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# NEURODYNAMIC AND CHARACTEROLOGICAL FEATURES OF GENDER DIFFERENTIATION: AN INDICATOR OF SEXUAL IDENTITY

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### *Abstract*

The article is devoted to the study of gender differentiation of the mental properties of men and women. In the course of analysis of literary sources, it was concluded that to date, research in the field of psychophysiological characteristics of representatives of different sexes has been studied fragmentarily, being relevant and dictated by the needs of society, as they are indicators of the cultural and social transformation of society. And although our ideas about the biological field remain unchanged, the behavior patterns of men and women can change during such transformations. Changes in these models can be defined as gender deformation and violation of gender identification as representations of oneself – a male or female carrier. The psychological profile of gender structures was presented in the form of typological (properties of the nervous system and temperament) and characterological structures, which included 25 indicators. A comparative analysis of the studied parameters using Student's t-test revealed 10 significant differences, most of which were at a 97 % confidence level. The analysis of the obtained data made it possible to compose gender-specific psychological portraits in which typological features of the nervous system and temperament of men were revealed, characterized by a higher rate of reactions and women – rigidity and neuroticism. The characterological features of a modern man are characterized by stability, dominance, radicalism, self-confidence, and women by expressiveness, gentleness, diplomacy, anxiety, conceit. The study allowed us to conclude that most of the differences are gender-specific and correspond to our ideas about femininity and masculinity.

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**Keywords:** Gender differentiation, gender identification, mental properties, gender, sex.



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## 1. Introduction

In general, gender psychology is a relatively young branch of scientific knowledge. Recently, it is one of the major areas of psychological science, which is mistakenly perceived by many as relatively “new” in the framework of this discipline. It is well known that in the framework of foreign psychology, gender issues were actively developed in the framework of psychoanalysis by Z. Freud, and then by his students (Horney, 1993). In the future, it was the successes of several foreign scientists (Baranova, 1999; Bendas, 2006; Berne, 2007; Shakhov & Damadaeva, 2011; Voronina, 2001) that led to the finalization of gender psychology as an independent scientific field. However, gender issues represent a wide range of studies and attract the attention of a wide range of scientific interests, being essentially an interdisciplinary science.

In domestic psychology, the development of gender issues was carried out mainly from medical and psychological positions. And for a long time, it was considered from these positions. In the 90s of the 20th century, the “second wave” of scientists' interest in gender issues began as a continuation of this foreign scientific tradition (the study of gender psychology from socio-cultural positions). The interest in studying gender psychology from this point of view was due to a new look at gender-oriented research, both from the point of view of the female view (Horney, 1993), and male, considering gender deformity in terms of social roles (Kon, 2009).

In the last decade, this new area of science is experiencing a research boom. This is also due to the interdisciplinarity of scientific knowledge between sociology, medicine and psychology. Kletsina (1997, 2001) considers gender psychology as an independent part of psychological science, the subject of study of which is the patterns of psychological differentiation of representatives of different sexes. The issues of gender differentiation as a factor of human self-realization are widely considered in social psychology (James & Florence, 2001). Numerous studies provide data on the influence of gender not only on self-realization of a person, but also on gender deformation, as a condition for adaptation in the modern world (Damadaev, 2009). In social medicine, there are many studies on the influence of psychophysiological characteristics on human health (Geodakyan, 1992; Ilyin, 2002). Various aspects of the study of man from the point of view of his gender differences have become so popular in medicine that a new medical direction, gender medicine, is gaining momentum. The concept is still new but has every chance. Questions of gender and psychological characteristics are widely studied in psychology, in differential psychology and social psychology. Within the framework of gender psychology, there are many directions and approaches. Some of them are empirical (establishing psychological differences between men and women), and some are interpretative in nature (aimed at finding their causes).

Representations of femininity and masculinity are a very problematic area, as they relate to the problems of sexism and gender norms. However, the change in gender norms and their deformation, a new concept for us, but already actively promoted (Borozdina et al., 2017).

The evolutionary significance of the existence of male and female is well known. Females are the guardians of the heredity of the genus, they also determine the survival of the species in environmental disasters. At the same time, males are forming new trends in connection with a change in habitat. The research interest in such transformations is logical. At the same time, changes are taking place in our

ideas about the patterns of behavior of men and women and modern trends in Western culture, suggest that the process of such substitutions is very active.

In Russia, the gender theme is poorly consecrated, the range of the state of scientific problems is clearly lent out and needs practice-oriented research.

## 2. Problem Statement

Despite numerous studies in gender psychology, issues of gender differentiation of gender differences remain the most promising research areas. They can be characterized by two problem areas. The first problem concerns the degree of psychological differences between men and women. In the course of studying literary sources, it became clear that it is very difficult to draw conclusions about psychological sexual dimorphism for a few reasons. Firstly, various studies were carried out in different time ranges, and very rarely – on representative samples of subjects, levelling the role of extraneous factors (such as age, social status, ethnicity, etc.) using various methods, which makes the data difficult to compare. Secondly, the ideological factor (the authors belong to the ideology of feminism or, on the contrary, the camp of its opponents) seems to have a very large influence on the results of gender studies.

The second problem in the field of gender differentiation is to determine the causes of psychological differences between men and women. There are two main paradigms:

- biological, whose supporters believe that the psychological differences between men and women have a natural, innate basis;
- social, in the framework of which it is assumed that gender characteristics are the result of sex-role socialization of the individual.

Despite the numerous approaches and theories to the study of this problem, today there is no consensus. Accordingly, there are few methods for determining gender stereotypes of the ideal woman and ideal man. It is no secret that our ideas, under the influence of stereotypes, can change. In order to identify such changes, longitudinal studies are needed.

In the course of the study, we tried to find out which personality traits are typological in the personality structure of men and women and are determined by the characteristics of the nervous system and temperament, which we attributed to neurodynamic, and which are also characterological properties in identifying our gender identity.

## 3. Research Questions

If we talk about the substantive side of gender differentiation, the analysis of the results of a large number of studies, in which only highly consistent data were taken into account (data from individual studies were noted), indicates that we can speak more or less confidently about the following gender differences. Most works confirm that men are characterized by higher sociability (extraversion), a desire for leadership, creativity, spatial and mathematical abilities, and motivation to achieve success than women. The latter, in turn, are distinguished by greater conformity, anxiety, emotionality (neuroticism), expressiveness, attentiveness and speech abilities. The data on such characteristics as aggressiveness, intellectual abilities (which are traditionally considered higher in men), moral development and empathy

(which are considered more typical for women) are very contradictory, and therefore their role in sexual dimorphism is not clear now.

Thus, the main aspects of research questions were the identification of the sex-specific features of non-dynamic properties (represented by the properties of the nervous system and temperament) by the characteristic features of men and women in the formation of their gender identity.

#### 4. Purpose of the Study

The aim of the study is to study the problems of gender differentiation of the personality of men and women, manifested in the specificity of severity and in the structure of neurodynamic (typological) and characterological differences.

#### 5. Research Methods

The following diagnostic methods were taken: a questionnaire for diagnosing the properties of the nervous system (Strelyau, 2007), a test to determine the properties of temperament (Bregelman, 1989), and a multifactor study of Ketell's (2009) personality. A comparative analysis was carried out using Student's t-test. The study involved 157 women and 129 men, mainly students of the last courses of DSU and CSU.

#### 6. Findings

As is known, and literary analysis proves this, the most stable personality traits are neurodynamic indicators (properties of nervous processes and temperament) of a biological nature.

In the course of our study, methods were used to determine the neurodynamic properties:

1. Questionnaire for diagnosing the properties of the nervous system
2. Test for determining the properties of temperament.

To determine the characterological properties:

1. Methods of **multivariate personality research**.

Thus, 25 performance indicators were obtained.

A comparative analysis of the data allowed us to draw conclusions about the presence of differences at the level of statistically reliable indicators. Neurodynamic indicators of men and women (properties of the nervous system):

- among women, among significant differences compared with men, a higher level of neurotism was revealed ( $t = 2.04$  at  $p \leq 0.05$ ).

The properties of the nervous system of men are represented by a high level of excitement, and women – inhibition, which indicates the inertia of the nervous system of women.

Thus, we can conclude that women are more emotionally unstable and inert, which does not contradict our ideas.

The temperament properties of both sexes have more differences. During the study, the following data were obtained on the temperament properties of modern men and women:

In men, differences were revealed at the level of analysis of variations in arithmetic mean numbers; a higher rate of reactions was revealed.

In women, differences exist in terms of rigidity, in contrast to the properties of temperament of men.

However, there are indicators of the properties of temperament of men and women, the indicators of which do not differ from each other – this is extraversion and activity.

Characterological features of both sexes have a wider range of differences and are represented by the following series of differences:

- men have several differences in emotional stability ( $t = 2.02$ ), a tendency to dominate ( $t = 2.09$ ), high self-conceit ( $t = 2.62$ ), radicalism ( $t = 2.71$ ), they are more courageous and self-sufficient.
- women have a few differences in expressivity ( $t = 2.02$ ), frankness and friendliness ( $t = 2.12$ ), diplomacy ( $t = 2.15$ ), gentleness ( $t = 2.26$ ), anxiety ( $t = 2, 65$ ), normative behavior and suspicion.

No significant differences were found for the following characterological indicators:

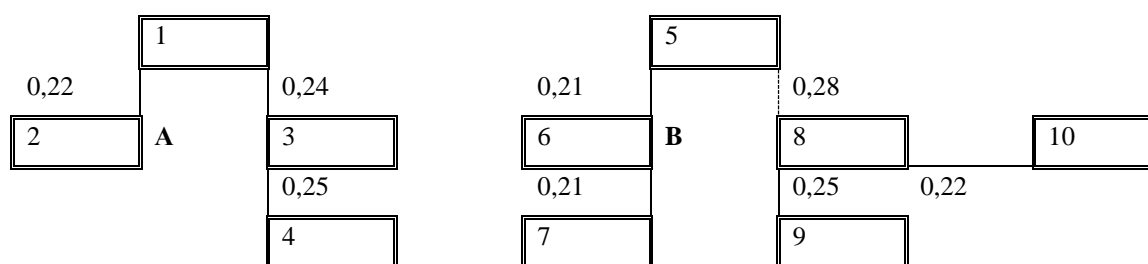
- intelligence, sincerity, tension (level of activation) and "idealism – pragmatism."

All data obtained varied at the level of 95–99 % confidence.

In general, the analysis of the obtained data gives the following gender-specific psychological portraits. An ordinary man is more emotionally stable, self-confident, harsh, prone to innovation and domination of others, but less diplomatic, open to others, inclined to express his feelings than women. Women, by contrast, are more unstable, anxious, expressive, open, gentle and diplomatic, conservative and insecure than men.

Using the correlation analysis in the male sample of subjects, quite a few relationships of the studied indicators were obtained (23, of which 99% of the reliable level reach 10). Judging by the number and tightness of ties with other indicators, the "personality structure" of men is formed by characteristics: stability (6 links), dominance (5 links), radicalism and self-confidence (4 links each). The "personality structure" of women is somewhat more complex than that of men, as it includes more indicators. It includes indicators: openness (7 connections), expressiveness, neuroticism, diplomacy (5 connections each), tension and softness (4 connections each).

Openness manifested in communication turned out to be positively related to the level of expression, which is associated with neuroticism (the most expressive are emotionally unstable persons) and negatively to the level of diplomacy (it is more difficult for an open person to observe various "conventions"), which is associated with softness in communication and level ego-tension. These indicators are also related to each other (Fig. 1).



**Figure 01.** Features of the personality structure of men and women ( $p \leq 0.01$ ): Legend: 1 – stability, 2 – domination, 3 – radicalism, 4 – self-confidence, 5 – openness, 6 – expressiveness, 7 – neuroticism, 8 – diplomacy, 9 – tension, 10 – softness

Notes: Pleiad A reflects the characteristics of the personality structure of men, Pleiad B – women

— - positive relationship

- - - - - negative relationship

## 7. Conclusion

The research questions considered were the differentiation of the neurodynamic and characterological differences of modern men and women. Accordingly, this study was to reveal the presence or absence of sex-role deformations in the gender structures of both sexes. The results showed that the “central” moment in the structure of men's personality is the characteristic of personal stability, which is associated with the level of dominance and self-confidence. Dominance also has a tendency toward radicalism. It should be noted that these characteristics are related to the traditional image of masculinity. Women, by contrast, are more unstable, anxious, expressive, open, gentle and diplomatic, conservative and insecure than men. All the above characteristics are polyspecific and are peculiar to our ideas about femininity.

In general, the study allowed us to compile a psychological portrait of modern men and women. The data obtained indicate that gender deformations in the characterological indicators of men and women were not found. Most of the characteristics are gender-specific and do not contradict our ideas about masculinity and femininity. Also, an analysis of the study showed that the gender identity of modern male and female representatives is traditional and corresponds to our views on masculinity and femininity and is determined not so much by neurodynamic features, but characterological, which have a wider range of data and severity, which indirectly confirms the theory of socialization as the main factor in the formation of personality.

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