
| RESEARCH ARTICLE

Gender Roles and Gender Differences Dilemma: An Overview of Social and Biological Theories

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| ABSTRACT

The union between a male and a female does produce not only new offspring but also a whole journey of gender experience. Scholars have posed countless questions, hypotheses, and articles seeking answers, validations, and explanations to how and why gender differences exist. To answer these questions, the present study reviewed the social and biological theories on gender differences, seeking to unearth their perspectives on the origin of gender differences. From the review, the social theory postulated that the society, through its social structures, created gender difference as a way of ensuring the division of labour between men and women. The biological theory also maintained that gender differences are natural orders created by biological processes to maintain a balance within the natural ecosystem. Based on the review, a model was developed to explain how both social and biological activities result in dividing roles between men and women. Recommendations that will ensure coexistence between men and women were also given.

| KEYWORDS

Gender; Disparity; Socio-culture; Nature; Sex; Theory.

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1. Introduction

Gender differences and gender roles in society have been one of the most tabled topics in public discourse. Many scholars have posed countless questions, hypotheses, and articles seeking answers, validations, and explanations to how and why gender differences exist. A recent study by the PEW research centre found that most people, especially in America, know that men and women vary in different ways, particularly in their feelings towards issues, their physical abilities, personal interests, and their approach toward parenting; but lack the knowledge of the origin of these differences (Parker et al., 2017). The continuous existence of gender differences between men and women has perpetuated different explanations from scholars. For instance, Boserup (1970), in research titled "Woman's Role in Economic Development", attributed differences in gender roles to agricultural origin. The author argued that the agricultural system in the preindustrial era greatly defined men's and women's roles (Boserup, 1970 in Alesina et al., 2013). Also, John Gray's bestseller, "Men are from Mars; Women are from Venus", attributed gender differences between men and women to psychological variation (Basu et al., 2017; Gray, 1993). Additionally, some socialists also attributed the epitome of gender difference to what they called the "productivity puzzle" (Mairesse & Pezzoni, 2015; Robinson, 2019). Although the origin of gender roles and gender differences continues to be a debated topic, Dorius and Firebaugh (2010) documented that many countries around the world, especially developed countries, have done extensive work to curtail the varied differences and inequalities between men and women; however, population growth poses a great challenge to the fight. They stated that gender inequality is more prevalent in countries where the population growth rate is high.

Much of the available literature on gender differences is usually based on studies limited to a subset of research in specific jurisdictions, institutions, disciplines, regions, and so forth, which limits the generalization of most of the findings. It is, therefore,

important that the fundamentals of gender differences and gender roles are understood to guide future research and decision making.

In recent times, there have been many disciplines that have formulated theories to define and explain the concept of gender differences, gender inequalities, and gender roles as either being created by nature or society. The notable among these disciplines are the biological and the social perspective. They both hold different perspectives on the origin of gender differences in society. The present study seeks to review the social and biological theories of gender difference by finding answers to the following important questions.

1. What are the Biological perspectives on gender differences?
2. How do social theorists explain gender differences?
3. How do Biological and Social perspectives contribute to shaping gender disparities in society?

2. Gender theories

2.1 Social theory on gender difference

The social theory is based on the premise that society is made up of interdependent parts, each of which contributes to the functioning of the whole society (Lindsey, 2015). The theory examines the various elements within the society, the relationships that exist among them and the role played by each element to maintain the general stability in the society. It postulates that amidst social disorder, the society can be restored to its original state when the elements within the society perform their unique roles effectively. The theory is believed to have originated from the works of Emile Durkheim, who worked extensively on society to understand how it remains relatively stable (Crossman, 2020). Durkheim believed that society was greater than the aggregate of any of its elements and that individual action was not the same as collective action; therefore, studying collective action was somewhat different from studying an individual's behaviours (Griffiths & Keirns, 2015). The work of Durkheim paved the way for other sociologists like Marshall, Pareto, Merton, Rostow and Weber to work extensively on functionalism theory, which covered gender differences (Ormerod, 2019; Griffiths & Keirns, 2015).

Functionalism argues that gender roles have been in existence even before the preindustrial regime, when men oversaw masculine activities, such as hunting and gathering outside their homes, while women stayed home and performed light domestic activities, such as childcare and cooking. Hunting and other agricultural activities in the preindustrial era were considered to be dangerous and brave activities that only men could do; therefore, women were not involved, and once established, these roles were carried on to successive generations since they were perceived to be the most effective way to keep the family system functioning properly (Rothschild, 2015; Boserup, 1970 in Alesina et al., 2013). The functionalist perspective on gender difference was largely developed by Talcott Parsons in a study "model of the nuclear family" in 1943 (see Aeby et al., 2019; Rothschild, 2015; Rodman, 1965). Parsons and other functionalists asserted that gender differences prevail in the society as effective ways of creating a division of labour among men and women; thus, men perform the 'instrumental role' ('breadwinner role), and women perform the expressive role of "nurturing and housework" (LibreTexts, 2020; Thompson, 2014).

However, the social ideology on gender roles has been criticized by several socialists such as Karl Marxists and Antonio Gramsci. According to Marxists, the functionalism theory is in direct support of gender disparity rather than studying the functions and interrelation among men and women in society. The author argued that the functionalist perspective on the division of labour among men and women creates class differences, which insidiously relegates women to the background. The author stressed that an improper division of labour makes women perform the housewife and less important roles in the society, thereby making them dependent on men for income and other basic needs, leading to men's supremacy over women (see Ware, 2019; De Souza, 2018; Gary, 2018). Similarly, Antonio Gramsci criticized the functionalism theory for its support for conservatism (status quo) of cultural hegemony. According to the author, the theory does not challenge people to take active responsibility for changing their social environment, even when doing so will help them. It rather considers a strive for social change as an anathema due to its beliefs that the various elements in the society have the tendency to repair their own ravages in an organic way (Crossman, 2020).

From the social point of view, it can be deduced that our social structures within society have predefined the roles men and women play in society. It posits that the division of roles among men and women is not meant to discriminate one gender from the other but rather, to maintain social cohesion.

2.2 The biological theory on gender difference

The biological theory argues that biological attributes such as genes and hormones that determine the sexuality of individuals are responsible for the different behaviour and differences among males and females in our society. The theory's proposition is that biological sex creates gendered behaviour. The theory also delineates the notion that males and females are uniquely made by nature and possess distinctive biological characteristics without any external influence; thus, socio-culture and environment have

no hand in female and male behaviour (Burke & Embrick, 2020). For instance, in a Psychological analysis of gender differences and gender similarities, Chong (2005) contended that exposure to biological elements like estrogen and androgen can influence not only male and female brain development but also childhood play behaviour, sexual orientation, and critical gender identity. Also, genetic dispositions, by means that one's evolutionary inheritance is showcased to have a direct impact on biochemical and structural differences between males and females (Chong, 2005). The biological theorists further argued that females are genetically inclined towards meekness and nurturing behaviour due to high levels of oxytocin in them, whereas males are predisposed towards adventure and aggression because of greater production of testosterone in them (Rimmele et al., 2009; Dabbs et al., 1995). Biological traits privileged men with hormones that stimulate sexual hierarchy, such as physical strength, courage, ambition, and promiscuity, whereas women are made up of biological traits that stimulate fidelity, nurturance, dependence, and caution (Rhode 1997). The theory associates human behaviour with natural factors and that individuals have no internal control over their behaviour and dispositions and are therefore devoid of responsibilities for their actions (Burke & Embrick, 2020). For decades, there have been several studies to validate the biological theory, and notably among them was an experiment conducted by Goy and Phoenix (1971); who injected female rhesus monkeys with testosterone prior to birth and later observed increased aggression among the monkeys (in Hines, 2011; Thornton et al., 2009). Similarly, Young (1966) performed an experiment on female and male rats by altering the level of hormones they received during their early development. The researcher observed reversed sexual behaviour changes among the rats: the female rats that received more testosterone displayed aggressive behaviour, whereas the female rats that did not receive the testosterone displayed meekness (see McLeod, 2014). Young's experiment was replicated by Gorski et al. (1985), who injected female rats with testosterone during pregnancy. After delivery, the researchers compared the physiology and behaviour of the experimental pups (baby rats) to the pups from the females who were not given the testosterone (the control group); the female pups from the experimental group had a masculine appearance and showed masculine behaviour (see Sammons, n.d). To establish the validity of the Young and Gorski et al. experiment, Hines (2011) extended the experiment to human beings; the researcher injected pregnant mothers with male hormones and later observed that the female babies born were more aggressive than normal female babies. The researcher, therefore, concluded that biological hormones have an influence on male and female behaviour. i.e., when the genes of an individual are manipulated, their behaviour will change in response to the manipulation. Consistently, the biological theory links aggressiveness, forcefulness, assertiveness, dominance, and strength of personality traits to masculinity, whereas meekness, submission, and passivity are associated with femininity (Jun 2009). A study of young children in their early ages identifies that nature distinguishes boys and girls in terms of their playing activities: boys tend to engage in rougher and tumble play, involving overall body contact and playful aggression than girls do. Males look primarily at mechanized objects and take more risks than females. They play with heavy toys like cars, trains, trucks, aeroplanes, and weapons, whereas girls prefer lighter toys like dolls and tea sets (Hines, 2011).

The biological theory brings to the understanding that males and females are not the same in terms of behaviour and physical appearance due to their biological differences, which make them behave and act differently in response to these innate features. This seeks to suggest that males and females cannot have the same treatment since they have different biological characteristics.

However, researchers such as Stone (2007) have criticized the biological theory for eliminating the role the environment plays in defining human behaviour. According to the researcher, the human environment, among other factors, goes a long way to shape their behaviour in society; thus, biological characteristics alone cannot be the basis for gender differences. Likewise, Roberto and Li (2016) opposed the biological claims that gender differences are fixed biological fixtures. They argued that gender differences are socially created concepts that are used to discriminate against women based on their biological makeup. They explained further that women are stereotyped as flighty and unreliable because they possess uncontrollable raging biological hormones that fuel unpredictable emotional outbursts. Furthermore, Gittins and Stroller also contended that being biologically female is not enough to justify why women earn less or are expected to take care of kids; therefore, the biological explanation cannot be the only basis to explain the gender difference between men and women. Therefore, there is a need for the social construction of roles and identities linked to the biological construction of masculinity and femininity (See Mikkola & Mari, 2019; Kirby, 1999).

2.3 The encapsulation of biological and social theories

The theoretical framework set out in figure 1 describes the biological and social processes that lead to the definition of gender roles and gender differences between men and women. As attributed to the biological theory, genetic processes begin the formation of males and females in humans, and by the action of chromosomes, the sexual identity of a newly formed embryo is determined. Naturally, a child is born either a male or a female based on specific biological characteristics he or she possesses. The sexual identity of a child contributes to his or her behaviour in society. And all things being equal, as the child grows, the hormones present in him or her naturally influence his or her behaviour. The male child tends to be more aggressive and engage in rough and tumble play, involving overall body contact, than girls do. Males look primarily at mechanized objects and take more risks than females. They also like playing with heavy toys like cars, trains, trucks, aeroplanes, and weapons, whereas girls prefer lighter toys like dolls and tea sets (Hines, 2011). While the biological process is controlled by nature, the social process is initiated by society.

From the social point of view, we can observe from figure 1 that the social process of gender difference starts after a child is born. When a child is born, society calls the child a male or a female based on their biological characteristics and existing social practices. Children are mostly assigned a sexual identity, either female or male, by their family or doctor at birth as a requirement by society to issue a birth certificate (Tolland & Evans, 2019). Furthermore, based on social norms and practices, children are given different orientations by their parents. Males are taught to be brave, adventurous, aggressive, and so forth, while females are taught to be calm, polite, and submissive. Parents usually give boys playing materials like cars, trains, trucks, aeroplanes, and weapons while the girl child is offered toys like dolls, make-up kits, tea and others.

The socio-cultural practices and the different treatment given to children gradually shape the way they interact and relate to each other. In many cultures, sociocultural practices create a big gap between men and women: men are given more opportunities than women. Men become possessors and controllers of resources to the detriment of women. Both the social and biological theories postulate that men and women have their predefined roles by nature and society.

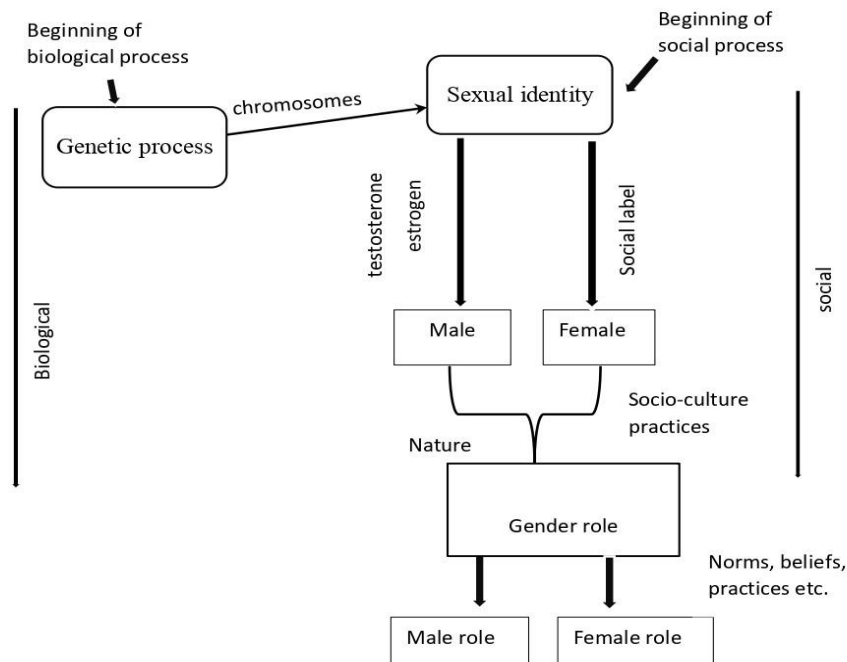


Fig.1 An encapsulation of biological and social theories on gender difference
 Sources: Authors' own sketch based on Money and Ehrhardt biosocial model (see McLeod, 2014)

3. Conclusions and Recommendations

The biological theory proposes that there is no difference between sex and gender; therefore, the biological traits that segregate males and females sexually also serve as the primary cause of gender difference; that is, these biological traits possess special characteristics that naturally trigger feminine and masculine behaviours in humans.

The biological theory does not recognize gender differences as a significant problem; rather, they are a natural process of maintaining natural order.

The social theory, on the other hand, explains that men and women are not born the same; therefore, they deserve different treatments; and these different treatment given by society is an effective way to ensure the division of labour among men and women. The division of labour also contributes to cultural and social cohesion.

The social process of gender definition depends on the biological process. For instance, society cannot assign an identity like a boy or girl to a child without first knowing his or her biological identity. Thus, all other social processes proceed with the biological processes. This review, therefore, concludes that gender roles and gender differences are of both social and biological origin. Gender difference is a social process and also a biological process for identification and maintaining natural order.

Unfortunately, due to different sociocultural practices and misunderstandings of these processes, one gender mostly becomes a victim. In most cultures, especially in developing countries, women always become victims of gender disparities. Social-cultural practices and norms give men free-range to exercise superior authority over women, denying them the opportunity to perform their social rights.

We, therefore, propose a social education on gender roles as a way of maintaining gender balance in contemporary society.

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