
Personal view

HUMAN UNIQUENESS - AN ANTHROPOLOGICAL CONCEPT NECESSARY FOR MEDICAL EDUCATION

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Abstract

The author notes that medical education is still dominated by a scholastic approach of both healthy and sick patient which is proved by presentations of standard morphologies, standard biochemical structures, standard physiological behaviours, standard diseases.

This methodology is applied in spite of evidences showing that in nature there are not two identical individuals and a doctor treats sick patients and not diseases.

Using arguments the author discusses the uniqueness of human being at the genetic, morphological, biochemical, physiological, behavioural and pathological levels. He thinks that medical education must prepare the future doctor on the basis of a random approach of the human being and not on the basis of a fixed one, taking into account that the diagnosis and treatment are specific for each patient in part.

Because doctor's medical training must be based on theoretical training and, equally, on the experience gained by examining and treating patients, hence human individuals, the author considers that the new approach he proposes will grow student's interest in direct contact with the healthy patient and the sick one.

Keywords: *human being, uniqueness, medical education*

Rezumat

Unicitatea ființei umane - un concept antropologic necesar pentru învățământul medical

A constata că educația medicală este încă tributară unei abordări scolastice a omului sănătos și a celui bolnav, așa cum reiese din prezentările de morfologii-tip, de

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structuri biochimice-tip, de statusuri fiziologice și comportamentale-tip, de tablouri clinice tip.

Această metodologie este aplicată în continuare în ciuda evidenței, care ne arată că în natură nu există doi indivizi identici și că doctorul tratează bolnavi și nu boli.

A discută unicitatea ființei umane pe bază de argumente aduse la nivel genetic, morfologic, biochimic, fiziologic, comportamental și patologic. El consideră că învățământul medical trebuie să-l formeze pe viitorul medic dintr-o perspectivă aleatorie și nu dintr-una fixă, având în vedere că diagnosticul și tratamentul sunt specifice fiecărui bolnav în parte.

A susține că pregătirea medicului trebuie să se bazeze în egală măsură pe însușirea teoriei și pe experiența câștigată prin examinarea și tratarea bolnavilor, deci a cât mai multor indivizi în parte. În felul acesta prin noua abordare pe care o propune se va stimula la fiecare student interesul pentru un contact direct atât cu omul sănătos, cât și cu omul bolnav.

Cuvinte-cheie: *ființa umană, unicitate, educație medicală*

For centuries, the uniqueness of human beings has been supported and defended especially by religion. Otherwise, there were only the statements of some philosophers saying that "I am unique, there aren't two like me". The words of Pope John Paul II in one of his last Encyclicals are still vivid in our memory: „The evil of our time primarily consists in a kind of degradation, a pulverization of the fundamental concept regarding the uniqueness of every human being”.

Pope John Paul II said these words as somebody who had witnessed the physical and psychological violence against individuals, communities, countries, and even continents to which were subjected during the 20th century. The philosophical and ideological attempt to impose absurd ideas such as: „nobody is unreplaceable” or „that group of people is superior to other groups of people” or „all people are equal”, also spread to the field of science when, for instance, some people have tried to define the features of a so - called «superior race».

All these pseudoscientific attempts representing totalitarian ideologies were actually trying to cancel the individual as a person, as well as the unique and unrepeatable features of every human being.

During the past years, it has been very clearly proved that, in nature, there are no two identical individuals and that the human being is the result of some harmonious or non-harmonious genetic constellations providing specific enzymatic, molecular, morphological and functional profiles. No sooner had this brilliant victory proving the uniqueness of the human being ended, that the idea of human cloning appeared, i.e. the idea of making human copies, as a desperate attempt to make the view of equality between people legitimate again.

The genome is not only the basis of the human identity and diversity, but it also confers dignity to a human being, who knows oneself as unique. Approximately 70 years ago, a great Romanian anatomist, Gr. T. Popa (who described the hypophyseal portal system) stated that the human progress is

based on differentiation and not on levelling, that differences between people are more useful than the similarities between them.

I resorted to this introduction because, unfortunately, the concept of uniformity continues to dominate medical education which is still tributary to the presentations of standard morphologies, standard biochemical structures, standard physiological and behavioral, standard diseases, thus demonstrating the same scholastic approach of both the healthy and the sick person.

However, medical practice has progressed beyond the assertion of the uniqueness of the human being. The famous promoters of the French school of medical semiology of the 19th century stated that, *there are ill people and not illnesses (il y a des malades, pas des maladies)* or, in other words, each patient represents a particular case.

It can be said that medical training is not only based upon theoretical knowledge but also on the number of patients, hence human individuals examined and treated by a doctor. Not by accident, in the '70s, the WHO (*The World Health Organization*) stated that the preparation of a proper medical protocol requires an uninterrupted individual study as well as direct contact with the patients.

The German anatomist Benninghof pointed out 80 years ago, that the description of the human body as presented in anatomical atlases is not found in nature, it is neither revealed in the dissection room nor during surgical operations (2). No individual represents the average of the specific characters of all the individuals of a certain species. Benninghof said that in nature there is only an infinity of morphological types in which *the normal* has the least variation, and *the variant* presents distributions more rarely encountered than the classic type. But, I underline what Benninghof said: this classic type practically does not exist because each individual is unique.

If this is the case, if every person has a specific physical constitution and a peculiar reactivity framed within the limits of variation or of tolerance of the human species, then medical education must to present the healthy as well as the sick patient as a succession of unique clinical pictures more or less different from one another.

Today, we can certainly state that the differences between individuals are phenotypically reflected by genetic, biochemical, anatomical, physiological and behavioral features, all of these features contributing to the individual identity and helping to identify each individual.

Regarding the **genetic uniqueness**, human DNA identification has become a method currently used in forensic medicine for paternity testing or in criminal investigation; it is also common in clinical medicine to treat genetic diseases or some types of cancer. The structure of the human genome is so specific, that it becomes imperative in determining the genetic constitution type. Today it is part of the curriculum in most of the medical schools in the world, including that one in Bucharest.

The human morphological uniqueness is much better represented in the legal medicine curriculum than in teaching descriptive and topographic anatomy where the presentation of anatomical variations is more reduced. Thus,

the dermatoglyphs (prints of fingers, palm, toes, sole, lips), the dental formula, the bite print, the iris configuration etc., have been used for the morphological identification of the individuals (1, 7).

Morphological studies show that every human macroscopic anatomical structure is unique and its variations may enable identification in forensic medicine or may be involved as auxiliary factors in the onset of some diseases. I randomly select from the medical literature the studies of Nambiar (8) or Da Silva (4) which show that there are not two persons with identical frontal sinuses.

At the Symposium of Clinical Anatomy in Novi Sad, last autumn I insisted on the necessity of introducing the anatomical variation concept during the dissection training as a preliminary stage prior to the moment when the students come into direct contact with the patients in the hospital (3).

The biochemical uniqueness, i.e. the unique biochemical constitution of individuals is a facet less approached in medical education. Although the self and the non-self issue have a biochemical support for recognition based on a genetic qualification -which, for instance, is demonstrated by police dogs which can trace our scent due to a distinctive feature in the composition of substances on the human skin surface, the subject of human biochemical uniqueness is still on the periphery of medical education. I make this statement, in spite of the fact that in medical literature there are a lot of data about this issue, but there is still a low concern in creating a concept of human biochemical uniqueness. I could even say that this chapter is receiving the least attention from those who should edify a new anthropological approach of the human being uniqueness. However, I would like to quote the works of Nicolaides who demonstrated, using the number and variations of saturated and non-saturated fatty acid chains synthesized in the human skin, that each individual has a scent, hence a specific chemical print (9). Or the works of György who demonstrated the uniqueness of the biochemical composition of maternal milk (6).

Individual uniqueness is also reflected in the good functioning of the organs and systems, and in the range of reactions that the human body develops in the presence of some changes in the environmental factors.

The absence of a medical education presenting normal physiology as a succession of mechanisms with certain characteristics for each individual in part has deprived us of processing a huge amount of stored information, for a long period of time. For example, did anyone think that the hundreds of millions of EKG or EEG could be studied in the light of the physiological uniqueness of individuals?

A few years ago, Gennaro et al. analyzed human EEG traces during the superficial sleep stage and amazingly found that they were absolutely identical in time, in the same individual. Therefore, the authors entitled their paper: „EEG fingerprint in man” (5). The authors believe that the invariability of EEG in the same person is due to the individual characteristics of the functional anatomy of the brain which are genetically determined.

Regarding the endocrine functions, constant hormone levels for every individual have also been observed (10).

The uniqueness of our behavior and performances is a chapter widely debated in the medical and legal literature, from which I would just like to

mention the individual identification according to handwriting features (graphology) and vocal features.

The above mentioned mainly referred to the normal people, but **human uniqueness acquires new dimensions in the case of sick people**. Doctors noticed, long before the studies regarding normal people, that the symptoms, the clinical picture, the fitting into a certain syndrome, the response to treatment are strictly individual. Ion Juvara, one of the greatest Romanian surgeons of the 20th century said that "each patient has his/her own cancer". He made this statement based upon the thousands and thousands of specific developments with cancer.

Indisputably, medicine is a science because it largely meets the criteria for defining a science, but medical practice is also an art because it requires the development of a clinical investigation plan for each individual patient, of a therapy scheme which must be efficient for every patient, and all these are due to the uniqueness of every human being.

The conclusion of my paper is an invitation to reflection for every one involved in medical education to facilitate the acquisition of the knowledge and skills he/she will use in medical practice, in each patient he/she will have to treat.

We, the medical educators have the duty and responsibility to reconsider and reposition the human individual as a unique individual in the medical curriculum. And I say that, because *every person is like every other person* - according to the universal rules, *like some other persons* - according to the group rules and *like no other person* - according to idiosyncratic rules which define a person's own constitution, own functions and own reactions.

Idiosyncratic: peculiar to a specific individual

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