

Biological and Learning Dialectics of Gender Differences

Early belief was that male and female brains were different as were their bodies. Women had the smaller brain size, and size being an indicator of intelligence they were believed to be less intelligent than men.⁽¹⁾ This biological argument for gender differences overlooked the correlation between the size of the brain and that of the body, whereby men's slightly larger brain is directly related to an average larger size of the body.

However, research on gender differences entered a new phase at the beginning of the nineteenth century, characterized by the rise of the mental testing movement and the development of standardized ability tests⁽²⁾. Alfred Binet, 1905 (French Psychologist) and Lewis Terman, 1916 (American psychologist) devising and testing Intelligence Quotient tests (IQ) believed that, in general, there were no gender differences. They attempted to produce equal average scores to construct their tests, and indeed, repeated large scale testing yielded on the whole no gender differences in general.

The next chapter of testing was with L.L. Thurstone's development of the Primary Mental Abilities (PMA) test in the 1930s and 40s. The PMA assesses verbal comprehension, word fluency, number, space (spatial visualizing), memory, perceptual speed and reasoning. By the 1960s, psychologists Anne Anastasi's *Differential Psychology* (first

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Hana Papanek

published in 1937) and Leona Tyler's *The Psychology of Human Differences* (first published in 1947) reviewed series of gender related studies and experiments using PMA. Their conclusion revealed that females were superior in verbal and linguistic functions while males were superior in spatial and mathematical abilities.

In the 1980s, the development of a new statistical method called meta-analysis, using quantitatively cumulating results from many studies, produced more sophisticated probing of patterns of gender differences. Basic conclusions drawn from meta-analysis were that the largest difference is for one type of spatial ability, i.e. mental rotations, but gender difference in mathematical performance is moderate and there is no difference in verbal ability.⁽³⁾

Though sex is biologically determined, gender is culturally defined.⁽⁴⁾ Hence, the biological and

learning argument extends into anthropological constructs of gender differences. A cross-cultural division of labor by sex exists where women are child-bearers because they are the ones to give birth, and men are the providers because they are more aggressive and less nurturing. Such biological determinants are largely responsible for a sexual division of labor, and the private/female-public/male dichotomy of social structure. Productive and reproductive activities being organized in terms of public and private spheres, the public became men's sector for achieving power and status, whereas women's power and status lie in mastering and conforming in the private sector.⁽⁵⁾

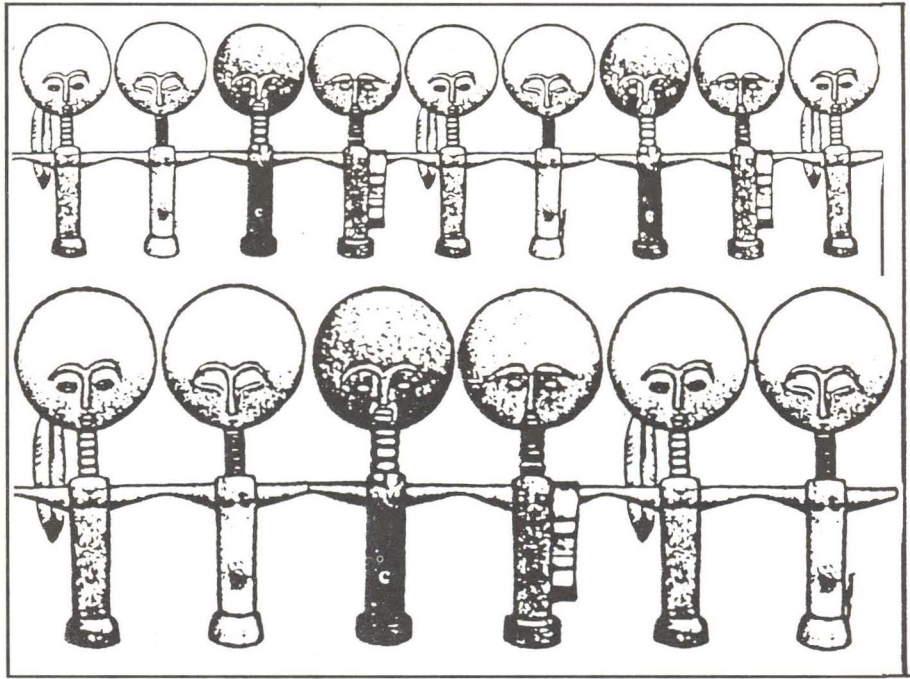
Other anthropologists have pointed out that the consistency of behavioral and temperamental differences between the sexes in different cultures cannot be reduced to biological determinism; it is rather a result of learning the environment.⁽⁶⁾ Boys

and girls will grow to become the men and women they are socialized and expected to be. Society itself structured along relevant sexual divisions of labor acts as the reference model further reinforcing gendered differences. To what extent gender is related to patriarchy is still debatable. Patriarchy essentially refers to kinship systems of male domination, whereas gender is relational and refers to culturally defined qualities of men and women.⁽⁷⁾

Are biological and learning variables mutually exclusive as such? It would seem that modern times illustrate how gender differences reflect an inequality.. Biologically, it is next to impossible that men will ever give birth, while social and cultural changes are slowly revisiting gender roles. Hence, the essence of women's distinctiveness lies in the multiplicity of their roles.⁽⁸⁾ Most women, in addition to being primarily responsible for house management and child bearing are heavily involved in economic production.

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Thus far, this article reviewed literature that attempt to trace gender differences. Gender is essentially a cultural principle, based on the social construction of biological differences as feminist Hana Papanek puts it. Papanek goes on to note that "gender differences, . . . are one of the great fault lines of societies - those marks of difference among categories of person



that govern the allocation of power, authority and resources". It is also generally accepted that gender - like class and race/ethnicity - is a source of inequality..⁽⁹⁾ Gender is not a modern synonym for feminism, but a discipline in itself. One that has become quite developed and interdisciplinary. It is not confined to psycho-social analysis of human systems, but examines sectors in which differences are inherent and continue to be unjustly and discriminably acute. Valentine Moghadam explicitly explains the concept of gender by saying:

Like class, gender is a relational concept. In the same way that class implies a relationship between labour and capital, gender implies a relationship between men and women. Many . . . assume that "women's studies" are of concern to women only.. gender is not "only about women"; it refers to a structural relationship between the sexes which is linked to the state, the economy and to other macro- and micro-processes and institutions. . . . Like class, gender

is not a homogeneous category; it is internally differentiated and elaborated by class, race/ethnicity, age, region, education.⁽¹⁰⁾ •

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(1) Janet Shibley Hyde. "Meta-Analysis and the Psychology of Gender Differences". *SIGNS*. 16-1:55-73, Autumn 1990. pp.56.

(2) *Ibid.* pp. 58.

(3) *Ibid.* pp. 72.

(4) Tam Siu-mi, "Gender and Culture: An Anthropological Perspective". *Gender Studies: News and Views*. No.2. 9/1991. pp. 7. Newsletter of Gender Research Programme, H.K. Institute of Asian Studies. The Chinese University of Honk Kong.

(5) Randa Abul-Husn. "The Private/Public Dichotomy". *Al-Raida*. Vol.IX, No. 53. Spring 1991. pp. 2.

(6) Tam Siu-mi, *Ibid.*

(7) Valentine M. Moghadam. *Gender, Development, and Policy: Toward Equity and Empowerment*. Research for action by the World Institute for Development Economic Research (WIDER) of the United Nations University. 1990. pp.6.

(8) *Ibid.*

(9) *Ibid.* pp.8.

(10) *Ibid.*