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Biopsychosocial Medicine and Health – the *body mind unity theory* and its dynamic definition of health

Josef W. Egger¹

The **Biopsychosocial Model** offers the most comprehensive background theory for scientific medicine. The most powerful version of this framework may be called a **body mind unity-theory** (or more precisely: *a brain mind unity-theory* or organic unity theory). This theory stresses a one world perspective, using the *General Systemtheory*, and overcomes the dualistic concept of psychosomatics (Egger 1992, 1993, 2005).

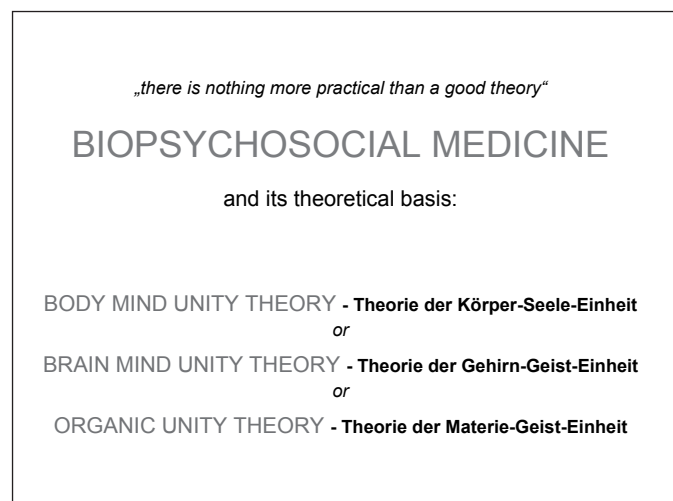


Fig. 1

The term *biopsychosocial* model was first used in medicine by George Engel, however there are a number of other prominent researchers, who have contributed significantly to the evolution of this theory over the last 4 decades. They all were not content to accept the boundaries and limitations of the leading biomedical theory (Engel 1976, Lurija 1992, Weiner 2001, Kandel 2006).

¹ Lecture at the Symposium “Biopsychosocial Melanoma Research – Recent Results”, The International Society of Biopsychosocial Medicine, Graz, December 15th 2012.

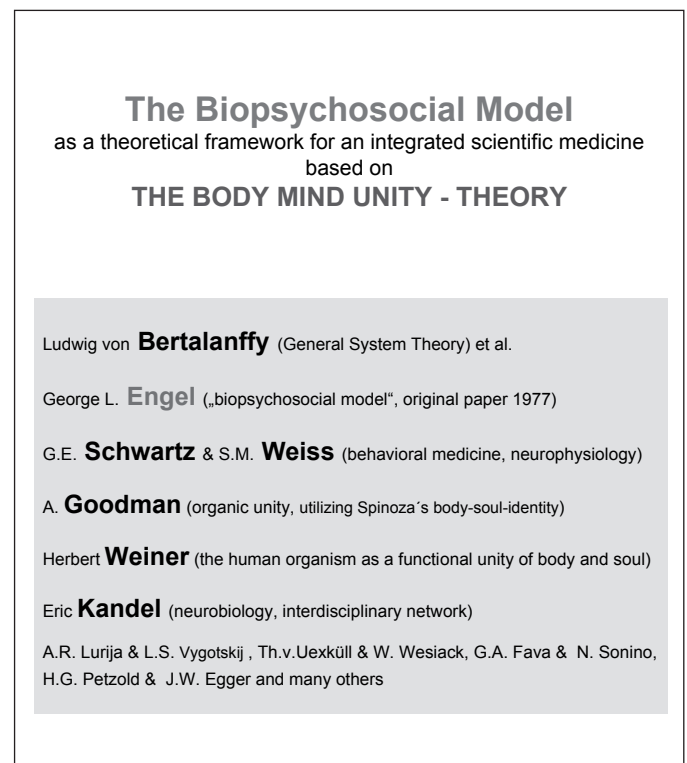


Fig. 2

The biopsychosocial model – or more precisely: the *body-mind-unity-theory* – does not oppose the biomedical model, which dominates this field until now. This new framework still recognizes the long and successful story of the biomedical model. However, the biopsychosocial approach attempts to widen our horizon by incorporating psychological and eco-social factors as a strong impact for health and disease. Such an undertaking – meaning the parallel use of physiological, psychological and environmental influences – certainly need a potent metatheory (Egger 2000, 2012, Kriz 1997, Foss & Rothenberg 1987).

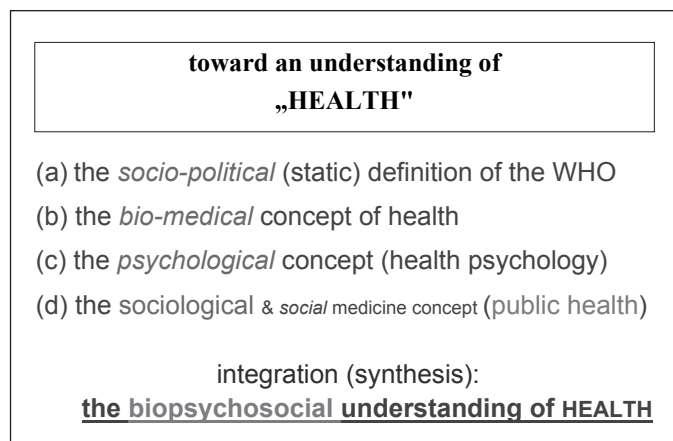


Fig. 3

But let us start to look at the different scientific definitions of the phenomenon of health. A short overview reveals 4 totally different ways to define health:

There is (1) the old, idealistic and static definition of the **WHO**, misunderstood over decades as a scientific definition, totally unusable for scientific work, (2) then we have the well known **biomedical** concept of health, (3) the **psychological** definition of health and (4) the **public health** concept.

These definitions are not interlinked because there was no theoretical background to manage this until the *General System Theory* was developed. This metatheoretical basis offers a way to integrate the different approaches.

A brief look at the different scientific concepts of health:

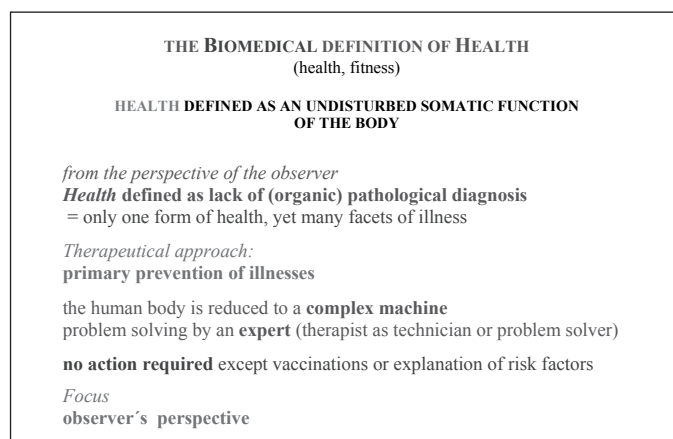


Fig. 4

Within the **biomedical** definition, health is seen as an undisturbed somatic function of the whole body, without any pathological signs or symptoms. There is almost nothing to do for a doctor except primary prevention of sickness such as vaccinations or an explanation of recognized risk factors; the doctor acts as an expert and problem solver.

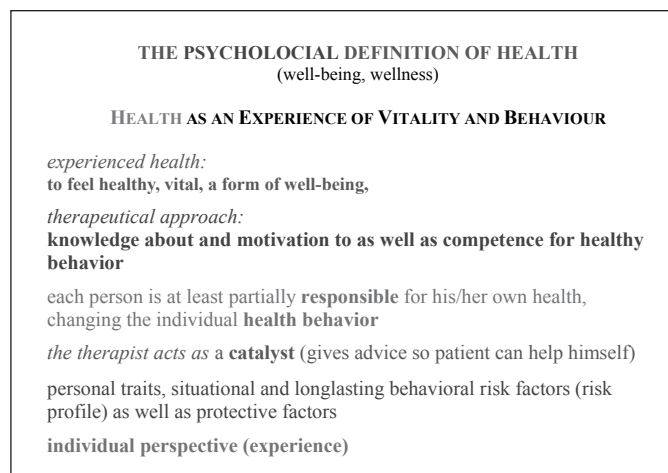


Fig. 5

The **psychological** definition of health focuses on the individual's experience of vitality and his habitual behaviour. Each person must take up the responsibility of gathering knowledge about health and of performing an adequate health behavior in his daily life; the doctor is primarily a catalyst, offering help so that the patient is equipped to help himself.

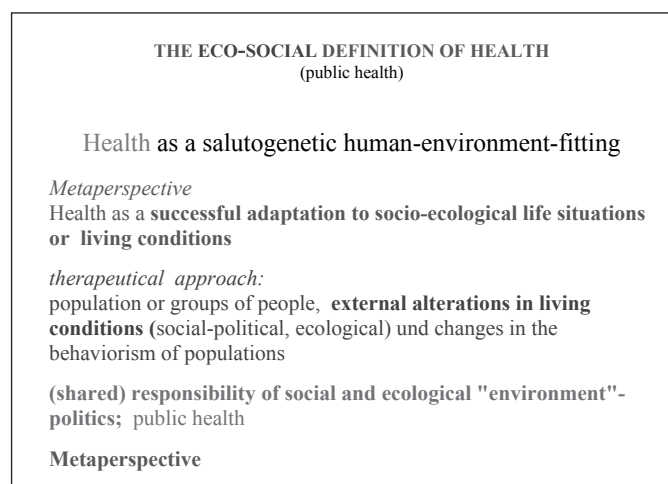


Fig. 6

The **eco-social** definition of health stresses a necessary good fit of a population to the conditions of the ecological and social life; health depends on a successful adaptation to the specific eco-social environment; this primarily is a matter of health politics in every society. At this point of the discussion we may summarize: *health* – from a general point of view – obviously does not mean the absence of illness; it cannot be defined as a state. So we have to find an answer to the question, „*what else does health mean?*“. The summary of a common understanding of health derived from everybody's opinion, as well as from the professional approaches, offers an interesting definition: *Health means the ability to work and to cultivate an active social life.*

From a metatheoretical perspective the phenomenon health is best described within a biopsychosocial concept. The revised Biopsychosocial Model of Illness and Health – sensu body mind unity theory, which offers a scientific framework for an integrated medicine in the 21st century – stresses a system theoretical scientific definition of health:

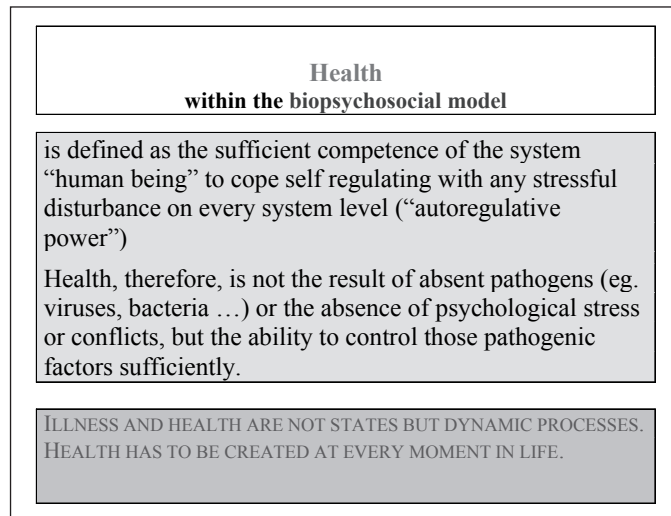


Fig. 7

Health is defined as the sufficient competence of a person to cope through self-regulation with any stressful disturbance on every system level. Health is not the result of absent pathogens (eg. viruses and bacteria ...) and means not the absence of psychological stress or conflicts, but the ability to control those potentially pathogenic factors sufficiently. Health therefore is seen as an intrinsic power for resilience (“autoregulative power”). *Illness* and *health* are not states but dynamic processes. Health, therefore, has to be created at every moment in life.

Within this new understanding health and illness are no longer seen as two different entities. They are not dichotomous or separated from each other. The General System-Theory postulates *parallel* levels of reality. Therefore, it makes no sense to greatly differentiate difference between *healthy* and *ill*. A person can function more or less normally on different levels at the same time. It also does not make much sense to differentiate between an *organic* and a *psychological* (or *mental*) disorder – these are primarily *phenomenological* perspectives (Goodman 1991, Petzold 2001).

One crucial point is that for *diagnostics* and for *therapy* as well, all three relevant levels – id est. *physical*, *psychological* and *eco-social* level – have to be investigated and considered in a *parallel* approach. All three levels belong to the same reality even if they are investigated by different methods, different concepts or different terminology. All three levels constantly interact with each other. All forms of life interact with their specific environment: The gene-expression of each organism reacts to changes of life environment. Our body-organs react in complex interaction to the specific changes of the biochemical milieu within our organism. We – as individual persons – react permanently to changes of our social and ecological environment (Egger 2008, Uexküll & Wesiack 2003).

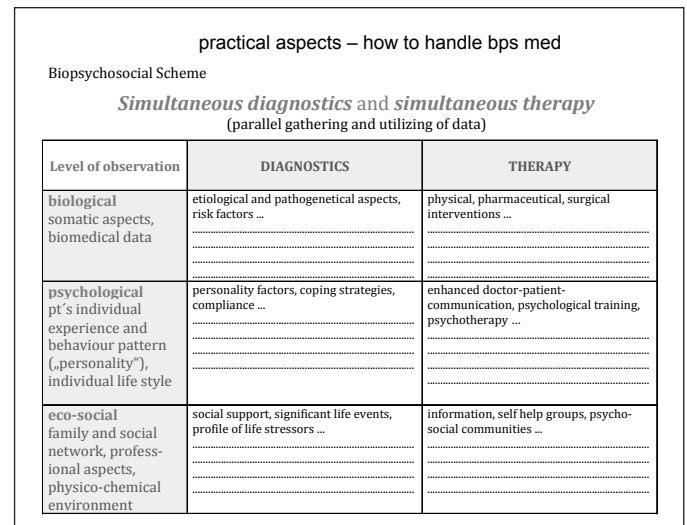


Fig. 8

What we need is a new strategy for the daily work in *data gathering*. It is necessary to collect data from the different system levels in a *simultaneous* way. Then, we have to integrate this data for a more or less simultaneous intervention or treatment. Figure 9 shows the main three topics for such a parallel intervention. Certainly, this job can be done better by teamwork, where different experts discuss their specific data and interpretations as well as their options for intervention.

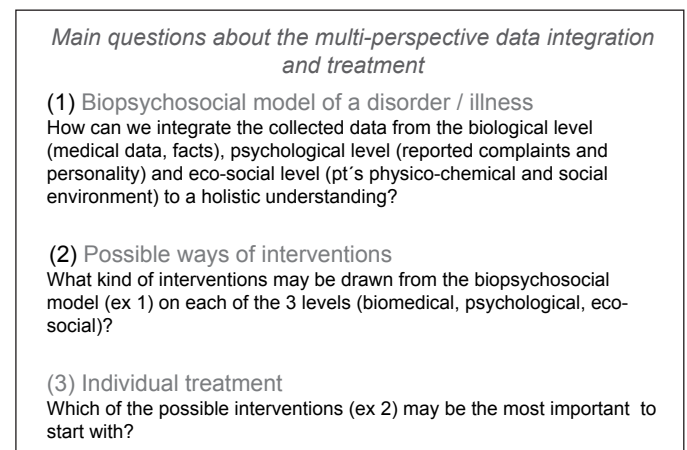


Fig. 9

The reason for this form of procedure is that every event runs – due to the vertical and horizontal networks – more or less *simultaneously* on the different system levels. This phenomenon may be technically described as *parallel interface* (in German “parallele Verschaltung”). However, this does not mean that all effects can be observed at the same time. Due to the different progression of processes on each involved system level, some effects will develop faster, while others only can be observed with delay. As an example, we could consider the long exposition to UV-light before melanoma occurs, or the latency between emotional stress exposition and gastric ulceration.

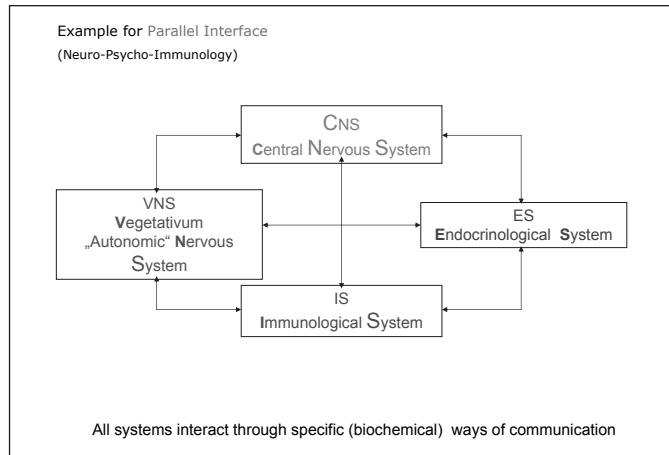


Fig. 10

It is important to mention here that we do not get an adequate insight or understanding of a *pathogenetic process* by collecting data only at one system level. There will be new phenomena on the next higher level that we could never observe on a lower system level. In other words: even the greatest of efforts within the levels of neurology or biochemistry will not be able to describe the phenomena of personal experience or individual behavior – and this is also true vice versa. The explanation to this is that each higher level produces phenomena, which do not exist in the level beneath.

Another problem arises by reducing the data on pathogenetic aspects and not using the protective influences. We have to consider the **risk factors** as well as the **protective factors** at all stages of an etiopathogenetic process. We already have a commonly used medical concept called *risk profile* for many disorders, but we do not have an interlinked concept for the simultaneous effect of risk factors and protective factors. We have to find answers to „What may endanger health? What put health at risk? What may produce pathological processes?“ And at the same time „Which elements are health protective? What may protect from sickness?“

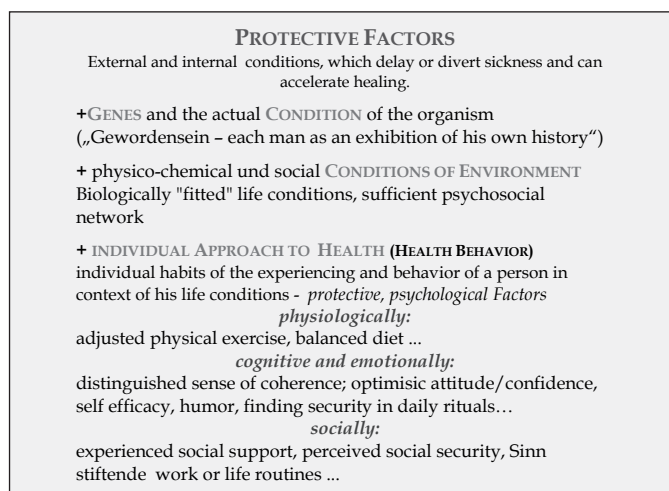


Fig. 11

Fig. 11 shows an overview of potentially *protective influences* on creating and sustaining health. They all are simultaneously involved in the process of generating health and respectively of producing illness.

Another implication of the biopsychosocial model is that all events or processes contributing either to the etiology, to the pathogenesis, to the symptomatic manifestation, or to the treatment of disorders, are consequently not either biological or psychological, rather *simultaneously both* biological and psychological.

Every psychological phenomenon – that means every *thought*, every *feeling*, every *impulse for action* or every *action* itself – is at the same time a *physical event* as well. Our common language creates the appearance of two independent or separated worlds – a world of body and a world of mind. However, there is only one unified process.



Fig. 12

Using this theoretical framework, we understand now better, how psychologically defined events are part of the salutogenetic or pathogenetic process. There are a number of psychological factors who reached sufficient empirical significance to be called „health producing factors“. A summary is given in Fig. 12.

For the scientific research we have to consider that there is no chance to study a disorder as a single entity with all possible factors involved (in German: „*das Ganze an sich ist nicht untersuchbar*“). Therefore, also in the field of biopsychosocial approach researchers prefer to examine smaller areas of a disorder – dependent on the special interest and expertise of the researcher. Nevertheless, he or she has to incorporate his/her findings into a more general biopsychosocial framework (LeDoux 2001).

Although there is no stronger or more potential theory for the scientific medicine, we have to face some critical aspects concerning the biopsychosocial model. The continuing and yet unsolved problem remains; we have no common terminology for the *physiological events* on one side and for the *psychological processes* on the other. We are able to realize the parallel organized processes of a disorder, but we still describe these

findings with two different languages or terminologies in medicine: We describe them with *biomedical terms* on the one hand and with *psychological terms* on the other hand. In this field we still have to make great efforts, a work, which can only be resolved in interdisciplinary teamwork over the years. Our *linguistic system* – and therefore our thinking system – is based on a *dualistic terminology* and lets us believe that we have two worlds: the material world of the body and a somehow strange world of the *soul* or *mind*, with no clear idea how they should belong together. But there is only one world (Windmann & Dustewitz 2000):

What we can say at the moment is: Whatever may be described by the rules of physics and chemistry belongs to the *material world* and all events best described by the rules of psychology belong to the world of *soul* or *mind*. But they both belong to the same reality and are only separated by our current use of terminology and our traditional way of thinking.

For research, just as for the daily work in medical practice, it is important to accept that we cannot investigate all aspects of a disease – we even do not know what the whole entity of a disease could be. For *empirical research* we have to deal with simplified *linear* or so called *if-then* relations. But we have to remind ourselves, that the *linear-causal models* are strongly *reductional* approaches, which can only explore some parts of the involved factors. Disorders or health processes are *multi-determined* and correspond to non-linear chaotic processes. What we can do is to study the risk- and protective profile, the intercorrelations and interdependencies, as well as the repressive or challenging factors within these processes on all three observation levels: the physiological, the psychological and the eco-social aspects. The theory of the *Body-Mind-Unity* extraordinarily stresses an interdisciplinary research (Egger 2012).

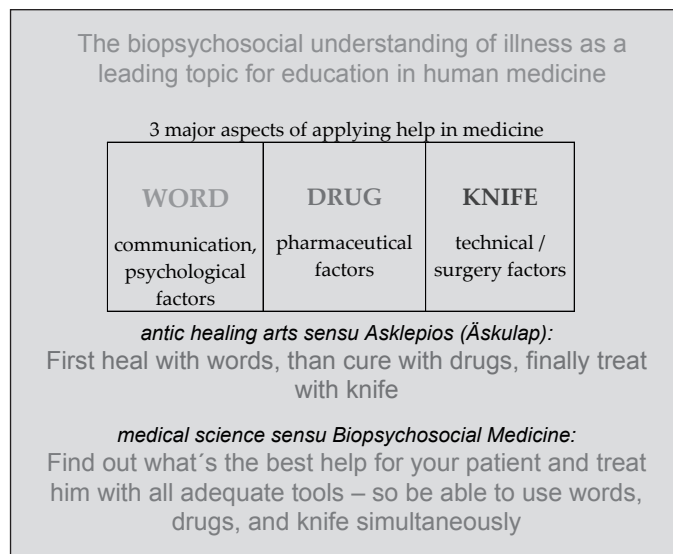


Fig. 13

For the daily work in biopsychosocial medicine, it is not important to be an expert in all relevant levels of a disease. It cannot be expected to be both an expert on *hard core medicine* of a certain disorder and – at the same time – be an expert of psy-

chology on individual experience and behavior of a person – or even a specialist on the eco-social correlations of a disorder. However, to practice biopsychosocial medicine, an elementary knowledge of the other terminologies is necessary: The medical doctor needs a basic understanding of the psychological and eco-social variables. The clinical psychologist on the other hand needs a basic understanding of the most relevant biomedical aspects of clinical disorders at hand.

Only if we can achieve an overview of the potentially involved factors on the different levels of observation, we can build a useful mosaic for biopsychosocial research and intervention. Otherwise, all the variables on the higher or lower system levels and their interactions will appear strange or even irrelevant to an expert. In my opinion, we best agree to the old greek wisdom „use word, drug and knife to treat the patient”.

To summarise

Health! – something we wish each other on many occasions – is not a gift of the gods, of stars or of magic. Scientifically, health means a highly complex and dynamic product of interaction of the variables genes, eco-social environment and individual health behavior. Health is not a state at all, it is not something that one can „possess.“ Health has to be created continually on each (bio-psycho-eco-social) system level. Within this process there are a lot of opportunities to recognize health parameters and to control health related aspects by adequate health behavior. So we are able – to some extent and with limitations of course – to *create health*.

And in general: Biopsychosocial Medicine requires communication between doctor and patient, between all health professionals and between medicine and society as well. The best way to practice Biopsychosocial Medicine is to cooperate within a multiprofessional team. This is true for research and for the patient's treatment as well.

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