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Emergence of Humanistic Medicine

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Theoretical Study

Abstract

The transforming winds have started blowing in medicine and have caused changes in its fields of knowledge and practice. The boundary between the roles of physician and patient, and other roles related to health have become ambiguous. An ample amount of unjustifiable observations has shaken the foundations of the biomedical model. Numerous scientific and social events indicate that we are passing a mechanistic and reductionist model toward a hermeneutic and systemic model in medicine; a model which not only is founded on disorders of a biological machine (diseases) but is organized based on promoting the health of human beings in all biopsychosocial and spiritual aspects. In this essay, we have a glance at the features of the medical system and its current transformation, and explain the possible conditions for realization of humanistic medicine.

Keywords: Reductionist model, Hermeneutic, Systemic, Biopsychosocial, Transformation, Humanistic medicine

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Life politics … is a politics of self-actualization in a reflexively ordered environment, where that reflexivity links self and body to systems of global scope (Giddens, 1991, p. 214).

Prologue

As a social system, medicine has a specific historical and behavioral course which distinguishes it from paradigms of other exact sciences. Recognition of systemic tendencies of medicine allows us to help transformation of medical discourse and institutions with the least resistance in favor of more appropriate discourse and institutions which satisfy biopsychosocial needs. The sluggish conservatism of medicine, its susceptibility to the public domain due to its direct connection to the peoples' needs and its being an interdisciplinary field structurally and historically are some of the most fundamental features of the medical system which are dealt with in this essay. Any program which overlooks these fundamental tendencies is destined for failure.

From the promising and almost biting title of this essay, it appears that the development course of the medical model is toward its humanization. For this reason, I used the handy term of humanistic medicine against biological medicine which has reduced the human being to a living machine.

As it appears from the beginning, the concept of human being is a guiding sign for passing through the current condition to

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reach a more favorable one; a sign which implies our emphasis on the role of medicine for actualizing the totality, self-directedness, and autonomy of human condition to promote human beings' health and give voice to their lifeworld against the dominance of medical system. I think these pivots are essential for making every humanistic medicine possible. Today, it seems that systemic and health-oriented points of view which have found considerable informational and management bases unanimously agree on being loyal to ontological and methodological principles. When we talk about a human being, we do not mean a subject restricted to inter/intrapersonal relationships, but a person who is connected to the transpersonal territory and does not negate his/her existential base. In this sense, health is achievable merely in coordination with the inter/intra/ transpersonal network of human condition not in individualistic or collectivistic unidirectional attitudes.

The time of transition from the medical model

The scientific and explanatory values of a model are not always aligned with its practical and therapeutic values. Medical history has always witnessed a condition in which a therapeutic model was used which was based on an older model despite proved advantage of an explanatory model.

For instance, although forerunners of scientific medicine emerged in 16th century and a medical knowledge based on chemistry and physics was acknowledged in 17th century in Europe and there was an attempt to use it as the base for pathology, therapy, and anatomy, the prominent clinical medicine was still based on the analogical model of humor medicine until the 18th and more or less until 19th century. Humor medicine was not based on anatomic pathology but on interpreting clinical signs of humor swings.

Instruments of biomedicine model for diagnosis and therapy were developed and practical and scientific values of medicine became aligned and coordinated in the gradual course of three centuries. The course of development in theory and clinical practice seems to be very slow, exhausting, and chaotic. As Kuhn also mentioned in the "Structure of scientific revolutions", a normal science passes a stage in the beginning of its transformation in which its theory and practice structures become heterogeneous and incompatible (Kuhn, 1996). An instance is the one mentioned above in which the organism was defined by physics and chemistry, but it was treated based on humors dynamism.

The developments in the last decades in laboratory as well as clinical researches have caused many abnormalities in the biomedical paradigm especially findings which show the structural and functional connection of mental and physical phenomena; the findings which are not explainable through the reductionist method of common medicine.

Emergence of fields of knowledge such as psycho-neuro-immunology and energy medicine made evident that we need to be in search of models that can explain the matter-energy-information-consciousness stream and can indicate how vital systems behave and respond to physical and symbolic factors (Vedhara and Irwin, 2006; Ader, Felten, & Cohen, 1991).

The biopsychosocial model which has found pervasive validity and reputation in medicine for years attempted and attempts to satisfy this need. However, despite all these attempts and successes in theory and practice, medical institutions which provide education and services still regard this systemic approach for merely filling the gaps in biomedicine.

The development course of medicine, as it was mentioned, is considerably slower than that in the exact sciences of physics and chemistry. For instance, the mechanistic model flourished in the beginning of the 18th

century but the mechanical model of medicine became practically dominant in clinical practice in the 19th century. The recent condition of medical knowledge also shows this lag compared with physics since medicine is still dominated by Newtonian physics and tries to explain and predict complex conditions of human organism based on definite mechanisms of parts of the system while physics has been liberated from Newtonian mechanical determinism by emergence of probability and non-deterministic views of quantum mechanics (Wulff, Pederson, Rosenberg, 1990; Bohm, 1980; Pribram, 1997; Bass, 1975).

While the appearance of concepts such as information and organization in physics goes back to worthy works of Maxwell in the 19th century, it is only since 1960s that biomedicine and medicine almost started using cybernetic and semantic and, generally, systemic explanations about human being. It is worth mentioning that this movement, with all its widespread use, has caused no fundamental changes in educational and healthcare system, although it has considerable effects in prevention and education fields of health (Brier, 2008; von Uexkull, Geigges, & Herrmann, 1993; von Bertalanffy, 1975).

Various factors can be identified to be responsible for this sluggishness and conservatism in medical discourse; I will refer to some of the most important factors in the following. First, medicine is not counted as an independent knowledge scientifically. It depends on physics, cosmology, and technology of the era. These are the knowledges which tell medicine what the world is made of, through what instruments we can know the world, what the position of human beings is in the world, what the world's natural order is, and finally, through what instruments we can transform this order. Therefore, predictably, it is not possible to transform medicine unless paradigms of knowledge are evolved.

I do not mean at all that medicine has no effects on the evolution of knowledge and technology, since there is a kind of interaction among all the discourses anyway. The effect of medicine can be sometimes evaluated deeper than this and a kind of physicianistic concern and bias can be identified behind the scenes of human beings' attempts to know and want. It cannot be said that a human being's mind does not seek health and well-being. Nevertheless, it is a reasonable and historical reality that medicine depends on paradigms such as physics, and of course, the instruments which technology makes accessible to medicine.

Perhaps a question arises: "Suppose that evolution in the paradigm of medicine is dependent on evolution in more exact sciences and technology, how can we explain this considerable lag?" I should answer that medicine, just like law, is a teleonomic knowledge-rather than a science - which attempts to provide and promote the health of individuals and society and all sciences and social practices of medicine make sense through this teleonomy (Taylor, 2009). While exact sciences try to discover and explain natural phenomena, medicine applies this knowledge for guaranteeing human life. Therefore, medicine is pragmatic and prospective due to its nature and it is natural for it to resist accepting changes because of moral considerations and its commitment to individuals and society.

Therefore, the delayed responses of medical discourse to the soul of the era should not be counted as medicine's dullness, but we should see it as its keenness to recognize its important responsibility. A medical technique shows its effects on the human being's life in a very short time. This is while the effects of a physics theory are evident in the long term.

In addition to the two above-mentioned factors – medicine's being dependent on sciences and technology and its teleonomicity – I have to mention another key factor which is perhaps more important in some aspects than the two aforementioned factors. The

governance of the physician as the one who knows mysteries and is guardian of life rather than a scientist has an age as long as history. This governance causes physicians to become sensitive to their excellent social status knowingly or unknowingly and have defensive reactions to things that shake this position. Acceptance of a new-emergent model equals with acceptance of relative ineffectiveness and wrongness of the previous model; a model which the physician takes his/her validity from and often talks from that position in a way which no hesitations about this model's validity or at least something other than definite superiority of this attitude over other attitudes comes to the mind of the audience.

It is evident that the privileged and metanarrative position of the physician is endangered, certainties are weakened, and the powerful role of the physician becomes shaky when a new model becomes dominant. This psychocultural aspect of paradigmatic resistance has a very crucial role in medicine. Although physicians talk about their own uncertainty and errors and medicine errors, they still maintain the position of physician – magician of the tribe (Coombs & Ersser, 2004; Albrecht, Fitzpatrick, Scrimshaw, 1999). Therefore, it is difficult to accept that what was called medicine thus far is only one type of medicine and the physician has to be prepared to accept another type. Of course, I should confess that I am not opposed to physician's being mysterious and enigmatic. I think that demystifying the treatment process decreases the role of placebo effects in treatment. However, I believe that striking a balance between enlightening and mysterious aspects of medicine is complex.

The fourth factor for the considerable resistance of medicine against change is the economic factor. The stages of research and setting up a production line of a medicine or a system, service package, or surgery procedure, and even education of medicine-related sciences and technology are very time-consuming and costly. Regarding limited time and money, if some truths become evident that reject the things an individual offers as the latest scientific achievements and the science is recognized as rejected or useless, he/she will resist the truth and disregard the science he/she used to advocate and try to justify his/her work and deprecate the new findings against the older and namely more authentic findings through ideological justifications.

When you are the head of a pharmacological company who has spent a million dollars, these measures will be more extensive and perhaps you will do everything to marginalize critical articles, suppress them by advertising, give money to journals, and bribe politicians and judges if some complainants appear. It will even be necessary to punish or get rid of a young journalist or researcher who insists on ineffectiveness or danger of your product.

This is the story of hundreds of instances in the last decades in which economic benefits have made health institutions act against their teleonomy. Ivan Illich calls this phenomenon social iatrogenesis meaning the diseases which appear not due to the methodological restrictions and inevitable complication of drugs (clinical iatrogenesis disorders), but due to operative economic and dominating biases (Illich, 1976).

The fifth factor which has roles in observed delayed and difficulty of changes in medical model and intervention is conventionality of medicine which is associated with its farseeing. The complexity of the subject matter of medicine – i.e., human health – and heterogeneous, biopsychosocial, and cultural factors and reasons lead us to be cautious even in using statistical computations and to evaluate findings based on common sense and expected findings or – to put it more clearly – based on prior confidence on previously confirmed hypotheses. In this way, we act based on common sense in diagnosis as well as treatment; that is, based on the "belief" in the existence or the correctness of a diagnosis

or a treatment method rather than based on mere "probabilities". I guess that this feature of medical knowledge needs to be explained further. First, we explain what we mean by saying that diagnosis is based on common sense. Our clinical knowledge is mostly based on pathology. Medical books are ordered according to anatomical classifications and titles for the diseases related to each vital system. Physicians usually learn symptoms and signs under the titles of related diseases. This is while they should rely on the symptoms and signs which they are faced with at patients' bedside for diagnosis of disease. To put it more clearly, what physicians study in textbooks are P(S/D), that is, "the probability of observing the symptom if a disease exists", but what they need for clinical diagnosis is P(D/S), that is, "the probability of a disease if a specific symptom is observed."

Therefore, when a physician reads in his textbook that, for instance, "55 percent of those who suffer from duodenal ulcer have also upper abdominal pain", by no means does it mean that if an individual has upper abdominal pain, he/she suffers from duodenal ulcer for 55 percent. This is the same as "all that glitters is not gold". Nevertheless, if we make these propositions probable, the similarity of the two instances becomes clear: 99 percent of gold metals glitter but 99 percent of the things that glitter are not gold. It is only through knowing the probability of a thing that glitters but is not gold that we can reach the percentage of glitters that are gold using the first proposition. To find the probability of duodenal ulcer if upper abdominal pain is observed, we have to determine two things. First, we should know $P(S/\overline{D})$ – the probability of observing upper abdominal pain if duodenal ulcer is absent as well as P(D) and $P(\overline{D})$ – prior estimation and evaluation or prior probabilities about presence or absence of disease (Wulff et al., 1990).

It is due to the significance of this component of prior probabilities that if you see someone who has intermittent fever and shivering in a large city, you are less likely to think of malaria unless you work in a region in Africa with high prevalence of malaria. This last component is the same common sense that I am talking about. In order to be able to calculate the probability of symptoms if the disease is present based on Bayes' theorem, we definitely need prior probabilities.

This is true about treatment in another form. When we say that medicine A is 30 percent more influential than medicine B and the p-value is lower than 0.01, we conclude that this difference is significant and the probability for no real difference is lower than 1 percent.

The p-value tells us that if we accept the null hypothesis (there is no difference between the effect of A and B), the 30 percent probability of difference between A and B is lower than 1 percent. Now we can better understand clinical researches' and treatments' being common sense. Here again we refer to prior confidence in null hypothesis. It means that although 30 percent of difference when p-value is lower than 0.01 is a very strong reason for the effectiveness of medicine A, the reality is that if we do not have any prior evidence in effectiveness of A, we should say that our prior confidence in null hypothesis is very large, and thus we cannot simply allow this medicine A to enter the therapeutic programs simply based on a study even if this study is very reliable. Of course, findings of future studies in the case of being aligned with those of this study gradually lead to less and less prior confidence in the null hypothesis to the extent that we can add medicine A into the pharmaceutical system or replace medicine B with it with an acceptable reliability.

What I explained here about diagnosis and treatment's being common sense, which of course is related to the common sense of practitioners and researchers in a health system and territory, is the factor which acts not only in medical interventions but also

generally in the medical model. In changing a single intervention, when we see how prior findings and beliefs in a given intervention are emphasized and new findings are isolated for some time, the extent of the resistance toward the change in medical model becomes evident. Therefore, we can predict the extent to which the body of opposite findings and beliefs should grow to promise the occurrence of a fundamental evolution in medical institutions and discourse.

The 6th factor that can be counted as the sluggishness of medicine is its interdisciplinary nature. Although medicine is regarded as an integrated and unified science in common sense, it has been a specific compound of various sciences, technologies, and knowledges which are brought together around the concept of health. From chemistry to physics, to biology, botany, climatology, sociology, anthropology, psychology, logics, philosophy, ethics, and even theology, music, and alchemy, all have had structural and functional roles in medical discourse in various ways at different times. Perhaps pathology, nosology, and pharmacology can be acknowledged as the most specific knowledges related to medicine. Each of these has its unique methods and instruments. In any case, medicine has had a huggermugger nature from the beginning. Intermediating structure of medicine is clearer and more evident today that interdisciplinarity is transmitted to other fields and it seems as if the soul of the era is to tinker the broken parts of the cup of wisdom – cup of divination which has fallen from the hand of Jamshid in ancient times and each of its pieces has transformed into an askew and unidirectional mirror in this era. I think naming many interdisciplinary majors which have emerged around medicine like a constellation of knowledge is not necessary.

The complexity of this knowledge structure necessitates that discourse and medical institutions not go under a fundamental evolution unless a new system of wisdom is established and becomes pervasive. Evidently, this last factor is in close relationship with the first factor – medicine's being dependent on exact sciences and technology – and is almost its extension.

The above discussions were necessary because if we are to analyze the behavior of medicine as a social institution, a paradigm, or a discourse, we cannot do this without relative knowledge of its basic tendencies and orientations. The necessity for such discussions is revealed when we want to understand and explain our mission toward the health of individuals and society in this era.

What is our mission at this time?

It was as if the ground had been pulled out from under feet, with no firm foundation on which to build anywhere (Einstein as cited in Schilpp, 1949, p.46).

It appears thus far that we cannot expect a revolutionizing transformation in medicine like the one that occurred in physics because of the 6 mentioned reasons. The course of evolution in medicine is slower, more continuous, and smoother and it is expected that medicine heterogeneity period will be longer in a wider scope than exact sciences through adding new-emergent interventions, sciences, institutions, and theories to the predominant paradigm.

No blame is placed on Kuhn in terms of these differences in the path of evolution of the medical model by the structures of scientific revolutions since he does not know medicine, technology, and law - which are the practical fields of science- to have a paradigm. Hence, it is natural that the rules for paradigms cannot be applied to these fields. However, we, as it is common today, know medicine to have more or less a paradigm or, to say it more exactly, paradigms; I also referred to its structural heterogeneity and more continuous historical course despite all its gaps. Therefore, here we use Kuhn's model to the extent that it has explanatory value and

we also consider the discrepancy between this model and the evolutionary movement of medicine through history.

Before I explain our role in this evolutionary movement, which is another differentiation between Kuhn's structuralistic perspective and that of ours, I want to refer to today's era of medicine which apparently is an interstitial and transition condition. Then, I will illustrate the position of physicians, patients, and public and governmental institutions, and their present mission.

Einstein's quote at the beginning of the section is the description of a time in which the previous model had collapsed and the new model has not yet been constituted; the condition in which observed abnormalities have led to divergent narratives none of which has definite preference over the other, and the practitioners of that science have lost their work, life, and social role. Kuhn describes this as:

"… the rules of normal science become increasingly blurred. Though there still is a paradigm, few practitioners prove to be entirely agreed about what it is…" (p.83).

He believes that this unspecified condition is so painful for practitioners and scientists of a science that many of them cannot bear it:

"Though history is unlikely to record their names, some men have undoubtedly been driven to desert science because of their inability to tolerate crisis. Like artists, creative scientists must occasionally be able to live in a world out of joint…" (p.78-79).

Most of these apocalyptic signs have already appeared in medical discourse but it does not seem that the courage and honesty of medicine, due to the mentioned reasons, are to the extent of those of physics to lead physicians to a suspended and dissociated condition. However, they experience this dissociation in a more conservative manner.

We should have in mind that Kuhn is more similar to an interpreter of the dream of science history than a prophetic messenger since he has a structuralistic approach and, like his peers, supposes almost no will for human beings he believes that paradigm is a pervasive and extensive movement which moves in its course of development and practitioners and researchers of a science do not even need to identify their paradigm and it is only through working and more working in the normal science that at last abnormalities appear and paradigmatic evolution happens.

In this situation, consciousness seems to be a faultless witness which is only looking at the movement of science history through a window. Although this attitude has many advocates, it is against the view of many great thinkers and philosophers of science; thinkers who believe in intellectuality and the role of conscious contribution of practitioners and researchers in the evolution course of a science. It is worthy to explain what I mean by these.

The tendency of illustrating a timeline for history and the simile of a society or a science for an organism which has stages of growth and conditions for survival specifically started from Hegel's "Phenomenology of spirit" and transformed to a pervasive and global idea by Marx's philosophy. In contrast to Kuhn, Marx was like a apocalyptic as well as prophetic messenger who talked about the definite superiority and victory of the proletariat in the deterministic path of history. He also made them understand their historical mission in his "The communist manifesto", in a paradoxical manner, and continuously cried: "Workers of the world, unite!" In his scientific explanation of history, which he had presented before and emphasized on it later, he claimed that whether you want it or not, whether you do something or not, the proletariat will surely dominate. Then, with a different and non-deterministic tone, he addressed the proletariat and stated that this is their mission in this era and they should do this and that so that a revolution takes place.

Kuhn's "Structure of scientific revolutions" was published in 1970s – at the time of

frustration after suppressing the student movements. At that time, no one, at least the elites, neither believed in writing manifestos nor advocated the teleonomies of the era of intellectuality and rationalism. Conversely, the dominance of language, discourses, and power systems and generally the power of social structures showed themselves to be more important and perhaps it was very natural for an intellectual scientist like Kuhn to augment such an idea.

However, many great philosophers nurtured other beliefs and still believed in the role that the thinking human being plays against these systems. They believed that we are free to interpret and criticize the dominance of the economic, political, and scientific systems, and negotiate with them and change their course of movement. Jürgen Habermas and Antony Giddens are the two thinkers who have caused considerable effects in this respect. The two philosophers have concentrated a major part of their work on this basis, i.e., explaining the relationship between the human being and the system. Although Habermas considers the freedom of interpretation and creating favorable constraints for discourse, he believes that systems need to be criticized ideologically in order to prevent them from acting against the direction of their teleonomies, i.e., human welfare (Barry, Stevenson, Britten, Barber, Bradley, 2001; Habermas, 1985; Mishler, 1984). Mishler applied these ideas considerably to establish a favorable relationship between lifeworld's rationality and the (medical) system's rationality in order not to ignore, deviate, and suppress giving voice to medicine– unlike what happens in the current situation (Mishler, 1984).

Criticizing the determinism of Kuhn's paradigm, Popper believes human beings to have a more active contribution in paradigms and discourses. In his "Normal science and its criticisms", he claims that we, as prisoners, are always captivated in the frameworks of our theories, expectations, language, and past experiences. Nevertheless, we are not captives in the real sense of the word. If we try, we can come out of our framework. In this way, we definitely enter another framework; however, this new one is better and more spacious and we can also come out of it at any moment.

It seems that this extent of optimism for dominance of the autonomous human being is exaggerated, but it can be understood that we can release ourselves from the dominance of conditional thinking of the medical system at an individual level by gaining insight. That is, a physician or a patient can free his/her lifeworld from the rule of the dominant medical discourse to a great extent and provide a more humanistic, dynamic, and autonomous condition by his/her personal interventions and creativity. This is while rationality of the medical system is merely focused on the length of life and social functions and deemphasizes more qualitative and humanistic affairs or merely regards them as ornamental affairs attractive to the client.

If we believe that a structuralistic and deterministic attitude toward history is inevitable, the question of "what is our mission?" becomes meaningless and we can only ask: "What is our duty in this supposed framework?" and "What do we have to do in order not to be marginalized?" However, my experiences have made me believe that our mission is not only meaningful in this field, but is achievable to a great extent. The condition in which an ill individual reaches an insight about his/her own state and is not transmuted into the services of the medical system despite using them, or he/she does not allow disease to be identified with him/her to make him/her a disabled and automaton called "patient" affects the attitude of those around him/her toward him/herself, life, death, and disease willingly or unwillingly. I myself have many times experienced that an ill individual can affect his/her physician's understanding of life and profession.

Of course, a supervisor, a physician, and a university teacher can transform frameworks,

theories, and the method of coping with and treating illnesses in a wider field, as the instances of this are not few.

Non-governmental organizations are also one of and perhaps the greatest bases for supporting human beings' lifeworlds against the medical system. To prevent the effect of life iatrogenesis, some organizations prevent the entrance of medical practitioners into them as leaders or sometimes as counselors despite using their timely medical services. In these organizations, physicians can only participate in the association for themselves and as representatives of their own lifeworlds. Many journals, books, forums, and websites converse critically with the system. As it appears, such small and large movements gradually join with each other and force the system to become responsible for the needs of the lifeworld.

Evolution of a discourse and paradigm usually takes much time, but it seems that these humanistic movements which are honestly sought for human and spiritual rights of alienated human beings in the medical system are weakening the structure of the biomedical discourse more and more. Moreover, the forces of people, scientists, physicians, paramedics, and theoretician are reaching the critical threshold of the evolution. It seems that we should expect the pervasive emergence of a humanistic model in medicine in these years, a model whose methods of explanation and intervention are biological as well as psychological, social, and spiritual, a model which seeks not only to promote the quantitative and objectified aspects of life, but also to actualize the qualitative and intellectual ones.

No movement, even conscious and autonomous coping of a patient, is trifle in this line. No one can evade from his/her mission regarding the evolution of medical discourse since health is not only a right, but also a social action. In addition, paternalistic views - views that recognize health as the mission of the medical system- have lost their dominance and superiority in the global domain of today's world.

Possible condition for a humanistic medicine

Now that we have an outline of the historical behavior of medicine and our transition condition in the history of medicine, and have explained the conversation between voice of the lifeworld and that of the system, I think that I should refer to the pathways through which this conversation can be guided in the direction of realizing a pervasive biopsychosocial model.

Perhaps the title "what should I do?", or something similar, would have been better for this part of the essay. In any case, the subject matter is the same as I explained; "What is the possible condition for the emergence of a medical system which is in line with lifeworlds of human beings and in the direction of actualizing the humane totality of human being?"

Before anything else, to distance the discussion from the utopian attitude, we have to confess that even in the case of the realization of a complete humanistic medicine, there is a need for its critical conversation with the lifeworld since every system which is constructed for a purpose has needs and requirements of its own in addition to satisfying the needs which are the reason for its existence. Therefore, it is natural that sometimes the cathexes of the system onto itself are against the needs and wants of the human being and sometimes the self-referential function of the system becomes dominant to the extent that even the purpose of the construction of the system is forgotten (Müller, 1994).

Institutions such as universities, health centers, hospitals, clinics, incorporations for production and distribution of pharmaceutical products and medical equipment, and people such as physicians, paramedics, and some informational resources such as reference books, textbooks, and medical journals have wants of their own due to their needs for survival and also for

their structural selfishness. Sometimes, the endeavors of these subsystems for their professional priorities and benefits increase to the extent that social priorities are marginalized and they even negate their purpose – as it was mentioned in social iatrogenesis. The danger of ideological acting of these systems always exists; that is, acting against today's science and against the purpose which gives them their social identity (Illich, 1976).

A biopsychosocial and humanistic model can also suffer from this self-consciousness after becoming pervasive. Therefore, medical system's being open is the first condition for realization of a humanistic medicine model since an open climate for critical interaction between lifeworlds and medical system is the only way for returning the systems to their objectives of health promotion (Barry et al., 2001; Habermas, 1987; Mishler, 1984).

Through this first contemplation, one of the most important conditions for realization of a humanistic medicine or, to state it more exactly, a more humanistic medicine was mentioned; lifeworld-system interactions' being open which is the condition for coordinating and balancing the self-referentiality or namely inherent selfishness of systems.

The second condition which is related to the first condition is the spread of non-governmental organizations and self-help groups. Development of such institutions is one of the most evident signs of psychosocial and moral maturity of a society. These democratic institutions can widely play effective roles in knowledge production and criticisms of medical systems as well as their supportive and educational approaches which they have.

The third condition is transformation of fields and methods of research in the health domain. Research priorities and evaluating studies are the most fundamental changes which lead to evolution in a model of a science. Although Kuhn knows this starting point as the paradigmatic evolution in sciences and believes that all crises practically are launched due to the loosening of the rules of normal research, the starting point should be known as the change in public domain tendencies since the knowledge and discourse of medicine is related to direct and everyday needs of people. Nevertheless, fundamental changes in research methods and priorities can lead to fundamental changes in descriptive and prescriptive models of medicine.

Currently, the more a study is quantitative and objective, the more it is regarded as valuable. Therefore, laboratory and clinical trials are placed at the most superior level. Of course, hermeneutic and qualitative studies have more or less been focused on medicine recently, but they have not found practical, social, and management positions they deserve. If we identify psychosocial factors – belief system and health and illness behavior – as highly determining factors or, more than that, the most determining ones in formation, duration, exacerbation, and relapse of the disease, we have to accept that empirical and semi-empirical researches merely illustrate a horizon of the effects of these factors on various conditions of health and we would need to extend phenomenological researches for explaining these phenomena and evaluating psychosocial interventions (Ogden, 2004; Barabasz, Olness, & Boland, 2009).

From this standpoint, case studies are employed not only for reporting rare cases but also for analyzing clinical complexities through individual differences and their effects on the treatment course. The great knowledge of psychoanalysis was also founded on such case studies. One of the most basic research methods in the biopsychosocial approach is these case studies. Although such studies are at the lowest level of the value hierarchy of evidence-based medical researches, they have a very fundamental role in linking direct and real clinical experience with research so that research and therapy intertwine into each other.

The ethnographic study, which recently is regarded as the most important research method in medical anthropology, will have a more important role than that of the quantitative field studies. The worshiping of objectivity and quantity in today's medical research is deemphasized advertently or inadvertently by changing research priorities that have currently been formed at least in meta-planning and lifestyle which is placed at the top of this list.

Revisional, review, and theorizing studies have a very fundamental and turning role in this era since biopsychosocial medicine is based on the novel organization of today's medical knowledge rather than on new information about psychosocial mechanisms and it tries to integrate the scattered islands of medical knowledge based on one ontological, epistemological, and methodological base. Therefore, predictably, many previous studies are read anew or data of a research may be analyzed by other methods. Many studies which were not considered as related to each other become related by this model and new explanations and interventions and new therapeutic approaches and theories are provided. Evidently, the theoretical structure of this model and the complexities which it has in practice due to going beyond strategies of linear causality of biomedicine are criticized. Some of these criticisms were answered to by completing the theoretical structure of the model and systemic and therapeutic management strategies, and some others still remain to be dealt with. In any case, it seems that the systemic model of health is still the most inclusive and efficient system.

The fourth condition is associated with guidelines and handbooks. If we believe that our present knowledge implies that effective communication between therapist and client, development of sustainable change in the belief system and health behaviors, and lifestyle modification are the most fundamental principles of the sustainable development of health, we have to say that almost none of these teachings are prospected for physicians and it can be predicted that the measures they take in these issues are instinctive, non-methodological, and consequently ineffective to a high extent.

Changing the existent handbooks and incorporating materials such as health psychology, medical anthropology, medical ethics, and methods for clinical reasoning and judgment, history and philosophy of medicine, and complementary medicine are definitely very useful. However, we should consider that the teaching method has to be changed fundamentally from a knowledge and technology transfer method to an evolutionary method in the way of thinking, personality, and lifestyle. There is a 100-year-old tradition in psychoanalysis based on which each psychoanalyst has to go under psychoanalysis prior to starting his/her profession so that his/her conflicts and lack of psychological maturity do not affect treatment of and communication with clients. Perhaps psychoanalysis in its vastest sense is not necessary for all physicians and paramedics. However, establishing a kind of deeper, more personal, and psychological relationship - compared to more formal relationships common between students and teachers - is essential; a kind of relationship which had been common in deeper and more humanistic relationships in the traditional system of medicine. Teaching the skills for thinking and clinical and moral reasoning rather than mere teaching of guidelines and fostering communicative skills and cognitive–behavioral interventions for evolution of health dynamism and growth of communicative rationalism in educational climate can be key pivots which lead to

humanization of medical education.

In addition to these general considerations in medical education, we do not have to ignore that the realization of this systemic model in education and treatment needs specialized education in integrative medicine with a cognitive-behavioral approach more than anything else (Faass, 2001). The target of these educations are in fact general practitioners who are at the center of the referral system and are responsible for management and follow-up or, better to say, should have these responsibilities but do not in Iran. The family medicine program which is now in its executive phase in Iran is an appropriate ground for these revisions.

The disorder and chaos which exist today in the feudal and specialized system of medicine have caused confusion, inappropriate treatments, and useless expenses especially for people who suffer from psychosomatic illnesses (i.e., more than 55 percent of clients who refer to the clinics).

Lack of a powerful base for family medicine physicians and general practitioners and not giving them the necessary education which enables them to play essential roles (health counselors, educators, managers, and therapists), especially for appropriate coverage of psychosomatic and chronic patients and timely and appropriate referral of patients to specialists and therapeutic centers increased non-systematic and non-humanistic conducts with the patients more than that which is criticized by practitioners in developed countries.

Our present health delivery system needs general practitioners educated in the biopsychosocial approach and empowered nurses who are able to activate inner healing mechanisms and guide health behaviors of patients. Currently, in our educational system, a general practitioner is an unfinished product, a non-specialized and ineffective social element rather than a physician with a holistic and systemic approach. This illustrates the excessive fruitlessness of a large part of medical education. Regarding basic skills and knowledge, physicians who are trapped in this in-between situation can be changed into very efficient therapists in a fairly short-term period by merely changing the priorities.

In respect to the fifth condition, I should say that every evolution in the model of a science is accompanied with building or focusing on some basic concepts. Some basic concepts which will influence education, research, and treatment deeply seem to be present now in medical studies, but mostly in the margins of medical discourse. Some of the most fundamental changes in the medical conceptual network which evidently will transform the form of education, practice, and research in medicine are as follow: the concepts such as a health continuum rather than a binary system of health and disease, focusing on more personal and unique experiences of illness by the individual rather than mere concentration on diseases as diagnostic categories, focusing on salutogenic mechanisms and inner and outer resources that can increase quality of life (QOL) of individuals rather than focusing on pathogenesis, having a systemic approach toward the "person" rather than the reductive and mechanical approach to "disease", and focusing on continuous intervention which relies on autonomy of the individual for higher health rather than periodical and paternalistic intervention for treating the disease (Helman, 2000; Senior & Viveash, 1998).

Evolution in the method and practice is the sixth and the last condition of a biopsychosocial model. As was previously mentioned in the discussion about changing the educational system, we need some

institutionalizing in this field in addition to the need for pervasive systemic and humanistic changes in reorganizing and reframing roles and health and therapy institutions. Centers for stress reduction, patient education, and rehabilitation; psychosomatic clinics; and inpatient and outpatient centers for lifestyle modification are some of the most important institutions which are needed today.

Regarding the epidemiological shift of diseases into the chronic and psychosomatic ones and also development of public health culture, there is a need for development of more autonomic health institutions which help ill people or those who are prone to illness play their roles in sustainable promotion of health and their optimized immunity against illness. These health institutions are founded on the principle that the basic role of health practitioners is facilitating salutogenic processes and educating clients to play their roles as the most effective member of treatment and prevention teams.

These centers which can leniently be called behavioral medicine centers have increased in a geometric progression in developed countries from a few to several hundred in the last three decades. The expenses for the services are paid completely by insurance companies. Although from the beginning the clients used to refer to these centers by their own decisions or by referral of a physician, currently they are mostly referred by their employers. This indicates that the systemic and active approach to health is justifiable not only through moral and humanistic values but even through functional ones. For developing these new institutions, cultural, social, and legal embedding is needed in addition to related knowledge, technology, and techniques.

Conflict of Interests

Authors have no conflict of interests.

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