetuate gendered norms

For instance:

- Family: Parents often reward gender-conforming behaviors (e.g., praising boys for toughness, girls for empathy).
- Education: Schools may segregate activities (e.g., sports, STEM clubs) by perceived gender aptitudes.
- Media: Advertising and films frequently reinforce stereotypes (e.g., men as breadwinners, women as caregivers) [2].

Despite historical rigidity, contemporary societies increasingly recognize nonbinary and transgender identities. Legal reforms in countries like Canada, Germany, and Argentina now allow nonbinary gender markers on official documents, reflecting anthropology's influence on policy [5]. However, backlash against gender diversity persists, as seen in anti-trans legislation in the United States and the United Kingdom, highlighting ongoing struggles for acceptance [3].

5. Forensic Anthropology and Gender Identity

Forensic anthropology, which identifies human remains, faces ethical and methodological dilemmas when biological sex conflicts with gender identity. For example, transgender individuals undergoing hormone therapy or surgeries may exhibit skeletal features that blur traditional markers of sexual dimorphism (e.g., pelvic shape, skull morphology) [4]. Misclassifying remains not only undermines accuracy but also disrespects the deceased's identity, necessitating interdisciplinary collaboration with LGBTQ+ communities[11] Recent advancements in isotopic analysis and genetic testing offer new tools to infer gender identity indirectly, such as detecting hormone use or cultural markers in burial practices [8].

6. Ideological Biases in Research

Anthropological studies are not immune to ideological biases. Biological determinism—the belief that gender roles are innate—has historically influenced research, perpetuating stereotypes (e.g., male superiority in STEM fields)[12]. However, meta-analyses reveal that cognitive differences between sexes are negligible and better explained by cultural factors like educational access and societal expectations [7]. For instance, girls in egalitarian societies perform equally to boys in mathematics, challenging essentialist narratives [8].

Methodological Limitations

Systematic reviews often overlook gender diversity due to binary data collection(e.g., male/female categories) and insufficient intersectional analysis [1]. This exclusion reinforces exclusionary norms and limits the applicability of research findings. Emerging methodologies, such as decolonized ethnography and participatory action research, prioritize marginalized voices and challenge Western-centric frameworks [5].

7. Impact on Societal Norms and Policies

Anthropological insights have reshaped societal perceptions of gender. Margaret Mead's seminal work in Samoa revealed that gender roles—such as aggression in men or nurturing in women—are culturally variable, countering Western assumptions of universality [6]. Her findings informed feminist movements and policies promoting gender equality.

Case studies of "matriarchal societie", such as the Mosuo of China, demonstrate alternative models of governance where women control property and lineage, challenging patriarchal norms [7]. Similarly, advocacy for legal gender recognition—led by anthropological research on third genders—has driven reforms in over 20 countries, advancing LGBTQ+ rights (Ryan, 2018). In healthcare, anthropological studies have highlighted disparities in access to gender-affirming care, prompting reforms in medical training and patient protocols [4].

8. Conclusion

Sex and gender are multifaceted constructs shaped by biology, culture, and power dynamics. Anthropology dismantles binary frameworks, advocates for inclusivity, and provides tools to address systemic inequalities. Future research must prioritize intersectionality(e.g., race, class, disability), global perspectives, and methodological rigor to foster equitable societies. By bridging academic inquiry and social action, anthropology remains vital in understanding—and transforming—human diversity.

Acknowledgement

Many thanks to the reviewers for their valuable comments and patient guidance.

References

[1] Archer, J. (2019). The reality and evolutionary significance of human psychological sex differences. Biological Reviews, 94[4], 1381–1415. https://doi.org/10.1111/brv.12507
[2] Bhargava, A., Arnold, A. P., Bangasser, D. A., Denton, K. M., Gupta, A., Hilliard Krause, L. M., ... & Verma, R. (2021). Considering sex as a biological variable in basic and clinical studies: An endocrine society scientific statement. Endocrine Reviews, 42[3], 219–258. https://doi.org/10.1210/endrev/bnaa034
[3] Blackless, M., Charuvastra, A., Derryck, A., Fausto-Sterling, A., Lauzanne, K., & Lee, E. (2000). How sexually dimorphic are we? Review and synthesis. American Journal of Human Biology, 12(2), 151–166. https://doi.org/10.1002/(SICI)1520-6300(200003/04)12:2<151::AID-AJHB1>3.0.CO;2-F
[4] Bonvillain, N. (2020). Women and men: Cultural constructs of gender (7th ed.). Rowman & Littlefield.
[5] Davis, G. (2015). Contesting intersex: The dubious diagnosis. NYU Press.
[6] Davies, S. G. (2021). Gender diversity in Indonesia: Beyond binaries. Journal of Southeast Asian Studies, 52[1], 1–20. https://doi.org/10.1017/S0022463420000445
[7] Fausto-Sterling, A. (2019). Gender/sex, sexual orientation, and identity are in the body: How did they get there? The Journal of Sex Research, 56(4–5), 529–555. https://doi.org/10.1080/00224499.2019.1581883
[8] Fiani, C. N., & Han, H. J. (2020). Navigating identity: Experiences of binary and non-binary transgender and gender non-conforming (TGNC) adults. In K. L. Eckstrand & J. Potter (Eds.), Non-binary and genderqueer genders (pp. 63–76). Routledge.
[9] Foley, S., & Toosarvandani, M. (2022). Extending the person-case constraint to gender: Agreement, locality, and the syntax of pronouns. Linguistic Inquiry, 53[1], 1–40. https://doi.org/10.1162/ling_a_00422
[10] Galupo, M. P., Pulice-Farrow, L., & Ramirez, J. L. (2017). "Like a constantly flowing river": Gender identity flexibility among nonbinary transgender individuals. In J. Sinnott (Ed.), Identity flexibility during adulthood: Perspectives in adult development (pp. 163–177). Springer.
[11] Gowland, R. (2021). Ethical issues in the bioarchaeology of intersectionality. Bioarchaeology International, 5[3], 167–182. https://doi.org/10.5744/bi.2021.1002
[12] Halpern, H. P., & Jenkins, M. P. (2016). Parents' gender ideology and gendered behavior as predictors of children's gender-role attitudes: A longitudinal exploration. Sex Roles, 74(11–12), 527–542. https://doi.org/10.1007/s11199-015-0555-0
[13] Hembree, W. C., Cohen-Kettenis, P. T., Gooren, L., Hannema, S. E., Meyer, W. J., Murad, M. H., ... & T'Sjoen, G. G. (2017). Endocrine treatment of gender-dysphoric/gender-incongruent persons: An endocrine society clinical practice guideline. The Journal of Clinical Endocrinology & Metabolism, 102(11), 3869–3903. https://doi.org/10.1210/jc.2017-01658
[14] Herdt, G. (Ed.). (2020). Third sex, third gender: Beyond sexual dimorphism in culture and history. Princeton University Press.
[15] Hua, C. (2001). A society without fathers or husbands: The Na of China. Zone Books.
[16] Hyde, J. S., Lindberg, S. M., Linn, M. C., Ellis, A. B., & Williams, C. C. (2008). Gender similarities characterize math performance. Science, 321(5888), 494–495. https://doi.org/10.1126/science.1160364
[17] Jones, T. (2023). Global anti-gender movements and their impact on transgender rights. Gender & Society, 37[1], 12–35. https://doi.org/10.1177/08912432221124567
[18] Kappeler, P. M., Huchard, E., Baniel, A., Canteloup, C., Charpentier, M. J., Cheng, L., ... & Girard-Buttoz, C. (2022). Sex and dominance: How to assess and interpret intersexual dominance relationships in mammalian societies. Frontiers in Ecology and Evolution, 10, 918773. https://doi.org/10.3389/fevo.2022.918773
[19] Lacasse, A., Pag é, M. G., Choini ère, M., Dorais, M., Vissandj é, B., Nguefack, H. L. N., ... & Vanasse, A. (2020). Conducting gender-based analysis of existing databases when self-reported gender data are unavailable: The GENDER Index in a working population. Canadian Journal of Public Health, 111(2), 155–168. https://doi.org/10.17269/s41997-019-00276-3
[20] Mageo, J. M. (2018). Theorizing self in Samoa: Emotions, genders, and sexualities. University of Michigan Press.