

Psycho-Emotional Determination of Human Individual Identity

R. Klimek

Ob/Gyn Institute, Copernicus University School of Medicine, Cracow, Poland

Abstract

According to the principle of logical identity each man is equal and identical with himself, coming into being as a result of fusion of two different cells: maternal egg cell and paternal spermatozoon. When a means egg cell of mother A and b spermatozoon of father B we can formulate the following equation $a + b = x$. Each literal quantity (a or b) of this mathematical equation has its own individual value and they create together identity of x . The equation satisfied for all its variables is called mathematical identity. From the mathematical point of view if we know parents, we also know the range of possible identities of their children. The individual identity of each man is realized in the very moment of fertilization by individual time-spatial proprieties of two reproductive cells and the psychoemotional status of sexually active couple. The later constitute the main factors determining our identity. Usually we define them as love, friendship, respect, esteem, attraction to somebody. Fortunately the emotions connected with compulsion and constraint are the rarest. The conception in couple married without love, for some rational reasons constitutes something intermediate between two mentioned above circumstances. The simultaneousness of biological, psychological and emotional activities is obvious. Definitely biology constitutes the basis of human relationships as physics and chemistry constitutes the basis for biology, as mathematical understanding of the world allowed us to image the physical human life in thermodynamical terms.

Zusammenfassung

Entsprechend dem Prinzip der logischen Identität ist jeder Mensch unverwechselbar und mit sich selbst identisch, und er entsteht als Ergebnis der Verschmelzung von zwei verschiedenen Zellen: einer mütterlichen Eizelle und einer väterlichen Samenzelle. Wenn a die Eizelle der Mutter A und b die Samenzelle des Vaters B , dann können wir die folgende Gleichung formulieren: $a + b = x$. Jede Einheit (a oder b) dieser mathematischen Gleichung hat ihren eigenen individuellen Wert und sie schaffen zusammen die Identität von x . Wenn die Gleichung in allen Variablen erfüllt ist, wird sie mathematische Identität genannt. Vom mathematischen Standpunkt aus kennen wir Eltern, aber wir kennen auch die Spannweite der möglichen Identitäten ihrer Kinder. Die individuelle Identität eines jeden Menschen ist durch die individuellen räumlichen und zeitlichen Eigenschaften der zwei Geschlechtszellen und die emotionale Verfassung der Eltern während der Zeugung bestimmt. Gerade diese emotionale Verfassung der Eltern ist ein wichtiger Faktor für unsere Identitätsbildung. Gewöhnlich sprechen wir dabei von wechselseitiger Liebe, Freundschaft, Respekt, Achtung und Anziehung. Glücklicherweise sind die Gefühle von Zwang und Einengung bei der Vereinigung eines Paares selten. Die Zeugung bei einem Paar, das sich nicht liebt, liegt dann in der Mitte zwischen den beiden erwähnten Bedingungen. Die Gleichzeitigkeit von biologischen, psychologischen und gefühlsmäßigen Prozessen ist offensichtlich. Die Biologie ist die Basis der zwischenmenschlichen Beziehungen, wie Physik und Chemie die Grundlagen der Biologie sind und wie es uns das mathematische Verständnis der Welt erlaubt, das physische Leben des Menschen thermodynamisch auszudrücken.

Introduction

“By the time I created you in the womb of your mother I had known you; by the time you were born I had sacrificed you”

(Psalm 139 of the Book of Jeremiah)

These words have been chosen as a motto because – on the one hand it allows us specifying human identity mentioned in the psalm end and, on the other, it reflects the retrospective view of problems we deal with today as those which were described as early as in the Bible. Not long ago, gynecologists achieved a common consent in this matter and treat a child in a mother’s womb as an individual person. This attitude can be found in new obstetrical handbooks and, at the same time, international scientific meetings which treat a child in its mother’s womb as an individual person. The aim of this paper is to answer questions about the identity of a child, namely: 1. which moment should be regarded as the beginning of human specific identity, 2. is an identity of a man predictable, and, if so, 3. in which way is it conditioned?

Definition of Identity

To define the word is more difficult than to illustrate its uses. In general, society associates the identity of a man with an identity card. There are people who may get an provisional identity card. What is more, each human being has his/her name and surname given automatically at birth. But it is well known that it is difficult to give any significance to this name. This is probably the most difficult task in the life of an individual.

It is obvious from the principle of logical identity that someone is a person he claims to be and has his specific name. We are interested in the very notion of identity and himself. We say: "Man *X* is equal and identical with himself." As physicians, we are primarily interested in an individual human being as the subject and object of our concern.

From the point of view of phenomenological thermodynamics, any part of nature separated for observation constitutes a system. In our consideration man, whom we know well, paraphrasing Jeremiah, constitutes such system. The remainder is an environment. The notion of system and environment is worth stressing because we have got used to the fact that man consists of some elements or systems. Until quite recently in all medical handbooks, our obstetrics ones included, it was stated that man consists of circulatory, nervous, psychical etc. systems. These systems in turn consists of atoms, these atoms – of something else, etc. But we have to be interested in man as a whole, that is to say, not only in the structures he is built of or relations between these structures. Only in such circumstances may we treat a man as a system separated for observation. The division of man into separate systems – emotional, psychical and biological – no longer makes sense. On the other hand for example, the fact a very important one for our subsequent considerations, that an egg cell (ovum) is regarded to be a part of the mother's organism, should be stressed.

And likewise, spermatozoon may be regarded as a part of paternal organism, but only as long as this singular spermatozoon or this singular ovum are not treated as independent systems surrounded by their own environment. We should realize that each singular cell or our organism is dependent on environment, i.e. on the rest of the organism. The above holds true for all kinds of cells of our organism.

Reproductive cells come into being at the very beginning of human existence and, as early as then are endowed with the mission of the preservation of life. The stage of complete maturity of the egg cell is reached by the ovulation of only about 400 cells from amongst 2×10^6 cells which exist in the fifth month of fetal life, and only 10^6 cells which survive till birth. In every menstrual cycle a number of cells begins to mature, but normally only one or two are subjected to ovulation. Here the question arises: whether or not the egg cell, after ovulation, constitutes a part of maternal organism. On the one hand, it's the same egg cell of the mother's organism, but on the other – the same egg cell in the oviduct, migrating in the open space, can be regarded as an independent system in its environment.

Obviously, if we take into consideration spermatozoa such problems do not arise. 300–400–500 million spermatozoa take part in a single ejaculate. Enter-

ing the maternal organism they have to cross several barriers – among others psychical – which decide their optimal selection, so that only one well-chosen spermatozoon can fertilize the egg cell. So, we can say that each egg cell and each spermatozoon have their own individual identities, nonregarding if they do or not belong to the organisms of their origin.

Each obstetrical handbook gives a description of fertilization as a process, from which an egg cell and a spermatozoon, a zygote comes into being. But this is only a phenomenological process which can be observed while in fact millions of egg cells and millions of spermatozoa take part in this phenomenon. This real microworld is dealt with by statistical thermodynamics. The results of micro-processes can be observed in macro-scale. So here our essential question again arises: is a zygote a part of the mother's organism, or not? Definitely it is not! A zygote occurs in the maternal organism as quite a new system – as a new life. But it should be stressed here that the creation of a zygote within the maternal organism is conditioned by the influence and interaction of maternal as well as paternal organism. It is impossible to compare, even in experimental biological terms, the human zygote with any other zygote from the animal kingdom. And that is why the psycho-emotional conditioning of the human being from the moment of conception should be clearly specified.

Nowadays we can observe the egg cell. In 1981 my statement that in the near future the observation of the inner state of the human body with NMR imaging will be as easy as X-ray exams and even more popular, was received with disbelief in the press. Today such mobile NMR diagnostic laboratories, using equipment which allows us to observe a single egg cell, wander about continents. We can observe an egg cell, the very moment of ovulation and, in the near future, we will be able to observe singular spermatozoa moving along oviducts of a woman who is to conceive. This is possible because we see the picture which constitutes the phenomenological description of atomic changes; billions of atoms giving back radio-waves create the image comprehensible for us. We can say that today we are able to see the inner structures of a human organism down to a micrometre, we can see images, which we couldn't create or interpret without proper appreciation of statistical and thermodynamical laws.

People who deal with the philosophy of medicine meet some problems which occur in their everyday scientific work. The fact that achievements in physics such as magnetic resonance mentioned above have been applied to medicine only recently, show that contemporary medicine is 70–80 years behind in comparison with current developments in physics. Moreover – in comparison with contemporary mathematics, medicine is at least two centuries behind. An illustrative example can be found in mathematical identity.

Mathematical identity constitutes the equation satisfied for all values of its factors. We know very well equations in algebra, e.g. $(a + b)^2 = a^2 + 2ab + b^2$. In such an equation we have all quantities of variable a and all quantities of variable b . Taking into consideration a woman A with all her egg cells a , and a man B with all his spermatozoa b , so each of these a and each of these b have their own individual values. We can say that from a mathematical point of view when we know a man and a woman – a couple, we know the identity of the fam-

ily, therefore we can predict the probable identities of their children: $a + b = x$. Thus the statement “by the time I created you I had known you” means that at least mathematical identity of a man had been known earlier. Obviously in mathematical terms the identity of each zygote is different because each a with its real value is different from other a . We can define the identity of all children and the identity of the individual child.

From the point of view of medical thermodynamics man as a whole cannot be divided into separate parts. From the level of atoms to his psychical and emotional life man constitutes an entity – an integral system mentioned at the beginning. In this connection there is no point in discussing the beginning of human identity at the moment of fertilization.

There are those who call a human being at the earliest stages of development a primary embryo, because only several cells out of 60 of the zygote survive until the birth of a mature child. The same people seem to forget, for example, that in a mature organism millions of skin cells are exfoliated. An organism as a system exists only thanks to the transitoriness of its micro-system.

Determination of Human Identity

The question should be put here: When at the earliest can identity be determined? In mathematical terms it is possible as soon as we know the parents. When can identity be seen? At the moment of conception, the new identity is defined and cannot be different given specific circumstances and time. And finally, if so, in what way is the identity conditioned?

According to the previous considerations the designation of the identity of each of us is conditioned by such specific human emotions as love, friendship, liking. We imagine that in this sphere not only instincts are important. Therefore, by the time the new individual is created psycho-emotional factors are activated even if the factors present are diametrically opposite to the ones mentioned above as, for example, in the case of rape. Finally, one more kind of psycho-emotional attitude towards parenthood can be defined – the attitude which results in a contractual marriage of convenience. In such cases emotional and psychical factors are separated.

Each of these factors mentioned above has its own strength and thermodynamical features or characteristics of changes at the atomic level. Obviously we can discuss which of the factors are more important – psychical, emotional or biological, but we have to agree that all are active simultaneously. Biology constitutes the basis for psycho-emotional life, chemistry constitutes the basis for biology, and – in turn – physics for chemistry. Mathematical interpretation of biological phenomena results in the thermodynamical interpretation of emotional and psychical aspects of human life, not only of atomic changes.

In conclusion, we can indicate several kinds of psycho-emotional barriers in human reproduction. The initial step is connected with the selection of partners, the subsequent consists in the choice of a specific moment in time, for conception. There are cases very known in medical practice of apparently abstruse inability in sexual activity just at the moment of the most probable conception de-

spite favourable circumstances and real strong motivation for pregnancy. And, on the other hand, there exists a syndrome of conscious risk of unwanted pregnancy, when a couple that for years have been using contraceptives suddenly, for some inexplicable reasons, instinctively “forgets” to use them just at the moment of highest risk of appearance of unwanted pregnancy. These two extreme examples may illustrate how difficult it is to evaluate psycho-emotional aspects of human reproduction.

The next step is connected with the problem of acceptance of being pregnant. Pregnancy constitutes the result of co-operation of two independent systems. One of them is a priori designated for promotion of the new biological system, i.e. a new human being developing in the environment of maternal womb. The course of pregnancy depends to a certain extent on psycho-emotional acceptance. All problems with premature deliveries can be interpreted as a consequence of the quality of dynamic balance between two systems – a child and a mother. Their mutual dependence influences the choice of the time of birth, usually optimal for both.

Delivery itself constitutes the next psycho-emotional barrier to overcome on the way of human reproduction. Here, another group of problems connected with a woman’s acceptance of a new role – as a mother in the family and as a mother in the society.

All psycho-emotional barriers of human reproduction discussed above condition each existence and determine the identity of the human being. Family relationship and social status affect the organism developing in the mother’s womb, his/her history of life begins at the moment of conception. Laws of nature are the same at the beginning of individual life as at the end of it. According to some authors only 30%, according to others – 50% of zygotes develop to the moment of birth. 20% of multiple pregnancies detected with ultrasounds end as single pregnancies. From birth to death nature treats man in the same way: statistically conditioned at all times irrespective of his environment – maternal womb or dangerous external surroundings.

Conclusion

There are some ideas closely intertwined with the subject presented here, since questions put at the beginning have been answered. Gynecology is a knowledge of stimulation and protection of human life at each stage of its existence. The majority of gynecologists hold the conviction that only the mother is empowered to decide about the child developing in her womb. Furthermore, she should not be called “future mother”, as she is a mother since the day of conception.

The last sentence has its specific value with respect to quite a new phenomenon, that of surrogate mothers bearing in their wombs children conceived from egg cells of other women. Isn’t it reducing a woman to a role of incubator? Taking into account the psycho-emotional status of such surrogate mothers we should bear in mind that education, upbringing and culture have to precede biology in all human life, non only in reproduction. Another example: Americans have introduced popular means of birth control in some primary schools. It was

the easiest way of preventing teenagers from unwanted pregnancy. But not the best. They have forgotten about education and culture, and as a result thousands of youngsters use contraceptive pills not bothering about their side effects and disadvantages. It should be stressed here once more that it is culture that should dominate over instincts and biology.

Finally, it is worth emphasizing that all problems mentioned here have to be solved in the future in the domain of medicine in its broadest meaning, not only in the realm of health service, because medicine is a notion which encompasses care, treatment and rehabilitation of man. That is why society as a whole is responsible for medicine and health service. All considerations about social problems and the individual identity of man should be viewed bearing in mind the good of the whole society. Each nation manifests its values in the best way applying the achievements of general science to medicine.