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SCIENTIFIC CONTRIBUTION

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Abstract If it is true that health is a priority objective of medicine, then medical practice can only be successful if the meaning of the term "health" is known. Various attempts have been made over the years to define health. This paper proposes a new definition. In addition to current health concepts, it also takes into account the distinction between specifically human (great) health and health as the absence of disease and illness—i.e. small health. The feeling of leading a life that makes sense plays a key role in determining specifically human great health.

Keywords Health · Disease · Illness · Feeling of sense · Goal of medicine

The significance of defining health

Health functions as the aim and guiding principle of medical practice and thereby takes on significant practical importance. Without knowledge and a thorough understanding of the meaning of the term 'health', medicine loses its focus. This still holds true when a less ambitious goal is chosen and medical activities are targeted to fight pain, illness and disease. In these cases indirect questions about the nature of health arise: "Which diseases should be treated? Are persons suffering from childlessness, general fatigue, listlessness, sexual dysfunction, flu etc. diseased?" If the answer is 'no', does this mean that they are healthy and why is it so? There again the issue of defining and understanding the term 'health' sneaks in through the back door.

Given that 'health' implies a main goal of medical practice, the problem of defining health has attracted a lot of attention over the past few decades. A remarkable beginning was made in 1946 by the WHO, which created the following definition: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." This definition is well known and deeply anchored in the thinking of professionals and laymen alike.

Since 1946 many authors have demonstrated the inadequacy of the WHO's definition of health (Callaghan 1973; van Spijk 2002). They paid special attention to the fact that 'complete physical, mental and social well-being' goes far beyond the scope of health designating a utopian goal, a goal that actually aspires to some sort of paradise on earth. In spite of this objection the WHO's definition remained influential.

In recent years, efforts have been made to create new health definitions which offer a realistic objective of medical practice (Nordenfelt 1987; Bircher 2005; Huber et al. 2011). To date, none of these suggestions have gained widespread acceptance or generated a sustained effect. In fact the endeavour of defining 'health' proves to be more ambitious than might be expected and it brings about many, not least philosophical implications (van Spijk 2011, p. 70ff).

This paper offers a new attempt to define 'health' by putting forward the hypothesis that a successful definition of 'health' needs as a starting base an anthropology that among others takes into account the human being's specific nature. In the following section I shall draw a short outline of an anthropology with special consideration of health-related issues.

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An outline of anthropology

In philosophic anthropology of the last hundred years there has been a remarkable consensus when it comes to referring to the basic characteristics that differentiate humans from other living beings. The first and most important characteristic consists in man's *skill and virtuosity in handling (linguistic) signs*. Therefore Ernst Cassirer calls him 'animal symbolicum' (Cassirer 1944, p. 26) and Helmut Plessner comments: "Firstly man is a speaking being," and he adds later: "(…and) of course inherent in the ability to speak is the capacity of abstraction, which is manifested in the formation of terms." (Plessner 1980, p. 314) One of these terms—the tiny word 'I'—opens up the door to an increased capacity of abstraction and to a new, specific human world—a world named 'culture'.

Whoever says 'I' instinctively experiences the enormous effect of this word; it lies in the fact that the speaker is going to fall into two parts: the *speaking subject* and the *described object*. In a sentence such as "A cow is standing in the meadow," the speaker is the subject and the cow the object. If, however, the sentence is "I am standing in the meadow" the 'I' becomes the subject and object at the same time and a new divisional line runs right through the middle of the speaker. The natural unity of experience is lost and gives room to the inner conflict of a being who is having a subjective experience and at the same time also observes himself objectively. Hegel says that the 'I' is the "*bolt of lightning* striking through the native soul and consuming its naturalness" (1913, §412, 10.198). For Plessner, being equally the subject of experience and the object of description puts human beings in a position that he calls 'eccentric' (Plessner 1975, p. 288ff.)

Using the word 'I' and the capacity of abstraction together with the great virtuosity of using signs, results in additional intricacy. The example given above can be taken up again with a slight variation and is now as follows: "A dead cow is lying in the meadow." By abstraction this opens the door to an alternative sentence which is: "I am lying dead in the meadow." This sentence refers to a most important fact, namely the possibility of *man's own death* and brings him in contact with the boundary that separates life from death. As far as we know human language makes man the only creature on earth who is able to get in touch with this issue.

Death, however, is not the only boundary that man is experiencing and struggling with. Another limit is set whenever human beings try to communicate to others their exact, especially internal experiences and have to acknowledge that this is not possible. In summary, it can be put as follows: Whenever human beings live intensively they will reach ultimate boundaries—death, separateness from others, lack of knowledge of the future etc. Being aware of these boundaries and trying to overcome them (at least provisionally or temporarily) sometimes provokes a very particular feeling: *the feeling of sense.*

Experiencing sense in the way it is understood here is not about *facts* nor is it synonymous with the term 'meaningful'. 'Meaning' is about a specific attribute of signs (denominating those signs that make a difference for further life), 'sense' however describes a specific *human feeling*. It is a feeling which may show up when human beings live their lives to the extent that they reach or struggle against ultimate and existential boundaries.

The feeling of sense has common features with happiness. Happiness is *not about* having won a million in a lottery but a *specific feeling* that can (but does not necessarily need to) arise after having received a huge lottery-pay-out.

In terms of 'sense' describing a subjective experience that may arise in man as the consequence of struggling against ultimate existential boundaries, the following definition of health can be put forward*: Human health—also called 'great health'—is the ability to live a life that makes sense.*

Human health as the ability to live a life that makes sense

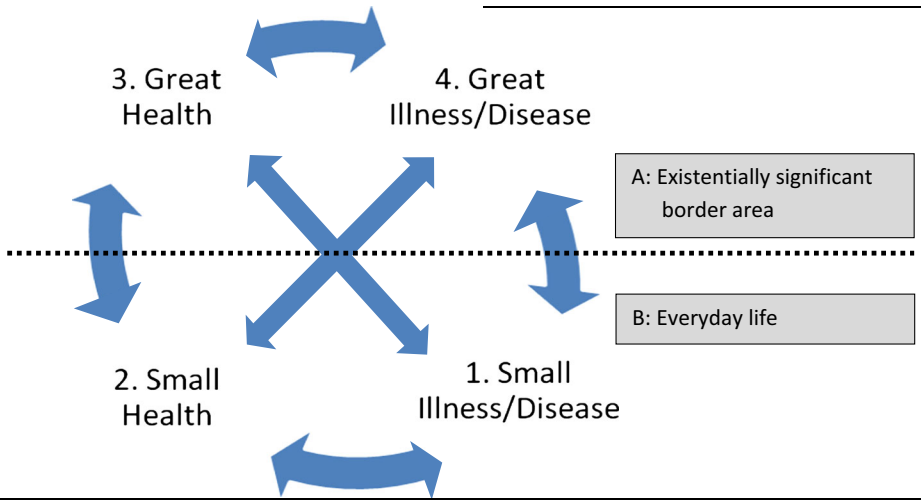
This definition which I'm going to refer to as Human Health Theory (HHT) needs further explanation:

A. HHT differentiates between human and non-human health. This makes sense if we take into account that it is possible for humans, and for humans only, to describe themselves as still being healthy when this has become out of reach for all other living beings.
   A concrete example may illustrate this: A horse that loses a leg is critically diseased and bound to die. A human being with the same affliction maintains the capacity to lead a life that makes sense, i.e. to stay healthy. Humans, unlike horses, are able to compensate for the loss of function in—say—their legs most particularly through cultural activities. Blind, lame or diabetic persons can lead their lives as a musician, lawyer and so on, filling their lives with moments which frequently evoke a feeling of sense and enables them to say: "I feel healthy." In other words, despite disease, illness and affliction, humans can be healthy—diseased and healthy at the same time.
   More than a hundred years ago this contradiction attracted Friedrich Nietzsche's attention and he began to differentiate between small and great health (Nietzsche 1997, p. 13; 1882, § 282). *Health, understood as the ability to lead a life that makes sense*, refers to

Nietzsche's *great health*.

Small health is opposed to illness, disease, injury and impairment. It signifies the absence of these states and can be attributed to animals and humans in equal measures. *Great health,* on the other hand, is categorically superior and can (but does not necessarily need to be) preserved even though someone is suffering from illness and disease. This is possible as long as the latter are not very severe do not pose an existential threat to the affected person's life.

It is also possible for a person suffering from severe illness and existentially threatening disease to be confronted with his or her boundaries of life and death and by doing so, paradoxically all of a sudden experiences the feeling of sense. By analogy with the notion of health it might therefore be useful to differentiate between 'great' and 'small' illness.



The different categories in the diagram above are explained as follows:

1. The category of "small illness/disease" refers to affections that do not pose an existential threat to life. A disease is in accordance with Boorse (1977, p. 562) a "(…) state (or process, PvS) which (…) reduces one or more functional abilities below typical efficiency." Small diseases can be such that they cannot even be perceived (e.g. a cancer in situ). An Illness is in accordance with Nordenfelt (2007, p. 8) "a state (or process, PvS) of suffering or disability experienced by the subject." Because it is a subjective value, the term illness is used whenever somebody *says* that they feel ill or disabled.
2. 'Small health' is equal to the absence of illness and/or disease. It includes states of increased health hazard such as lack of perspective, high-risk behaviour (smoking, overweight, alcohol consumption etc.) and feelings like those of loneliness or senselessness.
3. 'Great health' refers to the field that opens up whenever a person is able to live life to the full and therefore regularly comes up against existential boundaries. By doing so, the feeling of sense may arise.
4. 'Great illness or disease' is generally experienced as a crisis that calls attention to the human being's dependency on others, affects them existentially and brings them in touch with death and the spiritual dimensions of human life. This may create a boundary experience that may provoke the same feeling of sense that was mentioned in regards to 'great health'. This might even result in the seemingly paradoxical switch from great and existentially threatening illness and disease to great health. Hence, the creation of a (generative) cycle.

B. The distinction between great and small health expresses the widely accepted view that the human being is a citizen of two different worlds: one called 'nature' and the other called 'culture'. The human being cannot be understood without taking into account this twofold citizenship.

C. To be healthy does not mean that a person's life makes sense all the time. The analogy with happiness is once again useful here: People usually call themselves

happy even though they live most of the time without experiencing that emotion. To say "I live a happy life" simply means that this person frequently experiences moments of happiness. The sum of these moments predominates over other opposite emotions, "colours" a person's whole life with its positive influence and brings them into a *mood* of happiness (Nordenfelt 1987, p. 81ff). The same holds true for the feeling or emotion of sense.

D. The definition of health as the ability to live a life that makes sense does not determine whether this is an objective or a subjective concept. Actually it is neither objective nor subjective, but the result of an agreement.

   Whenever dissent in dealing with health and health claims arises, the following rule applies: Reality cannot be defined by either a single subject or by a social consensus alone. In the field of health and health claims, however, disagreement is rare. This has to do with the fact that society cannot prescribe the emotion of sense (or any other emotion) to anybody.

   There might be *rare* cases where persons behave in a way which causes others to suspect that they are misinterpreting their own feeling of sense. Whenever this occurs the problem has to be solved by negotiations between the person in question and society. As long as these negotiations have not come to an end it is not possible to determine whether health is present or not.

E. I do not argue for differentiating between great and small health in colloquial language. This distinction, however, becomes important when it comes to using the term 'health' in a scientific or philosophical context. Health of a human being (i.e. great health) has its own specificities and needs to be differentiated from processes that concern animals or living beings in general. This will hold true especially when it comes to promoting medicine that lives up to its claim to being truly human.

HHT in regards to other definitions of health

The WHO's definition of health: As mentioned earlier, the WHO's definition is incorrect. Its most obvious flaw lies in the fact that even though financial resources may be abundant, human beings in general and medical institutions in particular will inevitably fail to achieve the task of attaining a state of '*complete* physical, mental and social well-being.' Such a goal is beyond all human means.

It is astonishing that the WHO's definition, flawed in form and content as it is, has remained so influential. An explanation for this phenomenon could lie in the fact that the WHO goes beyond a purely naturalistic or technical understanding of health. By asking for a "state of complete physical, mental and social well-being," the WHO is aiming for a broader and more comprehensive goal. It is a goal that goes beyond the small—one could say veterinary—health and is aiming for a complete healing. The search for such visionary or utopian goals has always provided an important motivation to man.

Health as 'the ability to live a life that makes sense' shares the WHO's perspective on great health. Unlike the WHO's definition, it doesn't involve a utopian but rather an achievable goal.

Christopher Boorse's naturalistic and bio-statistical definition of health: Boorse's (1975, 1977) more practical definition than the one given by the WHO has become influential. Boorse defines health as being the absence of disease, whereas diseases are to be understood as "internal states that interfere with functions in the species design" (1977, p. 557). A normal function, i.e. a 'function in the species design', is present whenever an organ performs "with at least statistical typical efficiency" (1977, p. 557).

Boorse has been criticised by many authors (Khushf 2007, p. 19). One of the main criticisms is about his definition being too narrow and not taking into account that health does not only concern internal states or parts of an organism, but the human being as a whole (Nordenfelt 2007, p. 9). Boorse, however, is in partial accordance with what is called 'small health' in HHT. In both cases, health is defined by the absence of disease. But the accordance is partial only because in HHT 'small health' comprises not only the absence of disease but also the absence of illness.[1]

Martin E.P. Seligman's concept of 'positive health' shares some characteristics with the idea of 'great health': both agree that health is more than just the absence of illness or disease, and that health may be compatible with some degree of suffering and illness (Seligman 2011, p. 182f).

However, there are also important differences: Seligman regards 'positive health' as a state that is empirical (2011, p. 209ff) and measurable (2008, p. 3). However, 'great health' as it is understood in HHT is derived from an anthropological concept that aims to capture the essentials of human nature, and its theoretical background is consistent with the assumption that general or abstract terms (such as 'justice', 'happiness' and 'health') cannot by definition be empirical and cannot be quantified. HHT

[1] Small health in man differs from small health in animals. The difference lies in the fact that illness refers to a subjective feeling that can be communicated by human language only. Animals cannot communicate their being ill; and as soon as there is a functioning beyond at least statistical typical efficiency of any part of the animal that can be observed or measured, it becomes a disease. This means: small health in man is the absence of disease *and* illness; in animals and other living beings it is the absence of disease only.

actually provides the necessary basis that allows scientists to identify the main items that must be measured in order to assess human health. Seligman mentions as examples items such as 'longevity', 'low expenditure' and 'more years in good health', but it is not clear why they are chosen instead of others. In fact the statement that the third item '*more years in (good) health'* indicates a '*higher degree of (positive) health'* highlights the inherent circularity of this approach.

Lennart Nordenfelt is one of the most prominent critics of Boorse and argues for a concept that goes beyond biology and for an understanding of health that is not confined to the mere absence of disease. Nordenfelt calls his concept 'holistic' and Boorse's definition 'analytic' (2007, p. 9). In 1987 he defines the following: "A is in health if, and only if, A has the ability, given standard circumstances, to realize his vital goals, i.e. the set of goals which are necessary and together sufficient for his minimal happiness" (1987, p. 90).

Nordenfelt's theoretic intentions are similar to mine: They (1) go beyond a pure naturalistic understanding of the human being and human health; (2) argue for a holistic concept of health[2] and finally (3) link health with a fundamental anthropological category.

It is only when it comes to the concrete content of the third point that I am in partial dissent with Nordenfelt. Whereas Nordenfelt uses 'happiness', more precisely 'minimal (long-term) human happiness' (Nordenfelt 1993, p. 9; 2001, p. 67) as his fundamental category, for me the term 'sense' assumes this position.

In summary, the differences between Nordenfelt's theory and HHT are:

- HHT differentiates between small and great health.
- HHT chooses 'sense' instead of (minimal long-term human) 'happiness' as the cornerstone of the concept of health.

The advantages of differentiating between small and great health

By differentiating between 'small health' and 'great health', it becomes possible to overcome many of the problems encountered in the search for an adequate understanding of health: First of all, it creates a proper place for the biological dimension of health. The basis and starting point of every healthy human being is and remains biological and physiological. At the same time, this differentiation concedes to all critics of Boorse that this is not enough when it comes to *human* health. Great health takes into account the fact that the 'specific design' (Boorse) of human beings concerns their cultural dimension and it also takes into account the fact that this has to be incorporated in any definition of health that is able to satisfy laymen, doctors and philosophers alike.

Secondly, HHT overcomes a problem that Nordenfelt in particular is struggling with: conceptualising the health of infants, pregnant women, the elderly and animals. In these cases Nordenfelt (2006, 1987, p. 104, 112ff, 139ff) has to modify and adapt his concept. The differentiation of small from great health overcomes this problem as follows:

- Animals do not by definition experience great health; neither do infants who are not yet able to give verbal expression to the feeling of sense.
- The elderly, on the other hand, even though they might suffer from age-related affections of their well-being, are able to clearly express that their life make sense to them. They often lose great health, however, when they have to enter a nursing home where they feel useless, a burden to society and being confined to wait for death.
- Of course being pregnant is perfectly compatible with great health and delivering a baby, as painful as it might be, has proven to be a powerful moment of experiencing the feeling of sense for many women.

Thirdly, HHT helps to solve the problem that diseased people sometimes call themselves 'healthy'. Let's take the example of diabetes: In Nordenfelt's concept, a person suffering from diabetes who needs regular treatment and abstention from many pleasures and who has a shortened life expectancy, stays healthy as long as they are still able to attain their vital goals. This is in accordance with the subjective experience of many diabetics, but contains the paradoxical situation that a diseased person is called healthy. In the concept proposed here, this problem can be solved as follows: Diabetes as a disease is opposed to small but not to great health; the latter is perfectly compatible with disease.

Last but not least, differentiating between small and great health allows the embedding of medicine within a wider context. Medical activity sometimes goes beyond treating such and such disease and applying technical procedures to overcome some physical or physiological defects. Sometimes it sets the goal of *healing* a suffering person and therefore has a salutary aspect. For this reason medicine always had and still has a close relationship with religious institutions and has been deeply embedded into

[2] To be precise: in HHT 'great health' is a holistic concept. The same holds true for the term 'illness'. It is the whole person and not any part of a person that feels ill. 'Disease', however, is in accordance with Boorse of an analytical nature: Disease is present as soon as there is function beyond at least statistical typical efficiency of any part of the body. The same applies to 'small health': Whenever disease—which is an analytic concept—is present, small health is lost. A woman, feeling perfectly well at moment x, loses small health as soon as e.g. the result of a pathological Pap test arrives a few moments later.

the spiritual or metaphysical thinking of all societies. In daily practice this aspect may stay in the background most of the time. But the lack of this element is a possible reason why many patients turn away from Western medicine and turn towards alternative medical systems where a general orientation of life is provided. The concept of great health brings this important aspect back to its right place in the midst of Western medicine.

The advantage of prioritising 'sense' over 'happiness' as the turning point of the concept of health

'Happiness' and 'sense' have common features. First of all, both of them are emotions. My understanding of an emotion is that of a subjective experience. An emotion is without content and can therefore not be comprehended by words, language, signs etc. Simple living beings experience simple emotions (e.g. emotions of attraction or repulsion). More complex beings, such as animals, seem to experience more differentiated feelings and among them also the emotion of happiness. Of course we cannot be certain of interpreting the happiness of animals correctly. But whenever a cat lies on a person's lap and purrs quietly or a dog is enthusiastically barking und wagging its tail when his master arrives, it seems to be the non-verbal expression of something similar to that what we call 'happiness'.

The main difference between 'happiness' and 'sense' lies in the fact that the appearance of the latter is limited to activities to which (with the utmost probability) only human beings have access. Because the origin of the feeling of sense is jointly linked to the existence of human language, I choose it as the cornerstone of the entire concept of health. Paraphrasing Boorse, one could say that if, and only if, the emotion of sense is present, 'man functions according to his design'.

The importance of the feeling of sense when it comes to health has been put forward by authors such as Aaron Antonovsky, Victor E. Frankl and others. Antonovsky (1988, p. 18f) placed emphasis on the joint connection of the feeling of sense with people's resilience to endure difficult conditions and Frankl (1955, p. 26 and 63) says: "Challenging the meaning of life is "(…) the truest expression of the state of being human, the mark of the most human nature in man." And later: "(…) that finiteness must itself constitute something that gives meaning to human existence".

Frankl mainly worried about mental health; I do not differentiate between mental and physical health, but of course great health is concerned with mental aspects. As man's physical and biological condition varies very little from animals to humans, the main differentiating feature has to be found elsewhere, i.e. on a mental level.

While some authors stress the importance of sense in human life, there are others who question the privileged position that happiness holds in the writings of so many authors. For Wilhelm Schmid, the search for happiness indicates that the real goal of life—which for him is the experience of meaning—is about to be missed. Schmid (2007, p. 45) says: "The intensity of looking for happiness can be taken as a sign for the despair provoked by the lack of sense".

Beside the disputable position of happiness in the ranking, another problem lies in understanding the term 'minimal (long-term, human) happiness'. Nordenfelt puts a lot of effort into solving this problem and ends up testing several questionaries of which none gives full satisfaction (Nordenfelt 1993, p. 123ff).

Within the concept proposed in this paper, knowing whether someone enjoys great health is simple: The designated person has to be asked whether he or she is living a life that makes sense. If the answer is 'yes', this person is healthy.

A person is not enjoying great health if she or he:

- is not able to understand the question
- answers 'no'
- is in such distress that asking questions about a life that makes sense is seen as an inappropriate disturbance.

This also means that great health is, in contrast to Nordenfelt's notion of happiness, not gradual (or dimensional) but follows a law of make or break.

Practical consequences of a new understanding of health

Medicine that wants to achieve great health will be a *medicine that makes sense* and varies from today's medicine in various regards:

- Asking and aspiring implicitly or explicitly for a life that makes sense will start to broaden the perspective of medicine. This is of special importance when it comes to the treatment of chronic or incurable conditions.
- A life that makes sense cannot be attained by technical procedures. It does not mean that technical procedures will lose their importance in medicine. As a discipline that provides technical services it will be supplemented and put into its right place by another discipline that adds a genuine and central human goal: aspiring to a life that makes sense.
- Since the feeling of sense arises mainly when human beings struggle with their boundaries, any medicine needs to actively and purposefully set its own boundaries and keep patients as well as the public informed about its limits.

- Any medicine that is aware of its own limits will harbour medical professionals who are familiar with their own personal limits, their limited knowledge and their limited capacity for sympathy towards their fellow human beings.
- Patients will learn that experiencing boundaries and attempting to overcome them—however unpleasant it may be—is a constituent of human health. They will ultimately learn that great health *will not be discovered in well-being alone*.

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