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QUALITY OF BIRTH — A LIFETIME RESOURCE: PRE-PERINATAL ASPECTS IN THE DISCUSSION ON PERSONALITY FORMATION

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▪ Having entered into a long-standing discussion about what is leading in the formation of an individual — genes or parenting — the authors point out the role of the quality of birth as the third equal component of this process. The authors introduced the notion of emergentness in relation to the psychosomatic qualities of a conceived child, distinguishing him from each of the parents and underlying his uniqueness, security and individuality of reactions in the conditions of ambiguity, multifactorial effects (psychological, social, environmental) before and after birth during lifetime.

▪ **Keywords:** personality formation; gene system; quality of birth; emergentness; prenatal psychology.

КАЧЕСТВО РОЖДЕНИЯ — ПОЖИЗНЕННЫЙ РЕСУРС: ПРЕ-ПЕРИНАТАЛЬНЫЕ АСПЕКТЫ В ДИСКУССИИ О СТАНОВЛЕНИИ ЛИЧНОСТИ

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▪ Включившись в давнюю дискуссию о том, что является ведущим в становлении личности — гены или воспитание, авторы указывают на роль качества рождения как третьего равноправного компонента этого процесса. Авторы ввели понятие эмерджентности в отношении психосоматических качеств зачатого ребенка, отличающих его от каждого из родителей и лежащих в основе его уникальности, защищенности и индивидуальности реакций в условиях неоднозначности, многофакторности воздействий (психологических, социальных, экологических) до и после рождения в течение жизни.

▪ **Ключевые слова:** становление личности; генная система; качество рождения; эмерджентность; пренатальная психология.

Preface

This article is based on the report "Quality of Birth is a Lifetime Resource," which was presented at the seminar "Health and Longevity" at the house of scientists of Haifa, and this report has affected the style of presentation of this article. We hope that the readers will take this lightly, focusing on the problem under discussion. Let us add a few more explanatory words to the title of the article and its content. The term *birth* refers to the period from the impregnation to the birth and breastfeeding. The phrase *a quality of birth* means the following:

a) Conditions preceding and providing the impregnation

b) Conditions surrounding the child during 9 months of the prenatal development
c) Conditions of birth (natural maternal delivery with or without external intervention or by a caesarian operation)
d) Conditions and methods of feeding the newborn during the first year after birth

The concept of *a condition* implies the absence or presence of traumatic conditions (environmental, social, and psychological) that are observed during all stages of birth, hence determining the *quality of birth*.

The concept *lifetime resource* means the following:

- Mental and somatic health of the individual throughout the life cycle, primarily its macrobiosis
- The ability to perceive a multilayered, diverse information, and critically comprehend it
- Verbal and behavioral communication skills
- Activities in association with closely related individuals and society as a whole and to the surrounding nature

Introduction

Recently, the polemic regarding the formation of personality, whether genetics or education, remains unclear. Meanwhile, researchers overlook (do not know, do not guess, or ignore) significant factors related to birth.

The initial incentive to discuss the stated topic was the familiarity with the monograph of the English geneticist and psychologist Professor Robert Plomin from the Institute of Psychiatry of the King's College in London titled "Photocopy: how DNA makes us who we are" [1].

This book significantly contributes to the long-standing debate about whether genes or education has a greater impact on personal development. Occasionally, this debate has taken on the political aspect. At one time, the Soviet Union defined genetics as "a whore of imperialism" and an outstanding Soviet geneticist, an excellent scientist, Professor N.I. Vavilov, was rotted in prison. Moreover, Professor Plomin admitted that he did not publish this book for 30 years, fearing that he would be considered a *Nazi*, because in his monograph he claims that it is "genes that determine our personality."

Commentators of this book consider some of the author's conclusions as provocative, capable of igniting a fierce debate that in fact happened. Researchers of this issue recognize that many children, if not most, live with their biological parents, and it can be significantly difficult to understand what they inherited genetically and what they received because of the education and environmental factors.

Clinical example and analysis

In our correspondence with Professor Plomin, we provided this example. The mother of three children, a very intelligent, educated woman, said that her children are completely different in character.

The eldest son is kind and supportive, understands her very well, is ready to help her any time, is a good student, and is sociable and friendly. His mood is usually unexcitable, and he is optimistic.

The middle daughter is "always a problem" and peculiar, does not listen to advices, does what she pleases, dresses extravagantly, and is in conflict with her family. Moreover, at school, she constantly has no good relationships with friends and teachers. You always run into her, stating "No, I don't want to, I won't." Her mood is often gloomy, and she believes that everything is bad.

The younger son is a family favorite, a darling, but he periodically demonstrates instability of mood and a high degree of resentment, up to hysteria.

"By what can explain such a difference in the characters of children?" she asked me.

At my request, the interviewee reported on events that occurred during pregnancies.

The eldest son was born from a desired pregnancy soon after the marriage.

The daughter was born from an unplanned and unwanted pregnancy; her husband and family dissuaded the woman from abortion.

The younger son, being in the womb, endured all the hardships and worries of repatriation together with her and was born in Israel.

In this case, we can draw a conclusion.

The genes are the same.

Parents and the educational style in the family are the same.

Only the conditions that surrounded a woman and determined her emotional and psychological state during pregnancy **are different**. It can be

assumed that they were reflected in the characters, thinking, and behaviors of her children.

This confirms the following opinion of prenatal psychologists: the prenatal experience may be more significant for a person's life than their genetic predisposition and education after birth.

Professor Plomin reacted immediately: "Dear Professor Brechman, I am glad that you found my book stimulating."

As for your example, why do you say that the genes are similar in siblings? Siblings differ by 50% genetically; thus, genes can easily explain the differences between them. Simultaneously, the evidence for the lifetime impact of the prenatal environment is rather weak."

Professor Plomin's answer created an ambiguous situation: how can I explain to a venerable scientist that he has a significantly rough idea of a prenatal psychology, but allowed himself to make such a casual statement about it? Moreover, this is at a time when we are celebrating the centenary of the first works that discovered the emotional perception and memory of a prenatal (unborn) child, and at that time, several independent studies have been conducted, and thousands of articles and dozens of books have been published including major monographs summarizing the results of these studies. All of them undoubtedly confirm the influence of various factors in the prenatal period of the development on the thinking and behaviors of the individual, his/her mental and physical health throughout his/her subsequent life after birth.

This is even more intriguing: a geneticist Plomin completely ignored the successfully developing new direction of genetics–epigenetics, which shows how the content of the gene system is replenished without mutations, without violating the DNA sequence.

Having formulated the first conclusion, which seemed to follow logically from the described above remark, we hastened to contradict it, writing that such a conclusion is traditional, but illusory, and suggested that we consider a different approach.

The second unplanned, unwanted pregnancy against the background of a changed socio–psychological situation caused a surge of negative emotions in the woman, a state of distress (according to Selye). Distress is known to be accompanied by serious neuropsychic reactions and hormonal, immune, electrolyte, and other changes in the body. In unwanted pregnancy, as shown by interviews with women, this event became a trigger that periodically caused them to re-experience psychological trauma. The latter is accompanied by repeated changes in the function of systems, organs, and cells with their subcellular elements, including genes, or rather the gene system[1] that monitors and regulates the constantly changing state of the body, inevitably affecting their molecular and atomic structures. Based on quantum mechanics, according to the theory of a particle–wave dualism of matter in the microcosm, any substance is in the state of both a particle and a wave that carries information about this particle. Hence, it is legitimate to assume the appearance of a peculiar (distorted) information wave field in a pregnant woman. It permeates and envelops her and her child with the inevitable inclusion of epigenetic processes that change the content and functioning of the genes of both the mother and her child. It is logical to assume that the second child, a daughter, was born with a large information load in a different socio–psychological atmosphere, with a changed educational style that was significantly different from the style of education of the first child.

For the third child (let me remind you that he and his mother endured all the hardships of moving to another country; this are the problems of fees, learning a new language, new living conditions, and adapting to a different climate), the socio–psychological and genetic status of the mother and the situation in the family were also different. Moving is a stressor similar to the loss of a husband (death, divorce) or a job and, along with the state of emotional stress of the mother, can cause the child to have genetic and psychological problems in the form of autism. This was confirmed by researchers from the Ohio State University (USA) [2].

The desirability of a third pregnancy could hardly completely eliminate or clear out the changes in this woman's gene system, but they introduced new aspects to it and to the second boy's gene

[1] We prefer the term "gene system" as an image that more fully reflects the close interaction of all human genes, which at the system level participate in the regulation of its internal environment (the structure and function of organs and cells that make up them) and simultaneously adapt the functioning of the body to changing environmental conditions.

system, which was evident in his thinking and behavior. The second conclusion is as follows: the emotional stress of the mother associated with her attitude to pregnancy and reaction to the impact of the external environment, due to wave mechanisms [12], is perceived by the unborn child, its gene system, where this information is recorded by epigenetic processes, and after birth, it is observed in the thinking and behavior of the individual.

This example confirms the known postulate that *life is a dynamic process and, unfortunately, not always (variants: never or poorly) managed*. To this, we add the second postulate, which is not always taken into consideration that *any phenomenon is a multi-factor process* and we can never be sure that we know all the factors that influenced the implementation of a particular phenomenon. Occasionally, an example makes the speaker's thought clearer; hence, here is one description from our obstetric field.

We know about such a phenomenon as the loop of cord of an unborn child. When this phenomenon was asked to any obstetrician, they will immediately answer the following: it is due to increased motor activity of the child in the uterus. Furthermore, this is true, but not all, because the increased activity of the child is the result of a special psychological state of the mother: her increased anxiety and a close emotional connection with the prenatal child. Researchers from the University of Leuven in Belgium [3, 4] confirmed this.

If this is a personal anxiety that is associated with certain genes [10], then any event (which the other person will not notice) can cause increased feelings of anxiety or even fear. However, increased anxiety is possibly a result of external psychotraumatic conditions that threaten life or individual integrity. Additionally, this may be the result of various conflicts within the family or in the society—political, social, and economic. Simultaneously, the significance of environmental processes should also be considered.

The founder of a heliobiology, A.L. Chizhevsky [5], showed that periodic tension in the society could be a reaction to changes in the geomagnetic field in a particular region of the Earth, changing the solar activity. He also established the influence of the solar activity on climate and social processes on Earth: natural disasters, catastrophes, epidemics, wars, and revolutions.

You will be right if you ask the following: how is it connected to the loop of cord? Moreover, the answer may be unexpected for someone.

A strong inverse correlation was found between the average annual frequency of the child's umbilical cord and the Wolf numbers reflecting the state of the solar activity ($r = -0.866$, $p < 0.001$) [6, 7]. Similar authors found that pregnant women with a child's loop of cord have an increased level of anxiety, aggression, irritability, emotional lability, unfavorable social family status, and negative attitude to pregnancy and the child. Thus, it is not the change in the sun activity itself that causes increased motor activity of the unborn child and its loop of cord but the impact on particularly sensitive members of the society with a high level of anxiety and the possibility of its strengthening, who are coincidentally pregnant, and at a certain period of pregnancy.

However, will there be consequences for their children?

The establishment of this fact is connected with a picture of a woman who asked me for psychological help. I asked her to draw her problem, at least schematically. She drew a house, next to a tree, the trunk of which is wrapped around a snake. It was unexpected and incomprehensible. During the conversation and psychological research with her, and later with other women like her, typical signs began to become clear: difficulties in forming relationships with close people, in the group (frequent changes of work), increased levels of anxiety, resentment, some-vindictiveness, and problems with the perception of humor. Simultaneously, a number of women highlighted the fear of snakes, the appearance of their frightening images in dreams, frightening, interfering with sleep and living quietly [9]. These signs correspond to the description of the consequences of increased anxiety, fear of a childbirth, and an undesirability syndrome. Some of the women pointed out this attitude of their parents to the pregnancy from which they were born, while others did not know about it (or did not want to make this fact public).

With the help of these examples, we tried to show a multi-factor path of psychological problems of a child because of emotional distress experienced during the prenatal period of development together

with the mother. This was the third summary, but not the last.

The fourth summary is as follows: we should add something that was unexpected for our colleagues who followed the analysis. We traditionally consider the appearance of a certain psychological characteristics of the child from the position of the influence of affecters, but we do not take into consideration the child's protection from certain influences that could be externally considered as his resistance. What is the matter?

From the moment of conception, individual features that distinguish it from the father and mother characterize the whole selfness (whole self), according to Turners [8] of a new person (embryo – fetus – child – adult). You can say that a new individual from the moment of conception reveals the phenomenon of the emergence. It is the appearance of new qualities that each of his parents did not have. Moreover, this new self-integrity (I repeat) from the position of quantum mechanics and wave genetics has special unique wave amplitude–frequency characteristics of genes, cells, organs, and the biofield as a whole. These characteristics reflect the noise immunity of the information and are a way of self-defense of the new individual. They protect the unborn child, including from the psychological reactions of the mother in the event of her experiences in a stressful situation or increased personal anxiety, when she reacts violently even to insignificant events or to her thoughts.

Before birth, an externally evident aspect of such a protection is an increased motor activity of the unborn child, changes in its position or presentation (breech presentation), up to termination of pregnancy, premature birth. This can be seen as a non-verbal dialog between the mother and the unborn child.

After the birth, resistance appears itself in the newborn's rejection of the mother's breast for breastfeeding as evidenced by gratuitous crying, various painful conditions, and a negative attitude to the proposals of the mother or other persons (see the above description of the behavior of the second child, a girl).

In the process of growing up and life, the individual demonstrates a unique perspective on relationships with others: either in the form of the desire to become distinctive in the intellectual development and a goodwill to receive compliments or in the form of a pathosocial behavior, envy, aggression, and other negative qualities that complicate his behavior in the society and return to it by the appropriate attitude of its members.

All this multi-factor influence and resistance, unfortunately, is poorly controlled and concerns not only psychological but also physical (somatic) characteristics of a person. It is a tendency to diseases of certain organs and systems.

Discussion

According to the laws of the genre, at the beginning of the discussion, it is necessary to go back to where you started, in this case to the discussion with Professor Plomin. Our views on the role of genes in the formation and functioning of personality coincide on a number of points:

a) Certainly, the genes of the parents determine that the child is born by a person.
b) Genes ensure the formation, development, and functioning of cells, organs, and systems.
c) Our ability to think, perceive, and generate ideas is linked to our genes. Simultaneously, we use the memory bank of data accumulated by (transgenerational) ancestors and constantly incoming new information. However, when considering genes, we should not forget about the world around us, where they constantly receive relevant information, processed by human emotions and thinking, based on their needs.
d) It should be added that genes retain their ability to perceive and remember new information (specifically "energetically charged," according to Turners [8]) due to recently discovered epigenetic processes, unfortunately, without filtering it. Moreover, this can happen at any stage, starting from conception to the rest of your life. Similarly, it would be possible to explain, for example, the influence of conditions of in vitro fertilization or a cesarean operation of an individual [11].

We should also see something positive in this since modern knowledge about the functioning of the gene system:

- Allows you to confirm existing (and possibly create new) approaches when accompanying a mother and child during pregnancy and childbirth

- Allows you to consciously adjust and start including positive information, which to a certain extent clears the previously received negative information
- Helps individuals in the process of education and self-education to understand the generally accepted rules of a behavior in the society and build friendly relationships and uses ways to promote health, including healthy longevity. For example, having clear goals in life and striving to achieve it, there are serious longevity factors and the shift toward optimism, humor, and kindness toward others that the psychological and energy levels returned to the same person.

Conclusion

1. The quality of birth is the third equal component in the process of becoming a person, along with genes and education.
2. The multiplicity of conditions affecting the period before pregnancy of human development (psychological, socioeconomic, environmental) in combination with the phenomenon of emergence in relation to the psychosomatic qualities of the conceived child ensures the uniqueness of the personality.

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