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On the Triad Disease, Illness and Sickness

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ABSTRACT

The point of departure for this article is a review of the discussion between Twaddle and Nordenfelt on the concepts of disease, illness, and sickness, and the objective is to investigate the fruitfulness of these concepts. It is argued that disease, illness, and sickness represent different perspectives on human ailment and that they can be applied to analyze both epistemic and normative challenges to modern medicine. In particular the analysis reveals epistemic and normative differences between the concepts. Furthermore, the article demonstrates, against Nordenfelt's claim, that the concepts of disease, illness, and sickness can exist without a general theory of health. Additionally, the complexity of different perspectives on human ailment also explains why it is so difficult to give strict definitions of basic concepts within modern health care.

Keywords: disease, epistemic and normative challenges, illness, sickness

I. INTRODUCTION

The triad of *disease*, *illness*, and *sickness* has been applied to denote medical, personal, and social aspects of human ailment.[1] The distinction between illness and disease has been noted in theoretical medicine since the 1950s (Feinstein, 1967; Parsons, 1951, 1958, 1964). Andrew Twaddle first applied the full triad in his doctoral dissertation defended in 1967 (Twaddle, 1968, 1994a, p. 22). The distinction between *disease*, *illness*, and *sickness* has become commonplace in medical sociology, medical anthropology, and philosophy of medicine.[2] In recent years, the triad has been elaborated and more strictly defined (Sachs, 1988; Twaddle, 1994a, 1994b), but also fundamentally challenged (Nordenfelt, 1994). Lennart Nordenfelt has argued

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that the triad[3] is fruitful only within the context of a general theory of health (Nordenfelt, 1987, 1994).

The point of departure for this article is the discussion between Twaddle and Nordenfelt of the triad (Nordenfelt, 1994; Twaddle, 1994a, 1994b). Its objective is to investigate whether the triad of *disease*, *illness*, and *sickness* remains fruitful, despite the critique. This will be done by addressing the following questions:

- What is the triad's explanatory power? In particular, how can it be applied to analyze *a)* controversial cases and *b)* epistemic and normative challenges to modern medicine?
- What is the relation among the concepts of the triad? In particular, is there a primacy of any of the concepts?
- Can the concepts of the triad be upheld only within the framework of a general theory of *health*, as Nordenfelt claims?
- Can the triad shed light on why it appears to be so difficult to define basic concepts within modern health care?

To address these questions, I will apply a provisional definition of the triad and confront it with difficult cases discussed in the literature.[4]

II. DEFINITIONS OF DISEASE, ILLNESS, AND SICKNESS

As Nordenfelt in particular criticizes the definitions of the concepts *disease*, *illness*, and *sickness* presented by Andrew Twaddle (Twaddle, 1994a, 1973, 1979), I will take these definitions as a point of departure and cite them at some length.

According to Twaddle, *disease* is defined in the following way: "Disease is a health problem that consists of a physiological malfunction that results in an actual or potential reduction in physical capacities and/or a reduced life expectancy" (Twaddle, 1994a, p. 8). Ontologically, *disease* is an organic phenomenon (physiological events) independent of subjective experience and social conventions. Epistemically, it is measurable by objective means (Twaddle, 1994a, p. 9).

Illness, on the other hand, is defined as follows: "Illness is a subjectively interpreted undesirable state of health. It consists of subjective feeling states (e.g., pain, weakness), perceptions of the adequacy of their bodily functioning,

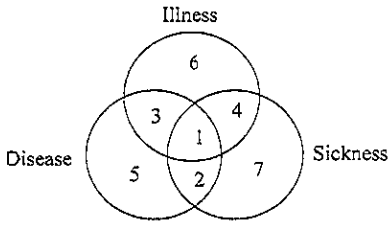

Fig. 1. Visual outline of Twaddle's model of the triad

and/or feelings of competence" (Twaddle, 1994a, p. 10). Ontologically *illness*, then, is the subjective feeling state of the individual often referred to as symptoms. Epistemically this can only be directly observed by the subject and indirectly accessed through the individual's reports.

Sickness is defined in the following way: "Sickness is a social identity. It is the poor health or the health problem(s) of an individual defined by others with reference to the social activity of that individual" (Twaddle, 1994a, p. 11). *Sickness* in this sense is a social phenomenon constituting a new set of rights and duties. Ontologically Twaddle conceives of *sickness* as "an event located in society ... defined by participation in the social system" (1994a, p. 11). Epistemically, *sickness* is accessed by "measuring levels of performance with reference to expected social activities when these levels fail to meet social standards ..." (1994a, p. 11). Furthermore, Twaddle outlines the temporal relationship between *disease*, *illness*, and *sickness*. The paradigm case is when a *disease* leads to *illness*, which then results in *sickness*. Moreover, he gives a relational analysis of the triad in the form of partly overlapping spheres (Fig. 1).[5] This relation between the concepts of the triad will be applied in the following analysis.

III. DEFICIENCIES IN TWADDLE'S TRIAD

The conclusion of Nordenfelt's critical analysis of Twaddle's triad is that it is inadequate to define and describe the condition of "un-health". Only in the framework of a general theory of health based on a concept of disability can the triad be fruitful (Nordenfelt, 1987, pp. 105–117; 1994, p. 22, 35). Nordenfelt's critique of Twaddle's triad can be grouped in three areas of concern, *disease*, *illness*, and *sickness* respectively.

Nordenfelt argues that the definition of *disease* excludes central phenomena in modern health care from being considered as disease. Injuries, impairments, and defects reduce human capacities, but are not clearly included in the definition. According to Nordenfelt, the integration of these categories into the definition of disease has to be based on a concept of health. Furthermore, Nordenfelt pays attention to the meaning of the claim that disease is a "reduction in physical capacities". He appreciates that Twaddle does not refer to a statistical abnormality, but he questions whether the "reduction in physical capacities" is particularly related to the individual. "Does Twaddle mean that any reduction would do, or does he require that the reduction should be of some importance for the individual in question?" (Nordenfelt, 1994, p. 24).

Furthermore, Nordenfelt's dissatisfaction with Twaddle's concept of *illness* contains three aspects. First, together with Wittgenstein and Ryle, he questions whether the subject has any exclusive empirical access to a private mental world. According to Nordenfelt, *illness* is not a hidden private sensation but a perceptible disability. Second, the concept of *illness*, as defined, is highly diverse. It includes anxiety, pain, itching, lack or loss of competence, and a general feeling of depression (lack of optimism). According to Nordenfelt the definition does not provide any means of differentiating between these phenomena, as does a health-based concept of *illness*. Third, the definition of *illness* as an undesirable state of feelings interpreted as undesirable by the individual, presupposes that the person is conscious. This is not so in many cases of medical treatment and care today. Furthermore, to be able to interpret a state as undesirable implies that the person already possesses the notion of a health problem. Nordenfelt therefore concludes: "Twaddle has not attempted to give a sharp characterisation of the notion of illness. He has not excluded those undesirable mental states which are obviously not instances of illness" (Nordenfelt, 1994, p. 27).

In the case of *sickness*, Nordenfelt resents the idea that the status of being sick should be due to a change in activity of the person. There does not have to be any altered activity prior to categorizing a person as *sick*. "The standard case seems to me to be the contrary. There is no particular activity at all, except the seeking of health-care, that could give any clue to the diagnosis concerning the patient." (Nordenfelt, 1994, p. 29). In particular, the paradigm case of assignment of sickness is sick leave, which does not presuppose any such change in social activity on the part of the patient.

According to Nordenfelt these difficulties show that the triad cannot be upheld without a general theory of health. His critique of Twaddle, and

Twaddle's answer (Twaddle, 1994b) can give the impression that their theories are far apart. Instead of referring to the detailed discussion between Nordenfelt and Twaddle I will, for the purposes of this study, only point out some of the similarities between the two.

IV. TWADDLE AND NORDENFELT REVISITED

Even though Twaddle and Nordenfelt may have quite different approaches to the conceptual challenges in health care, they seem to have several things in common. First, Twaddle's triad of *disease*, *illness*, and *sickness* is related to World Health Organization's (WHO) definition of health as "a state of complete physical, psychological and social well being." The terms of the triad refer to the spheres of *physical*, *psychological*, and *social* well-being respectively (Twaddle, 1994a, p. 5). Nordenfelt's *welfare* theory of health is also closely related to this definition. He sees health as the primary concept, and as being "not merely the absence of disease or infirmity" (WHO). Furthermore, the "ability to realise vital goals" is related to well-being (Nordenfelt, 1987, p. 36). According to Nordenfelt, health is the ability to realize goals which are necessary and together sufficient for minimal happiness (Nordenfelt, 1987, p. 90). At the same time "happiness is the most important variant of welfare" (Nordenfelt, 1987, p. 184). Hence, both Twaddle and Nordenfelt relate the basic concepts in health care to welfare.

Second, Twaddle's definitions of *disease*, *illness*, and *sickness* are based on the notion of *health*. "Disease is a *health problem*," "illness is a subjectively interpreted undesirable *state of health*", and sickness is "*poor health* or *health problem(s)* as defined by others" (Twaddle, 1994a, pp. 8–11, my emphasis). Thus, the definition of the triad is based on a concept of health (Twaddle, 1974, 1994b, p. 51), although it is different from and not as elaborate as Nordenfelt's.[6]

Third, Twaddle's primary concept is *sickness*. *Disease* and *illness* are mainly of interest in so far as they result in *sickness*. Similarly, Nordenfelt's primary concept of "un-health" is *disability*. *Disease*, *defects*, and *injuries* are conditions that may lead to *disability*, and are of interest only in so far as they do. This certainly allows comparison between the two, and as Twaddle himself notes: "...Nordenfelt seems to be bringing his concept of disability very close to my concept of sickness" (Twaddle, 1994b, p. 50). Nordenfelt's "non-capacity of performing a set of activities given standard circumstances"

(Nordenfelt, 1994, p. 29) is close to Twaddle's definition of *sickness* being an inability to perform expected social activities (Twaddle, 1994a, p. 11). This is confirmed by Twaddle's concept of health as taking into account the "individual's capacities for task or role performance" (Twaddle, 1974, p. 31). Thus, there is a close relationship between Nordenfelt's concept of ability and Twaddle's concept of capacity and between Nordenfelt's concept of disability and Twaddle's concept of sickness. Furthermore, as will be discussed later in this article, the concepts of *sickness* and *disability* both emphasize epistemic and normative aspects.

Thus, despite differences in, for example, interpretations of *defects*, *injuries*, and *impairments* or theories of health, there are basic similarities in their perspectives. Does this imply that it is possible to reconcile Nordenfelt's and Twaddle's concepts of the triad? Is it possible on the basis of their discussion to give strict and consistent definitions of the concepts of *disease*, *illness*, and *sickness*? Although Nordenfelt's and Twaddle's conceptions might not be so different after all, and it may be tempting to tinker with the definitions so as to render them less objectionable, this article will not pursue such a course. There has been a comprehensive debate on the basic concepts of health care from a variety of perspectives: realist or nominalist (Cohen, 1961; Gillon, 1986; Kennedy, 1981; King, 1954; Rather, 1958; Rothschuh, 1972; Scadding, 1967; Sundström, 1987), analytic or holistic (Nordenfelt, 1987), naturalist or normativist (Kovács, 1998; Räikkä, 1997; Reznek, 1987), objectivist or subjectivist (Kovács, 1998; Lennox, 1995; Sade, 1995), ontological or physiological (Hudson, 1983; Rather, 1958; Temkin, 1963) theoretical or practical (Boorse, 1977; Brown, 1985; Hesslow, 1993; Jensen, 1984) or value-laden or value free (Boorse, 1975; Fulford, 1993; Margolis, 1976; Turner, 1987). Hence, the concepts of *disease*, *illness*, and *sickness* are widely recognized in the literature, but they are subject to substantial controversy. However, the objective of this article is to investigate the fruitfulness of the triad without entering this extensive and complex debate. Therefore, only a coarse and tentative definition of the triad, *disease*, *illness*, and *sickness* will be given in order to investigate its explanatory abilities.

V. DISEASE, ILLNESS AND SICKNESS AS DIFFERENT PERSPECTIVES

The concepts of *disease*, *illness*, and *sickness* emphasize different perspectives on important aspects of human life. They reflect professional, personal, and

social perspectives and concern biological, phenomenological, and behavioral phenomena respectively. This has become widely accepted in the literature and in practice. Furthermore, *disease*, *illness*, and *sickness* are negative notions reflecting negative occurrences in human life.

Moreover, they call for action. *Disease* calls for actions by the medical profession towards identifying and treating the occurrence and caring for the person. *Illness* changes the actions of the individual, making him or her communicate his or her personal perspective of the negative occurrence to others, for example by calling for help. *Sickness* calls for a determination of the social status of the sick person, deciding who is entitled to treatment and economic rights and who is to be exempted from social duties.

Thus, for the purpose of this study the triad will be defined as follows:

> *Disease* is negative bodily occurrences as conceived of by the medical profession. *Illness* is negative bodily occurrences as conceived of by the person himself. Correspondingly, *sickness* is negative bodily occurrences as conceived of by the society and/or its institutions. Occurrence here means process, state or event.[7]

These are not as strict definitions of the concepts as one could wish. However, the main point here is not to enter the vast, vivid and versatile debate on the definition of the concepts, but to investigate their fruitfulness. Furthermore, strict definitions of the concepts might even leave out important explanatory aspects and restrict their fruitfulness.

VI. THE TRIAD IN PRACTICE: COMPRISING CONTROVERSIAL CASES

How then can such coarse conceptions of *disease*, *illness*, and *sickness* be of any value? In the discussion on the basic concepts of health care practical cases have been applied to evaluate the definitions of the concepts. "Descriptive" or "naturalist" theories have been accused of making pregnancy, excellence, and homosexuality into diseases. On the other hand, "normativist" or "nominalist" theories are charged with making ageing and feeling of general dissatisfaction diseases.[8] In the following I will try to analyze the triad with respect to such controversial cases to investigate the fruitfulness of the perspectivistic distinction between *disease*, *illness*, and *sickness*.

The paradigm case in health care is when a person feels *ill*, the medical profession is able to detect *disease*, and society attributes to him the status

sick. Illness explains the person's situation to himself, *disease* permits medical attention, and *sickness* frees him from ordinary duties of work and gives him the right to economic assistance (area 1 in Fig. 1). Examples of such conditions are numerous. There appears to be agreement in conditions labeled myocardial infarction, tuberculosis and renal failure. Here negative bodily occurrences as conceived of by the individual correspond with negative bodily occurrences recognized by the medical profession and by relevant social institutions. Thus, cases of *disease*, *illness*, and *sickness* are paradigmatic of health care.

There are, however, several other conditions deviating from this ideal, that is conditions which are members of two of the spheres of the triad. There are instances conceived of as *disease* and *sickness*, but not *illness* (2), for example conditions where certain signs or markers are recognized by the medical profession before the patient experiences any illness, and where society entitles the person to treatment and economic support. Various forms of screening and predictive testing belong to this group. The professionals are confident that they are dealing with *disease*, social institutions assign the *sick role*, but the person in question is not *ill*. The same situation can be recognized when patients are unconscious or have impairments recognized by the medical profession and society, but not by the person in question.

Correspondingly, there are cases of *disease* and *illness*, but not *sickness* (3). Examples are common cold, tooth decay, aging, and seasickness.[9] The medical profession is able to recognize these conditions as negative bodily occurrences and the person in question certainly experiences them as such, but they normally do not qualify for *sickness*.

Furthermore, there are instances of *illness* and *sickness*, but not *disease* (4). Fibromyalgia, low back pain, whiplash, and chronic fatigue syndrome are examples of conditions where the person certainly feels ill and society entitles the person to have the status *sick*, but where the medical profession cannot correlate any negative bodily occurrences. Correspondingly, pregnancy is commonly not conceived of as *disease* by the medical profession, although it might be experienced by many women as *illness* and accepted by society as a reason for *sickness*.[10]

Another group of cases covers conditions where only one of the concepts of the triad is applicable. Asymptomatic instances of hyperglycemia, hypertension (low or moderate), and lactose intolerance (in areas where they do not drink milk) are examples of *disease*, but neither *illness* nor *sickness* (5). The medical profession conceives of these as negative bodily occurrences, but the

person does not experience them as such and they do not normally qualify for a change in social status.

Correspondingly, instances of *illness*, but neither *disease* nor *sickness* (6) represent cases that are perceived as negative bodily occurrences by the person, but are not recognized as such by the medical profession or by society. A general feeling of dissatisfaction, unpleasantness or incompetence, anxiety or melancholia might be examples of this.

The last group concerning only one of the triad's concepts are cases of *sickness*, but neither *disease* nor *illness* (7). Delinquency, dissidence, homosexuality, skin color, and masturbation may count as examples of cases where social institutions have entitled people to have the *sick role*, but where the person has not felt ill and the medical profession has not recognized any negative bodily occurrences.[11]

Thus, the triad appears to be able to integrate controversial cases discussed in the literature. The claim here is not that these are the only examples that exist, nor that they cannot or will not be interpreted differently, but only that the concepts of *disease*, *illness*, and *sickness* represent a framework to conceive of controversial cases. Additionally, the triad allows for an analysis of some of the controversies of the debate. First, some of the epistemic and normative challenges in medicine will be investigated on the basis of the triad.

VII. EPISTEMIC AND NORMATIVE CONSEQUENCES

Several interesting observations, both epistemic and normative, follow from this analysis. Situations incorporating *disease*, *illness*, and *sickness* are neither epistemically nor normatively challenging. The person experiences a negative bodily occurrence making him request help, the medical profession recognises certain signs and knows what can be done, and society and its institutions entitle him to treatment, economic support and freedom from certain obligations (work).

However, situations belonging to only one of the spheres (5, 6, and 7) represent challenges. Conditions classified by the medical profession as *disease*, where the patient does not however feel any *illness*, and society does not find any reason to change his or her social status (5), have resulted in epistemic as well as normative challenges. How can we know that people with asymptomatic disease will actually develop symptoms and become ill? Should people with low or moderate hypertension be subject to extensive treatment?

Should sickle cell anemia be treated in areas with malaria? Can it be right to treat polydactylism and obesity if they do not annoy the person? Here we encounter ethical issues such as patient autonomy, paternalism, and informed consent.[12]

Accordingly, situations where a person is suffering (*illness*), yet no *disease* has been found, and where there is no change in his or her social status (6) represent an epistemic as well as a normative challenge. Epistemically it is a challenge to the medical profession to find a cause for the suffering. Normatively it is a challenge to know what to do in such situations. A general feeling of dissatisfaction does not normally qualify the person for medical care or economic support. On the other hand medical intervention has been initiated in such cases and has been criticized for being medicalizing. Trying to handle all cases of illness is also a matter of resources, and hence a question of prioritization.

Correspondingly, cases of *sickness* with neither *disease* nor *illness* (7) are challenging and might be dangerous. Skin color, drapetomania (a disease that made slaves run away), homosexuality, and political dissidence are crude examples. There appears to be no knowledge of negative bodily occurrences correlating to these cases. Accordingly, the norms that have been applied to entitle a person to be *sick* in these cases have been questioned.

Thus, cases where only one of the attributes of the triad is valid call for special attention. Furthermore, cases joining two of the spheres of the triad *may* be epistemically and normatively challenging as well. Cases of *disease* and *illness*, but not *sickness* (3) are subject to pressure from professionals and interest groups for support. There may be several reasons why the status of *sickness* is not given even though the case is both *disease* and *illness*. There can be a lack of resources, the situation may be common or equally distributed in a population, or there might be no cure available. Myopia and tooth decay are examples of cases that are not conceived of as *sickness* in many countries, but are acknowledged as *disease* by the medical profession, and certainly experienced negatively by persons having these conditions. The epistemic challenge is to find effective and efficient cures, whereas the normative challenges are found in questions of rationing and what to do in cases where persons are not able to pay for health care services themselves.

Accordingly, cases of *illness* and *sickness*, but not *disease* (4) put pressure on medical research to find mechanisms and causes of personally experienced and economically supported occurrences. Fibromyalgia, whiplash, and low back pain have been applied as examples. The etiology of and treatment for

these conditions are not commonly agreed upon. They have, however, in various countries been accepted as *sickness* and persons certainly claim to experience them as *illness*. There is pressure on the medical establishment to see these conditions as *disease* as well. There is an epistemic challenge to establish etiology and a normative challenge to find a treatment: such conditions ought to be treated. It is certainly a challenge to the medical profession to know what to do in cases that they do not recognise as *disease*.

Lastly, cases of *disease* and *sickness* without *illness* (2) represent profound challenges. Epistemically we are challenged by the question of how the particular patient relates to general knowledge and how certain we can be that persons actually will become ill when they have positive tests and are left untreated (Fischer & Welch, 1999). Normatively we are faced with a series of questions: How are we to handle the results from predictive testing? Are there limits to the treatment of asymptomatic diseases? How are we to break bad news? The discussion on genetic testing, hypercholesterolemia, and hypertension illustrates some of these normative challenges (Le Fanu, 1999). How far can we go in treatment of cases where the patient is not *ill*? How is patient autonomy preserved? Who is to determine the trade-off between the risks and the benefit of such treatment? These conditions represent some of the aspects most intensively discussed in modern medical ethics, and pose questions of patient autonomy, paternalism, and medicalization.

Hence, cases which belong to only two of the spheres represent epistemic and normative challenges as well. This further demonstrates that the concepts of *disease*, *illness*, and *sickness* represent a fruitful framework for analyzing some of the pressing epistemic and normative problems of modern medicine.

A. Differences Between the Spheres

Furthermore, from the discussion above it can be argued that cases which belong to only one of the spheres of the triad are more challenging than cases which belong to two. We appear to be more challenged by medical treatment of incompetence, dissatisfaction, homosexuality, dissidence, and low or moderate hyperglycaemia than we are by the treatment of asymptomatic breast cancer, common colds, and seasickness.

Cases are stronger and less controversial where two of the agents agree and the cases are recognized as both *disease* and *sickness* (2), *disease* and *illness* (3), or *illness* and *sickness* (4), than if they are only recognized by one of the agents as *disease* (5), *illness* (6), or *sickness* (7). Persons, professionals or

social institutions appear to have a weaker argument when their case belongs to only one sphere. The pressure on medicine to accept an occurrence as *disease* is strong when it is recognized both as *illness* and *sickness*. Correspondingly, there is pressure on society to provide necessary resources and to ascribe *sickness* when occurrences are recognized both as *disease* and *illness*.

In cases of only *illness*, the ill person has to convince both the medical profession and social institutions about his or her situation. Correspondingly, social institutions have to convince both the medical profession and the person in cases of *sickness* only, and both society and the person have to be persuaded in cases of *disease* only. Hence, cases of only *disease*, *illness* or *sickness* appear to be difficult cases. Thus, there are normative and epistemic differences between the areas (1–7) where membership in only one sphere is more normatively challenging than membership in two. The normative differences between the areas are investigated in further detail in the following section.

B. The Primacy of Illness

One interesting observation resulting from the analysis of the triad of *disease*, *illness*, and *sickness* is the difference in challenges between these conjunctive areas. Area (2) seems to cause more challenges than areas (3) and (4). Conditions like fibromyalgia, whiplash, and low back pain (4) seem mainly to challenge the medical profession (in lack of knowledge and treatment). Cases of the common cold, tooth decay, warts, and lung and throat irritations due to cigarette smoking (3) primarily challenge the resources of the society in question. A predominant proportion of medical ethics cases seems to concern cases of *disease* and *sickness* but not *illness* (2). To treat persons when they do not know that they need help appears to represent a major challenge to modern health care. Issues of patient autonomy, paternalism, and medicalization belong to this area.

Accordingly, we appear to be more willing to accept cases of only *illness* (6) than only *disease* (5) or only *sickness* (7). For example it seems easier for us to accept giving people treatment and care in cases where there are no medical indications in terms of *disease* (6) than to treat people against their knowledge or will (5, 7). The first case is a matter of limited medical knowledge and recourses. However, treatment in cases of only *disease* (5) or only *sickness* (6) raises more profound issues, such as patient autonomy, paternalism, and medicalization, and appears to be more challenging.

Hence, the most challenging cases appear to be those of *disease* and *sickness* (2), *disease* (5), and *sickness* (6). What does this tell us? Common to these cases is that they lack *illness*. This must mean that the most profound challenges that are related to the triad of *disease*, *illness*, and *sickness* are to be found in cases without *illness*. That is, there appears to be an epistemic and normative primacy of the concept of illness. This accords well with a substantial critique of modern medicine directed at its ignorance of the subjective experience of the individual patient, i.e., *illness*.[13] It also agrees with modern medicine's challenge of the epistemic-normative foundation of medicine evident from antiquity until today: the primacy of the individual person who is ill.[14]

However, what consequences does such a primacy for *illness* have for health care? Does it result in an overall subjective or experiential approach? Does it make any kind of ailment a case to be treated by the health care system? This does not seem to be the case. Within the framework of the triad, *disease* and *sickness* limit the situations of *illness* to be handled by the health care system. The triad provides a framework to acknowledge people's *illness*. At the same time it reveals the restriction of the medical profession to identify *disease* in all instances of *illness*. Correspondingly, it articulates society's abridged ability to ascribe *sickness* to all cases of *illness*.

Illness without *disease* and/or *sickness* is challenging and must be "handled with care". The very existence of *illness* can be taken seriously and examined cautiously both by the medical profession and by the appropriate social institutions. It does not, however, automatically qualify for help from the health care system. This will be determined by whether negative bodily occurrence can be identified by the medical profession (*disease*) and by relevant social institutions (*sickness*).

It is worth noting that within a system based on the concept of *health*, as suggested by Nordenfelt, one has to rely on special restrictions, for example statistical normality, or external events (Nordenfelt, 1987, pp. 114–117). Otherwise all cases of *illness* become eligible for treatment by the health care system, e.g., incompetence and general dissatisfaction. Nordenfelt tries to restrict the concept of *illness* from within the concept itself, and does this by making qualifications that are external to the person experiencing illness. This appears to be problematic. The triad, on the other hand, acknowledges illness as the negative bodily occurrences as conceived of by the person in question, and restricts the cases that are to be subject to medical treatment by *disease*, and the instances that are to gain economic support by *sickness*. This suggests

that the triad is more robust with regard to the threat of "subjectivism" (Edwards, 1998; Kovács, 1998; Lennox, 1995; Sade, 1995) than a health-based system. This invites scrutiny of Nordenfelt's main claim that the triad is not fruitful other than within a general concept of health.

VIII. THE TRIAD AND THE CONCEPT OF HEALTH, OR: WHY WE DO NOT NEED A CONCEPT OF HEALTH IN ORDER TO TREAT DISEASE

The tentative account of the triad given above is dependent only on the professional, personal, and social conception of negative bodily occurrences and not on a positive concept or theory of health. The triad of *disease*, *illness*, and *sickness* has been shown to serve a practical purpose integrating "controversial cases" and to present a framework for analyzing epistemic and normative challenges to medicine. Furthermore, it has revealed normative differences between the spheres, and in particular a primacy of the concept of *illness*. Hence, the triad has been shown to be fruitful without a concept of health.

This coincides with Tranøy's argument that we are more ready to define negative notions such as *illness* and *disease* than *health* (Tranøy, 1967, p. 355). Tranøy relates this to a general asymmetry in ethics. There is a higher "moral weight" attached to negative notions than to positive ones. There is an asymmetry between concepts such as *good* and *bad*, *health* and *disease*, or *life* and *death* (Tranøy, 1967, p. 351). This also agrees with Hans Georg Gadamer's general emphasis of negative critique (Gadamer, 1960). In particular it is in accordance with his characteristic of the hiddenness or enigma of health, *die Verborgenheit der Gesundheit* (Gadamer, 1993). Gadamer argues that *health*, as the aim of medicine, is not a definable concept. Ailment (Krankheit), however, is. Furthermore, he acknowledges the professional, personal, and social aspects of human ailment, as well as their normative aspects (Gadamer, 1987, p. 258).[15]

This is not the proper place to enter into a detailed discussion on asymmetries in ethics. Suffice it here to note that the triad has been applied without a general theory of health, and that it has been fruitful in helping analyze important epistemic and normative challenges to modern medicine. Hence, we do not need a concept of health in order to handle people's negative bodily occurrences. To further illustrate the triad's fruitfulness, let me turn to

the last question raised at the outset of this article: how can the triad explain the difficulties of defining the basic concepts of health care?

IX. DIFFICULTIES OF DEFINITION

Conditions such as pregnancy, excellence, aging, fibromyalgia, homosexuality, and a general feeling of dissatisfaction or incompetence have challenged explicit definitions of basic concepts of health care. Biostatistical definitions have been profoundly challenged with conditions such as pregnancy, excellence, and homosexuality, because they represent deviance from statistical "normality". Welfare-based definitions (well-being, happiness, goal-realization, action failure) are challenged with the conditions of dissatisfaction and incompetence, because they tend to relativize the concepts.

To be able to handle all these difficulties many have tried to refine definitions of basic concepts of health care. However, as it has been argued here, there appear to be distinct perspectives to occurrences conceived of as human ailment. To embrace all these perspectives in one single concept appears to be difficult.

Furthermore, some of the definitions of basic concepts in modern health care appear to be monistic. Although there is a variety of basic concepts in health care, such as *health*, *disease*, *illness*, and *sickness*, one single concept is the basic concept from which the other concepts are developed. For example, Nordenfelt derives concepts like *disease* and *illness* from his concept of *health*. Again, a monistic approach appears to face the same challenges of taking into account the different perspectives, as trying to cover them all with one concept. However, the difficulties of defining the basic concepts are not only due to the described complexity of perspectives but also to the relation between them. *Disease*, *illness*, and *sickness* are not static concepts; they influence each other and the borders between them are blurred. This influence can be described in three different ways.

A. Interrelating Concepts

First, the spheres of *disease*, *illness*, and *sickness* are not independent of each other. The attribute of social status (*sickness*) is influenced by distinctions made, processes described and entities applied in the medical profession. *Infertility*, traditionally not ascribed to the *sick role*, qualifies for economic support in many countries because it has become treatable as a *disease*.

Accordingly, the experience of *illness* is affected by medical knowledge in the same manner. The personal experience of ailment is influenced by the medical terminology; for example, a soccer-player might state that he has some pain in his *meniscus* or a patient can feel his "large intestines a bit bound" (Nessa & Malterud, 1998). Conversely, the experience of *illness* influences the activities of the medical profession. Research into low back pain and whiplash was initiated by peoples' suffering and need for help. The status of pregnancy and childbirth as *illness* and *sickness* has made the medical establishment hospitalize pregnant women as if they were suffering from diseases.[16]

Correspondingly, the sphere concerned with *disease* is influenced by the social status of *sickness*. The search for a causal explanation for fibromyalgia is supported by its status as *illness* and *sickness*. On the other hand, cases of the common cold are not usually classified as *sickness*, therefore the viruses which are the etiologic agents are normally not traced, even though this is technologically possible (Copeland, 1977, p. 530). Furthermore, the social sphere governs medical education and research to a wide extent. The social and psychological influences on the concept of disease are clearly reflected in the influential biopsychosocial model of disease (Engel, 1977).

Secondly, the class membership of the spheres may vary with time. As Twaddle has pointed out, a person may be a member of none, one or more spheres at the same time (Twaddle, 1994a, pp. 13–16). However, the membership may be complex and change with time; for example, both medical professionals and ill people are members of society, and thus all influence the sphere of *sickness*. In particular, in some countries the physician is the representative of society and manages both *disease* and *sickness* at the same time.[17] Furthermore, all members of society, whether medical professionals or not, may become *ill*.

Third, a practical-historical observation may be added. The concepts of disease change with time and depend on praxis. This influences medical taxonomy. Diseases are defined according to abnormalities of morphology, physiological aberrations, biochemical defects, genetic abnormalities, ultra-structural abnormalities, and etiologic agents (Copeland, 1977, p. 530). Hence, it has been difficult to provide a consistent medical taxonomy. There is no unified nosology, and the taxonomy seems to be more influenced by prognostic and therapeutic capacity than by formal definitions (Scadding, 1967).[18]

Thus, the distinctions between *disease*, *illness*, and *sickness* are not clear-cut. Twaddle's ideal relation of *disease* leading to *illness* subsequently

resulting in *sickness* appears too simplistic, and Nordenfelt's conception of them as disjoint (as a trichotomy) seems to be difficult to defend. As argued, the concepts are not disjoint, but the borders between them are blurred, and the concepts influence each other. *Disease*, *illness*, and *sickness* are interdependent concepts.

However, the concepts of the triad are concerned with the same matter: human ailment in terms of negative bodily occurrences, but the extensions of *disease*, *illness*, and *sickness* relate to different perspectives. This might be why it appears to be difficult to give one assembling definition of all negative bodily occurrences, or why it is so difficult to define them by each other.[19] Thus, the interrelated but still different perspectives represent an inherent difficulty in providing strictly consistent definitions, and this may be the reason why the definitions of basic concepts such as *disease*, *illness*, and *sickness* have become controversial in the philosophy of medicine. However, although they appear to influence each other and they vary with time, the personal, professional, and social perspectives appear to persist.

X. CONCLUDING REMARKS

The point of departure for this article was a review of the debate between Twaddle and Nordenfelt on the triad *disease*, *illness*, and *sickness*. It acknowledged Nordenfelt's critique of Twaddle's definitions, but instead of tinkering with these definitions in order to render them less objectionable, a coarse and tentative account of the triad was given. This account acknowledged the different perspectives on human ailment: professional, personal, and social. The objective has been to investigate whether the triad, *disease*, *illness*, and *sickness* still can be fruitful, and in particular, to investigate its explanative power. Some conclusions can been drawn from this analysis:

First, the triad of *disease*, *illness*, and *sickness* is able to address controversies over basic concepts in health care. It is thus a suitable conceptual framework for analyzing and facing controversial cases. In particular, the triad represents a framework for addressing the normative as well as the epistemic challenges in medicine. It enables us to identify and analyze normative matters such as autonomy, paternalism, rationing, and medicalization in terms of conflicting perspectives.

Second, the analysis also reveals epistemic and normative differences between the concepts, in particular a primacy of *illness*. This is in accordance

with a common account in the philosophy of medicine. It does not, however, imply that all cases of *illness* are to be treated by the health care system. The other spheres of the triad, *disease* and *sickness*, protect society from medicalization of the lifeworld. Any kind of *illness* is not the concern of medicine, and happiness is not its goal.

Third, the triad of *disease*, *illness*, and *sickness* can be fruitful without a general concept of health. We do not need a concept of health to respond to human ailment. In particular we do not need a concept of health to treat disease. This agrees with the philosophical account that ailment is more easy to conceive of than health, due to the general primacy of negative normative notions over positive ones.

Fourth, it has been argued that the triad clarifies why it is so difficult to render strict and consistent definitions of concepts such as *disease*, *illness*, and *sickness*. These concepts are not mutually exclusive, but rather are interdependent. They represent different perspectives on human ailment, and are thus difficult to unite in a strict and consistent definition.

Another commonplace but significant conclusion can be added: since it has been argued that the triad of *disease*, *illness*, and *sickness* is fruitful without a conceptual framework of health, the term "health care" appears to be paradoxical. A consequence of this analysis is that it seems to be both difficult and unnecessary to define the concepts of *disease*, *illness*, and *sickness* in the term of *health*. Thus, a system or institution intended to handle cases of human ailment does not properly fall under the term "*health* care", thus "health care" is a contradictory term used to describe the eradication of disease (defects and injuries).[20] To avoid the paradox of "health care" and include the structure of the triad it might be more proper to differentiate between the terms *disease treatment system*, *illness care system*, and *sickness rights system*. Instead of trying to save the term "health care" by elaborating a system of "health enhancement" (Nordenfelt, 1998), the ailment-based triad restricts the duties and rights in an ailment aid system. There is a fundamental difference between a "health care system" based on negative notions of human ailment such as *disease*, *illness*, and *sickness* and a system based on the concept of *health*.

A clearer differentiation of what is called "health care" appears to be fruitful. The concepts of the triad exhibit profound perspectives to human ailment. The medical profession provides a perspective that is different from that of the patient and from that of social institutions. It is because *disease* is distinct from both *illness* and *sickness* that the medical profession is able to

help. This means, however, that *illness* or *sickness* cannot be reduced to *disease*. That is, there are limits to what the medical profession can be expected to do and what it should do. Correspondingly, the other concepts of the triad represent distinct subject matters with characteristic limitations. Hence, the concepts of the triad display profound limitations that are easily neglected in the "health care" system.

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NOTES

1. "Ailment" here denotes negative bodily occurrence and is applied as a common term to refer to "disease", "illness", "sickness", "injury", "defect", "disability", "handicap" and "impairment".
2. See for example: (Bentham, 1892; Birch, 1979; Eisenberg & Klienman, 1981; Engelhardt, 1995; Frabrega, 1972; 1974; 1979; Howels, 1976; Hudson, 1983; Jenner, 1979; King, 1954; Marinker, 1975; Nordenfelt, 1997/8; Parsons, 1951; 1958; Redlich, 1976; Rothschuh, 1972; Sedgwick, 1973; Susser, 1971; Taylor, 1983; Twaddle, 1968; 1981; 1993; von Engelhardt, 1995; Whitbeck, 1981; Young, 1982).
3. Nordenfelt applies the term *trichotomy* to describe the relation between disease, illness and sickness. This seems to have some unfortunate consequences. *Trichotomy* means parted in three disjoint parts. However, as argued by Twaddle, and defended in this article, the concepts of disease, illness and sickness are not exclusive or disjoint. On the contrary, the paradigm case of modern medicine is a member of all these categories. The term *trichotomy*, thus, misses the point that the concepts of *disease*, *illness* and *sickness* are not exclusively definable, but have conjunctive areas. Therefore, the term *trichotomy* is omitted and replaced with the term *triad*.
4. As Nordenfelt's and Twaddle's discussion is restricted to somatic phenomena, so too is this article. The discussion could be expanded to encompass mental phenomena, but that would demand a separate article. Correspondingly, the article is concerned with the paradigms of the modern western medical tradition when it refers to the medical profession.
5. This figure is essentially identical to Twaddle's (Twaddle 1994a, p. 15). The layout and numbering is changed here according to the argumentation and structure of this article.
6. Furthermore, it seems worth noting that Nordenfelt actually has only two arguments that support the need for a general theory of health in order to make sense of the triad. First, he

argues that the distinction between disease, defects and injuries can only be made with reference to such a theory. Second, Nordenfelt believes that to be able to make sense of the definition of disease as "a physiological malfunction that results in an actual or potential reduction in physical capacities and/or reduced life expectancy," one needs a general theory of health (Nordenfelt, 1994, p. 24). However, he does not give any clear arguments for this claim. Twaddle therefore can still claim that cases of defects and injuries are part of diseases, and that his definition holds within his concept of disease. The argument of this article however, is that this is possible without any elaborated theory of health.

7. Negative bodily occurrences appear to be the focus of attention of the person, the medical profession and society, even though the concepts of *disease*, *illness* and *sickness* may vary with time and social context. Despite the variability of the concepts of *disease*, *illness* and *sickness*, they represent persistent perspectives on human ailment.
8. Nordenfelt tries to avoid this by excluding from illness emotions which are direct reactions to external events (Nordenfelt, 1987, pp. 114–117). This seems difficult in practice. How are we to know what is caused by external events? Furthermore, what is the difference between the grief experienced when loosing (the sensation in) a leg and that of loosing a close relative?
9. It might rightly be argued that seasickness is a *sickness* if one is a member of a boat crew. However, within many boat crews seasickness does not qualify for sick leave. Rather it is stigmatizing, questioning one's identity as a member of the boat crew.
10. It is interesting to note that because it is conceived of as both *illness* and *sickness* it is made a subject of the health care system, even though it is not recognized by the medical profession as a *disease*.
11. The examples of *sickness*, but not *illness* or *disease* are mainly historical examples, as we like to believe that today's society is free of such repressive actions. In Norway, however, the government tries to make the medical profession perform tests (genetic and x-ray) on asylum seekers, to investigate whether they have the sickness of "lying about their identity".
12. If the medical profession is the only one identifying negative bodily occurrences, their sensitivity to the interests of the person and society will determine whether they act paternalistic or violate patient autonomy. Additionally, one can question how well a person without illness understands information about diseases that he or she cannot experience. Is there a real informed consent?
13. See, e.g., Illich (1975), Knowles (1977), Reiser (1978), Pellegrino & Thomasma (1981, 1993), Jonas (1985), Beauchamp & Childress (1989), Gadamer (1993), Delkeskamp-Hayes & Cutter (1993).
14. Furthermore, it concurs with the practical taxonomy of medicine where there is an extensive class of symptomatic diseases. Although the etiology is unknown and there are no clinical or paraclinical signs, they are classified and handled by the medical profession as diseases.
15. "Das Ziel [der Medizin], die Gesundheit, ist nicht ein von der Arztkunst her klar definierbarer Zustand. Denn Krankheit ist ein sozialer Tatbestand, sie ist auch ein psychologisch-moralisher Tatbestand, weit mehr als ein von den Naturwissenschaften aus bestimmbares Faktum" (Gadamer, 1987, p. 258); "[t]he goal of health is not a condition that is clearly deniable from within the medical art. For illness is a social state of affairs, much more than a fact that is determinable from within the natural sciences" (Gadamer 1996, p. 20).

16. Furthermore, if the differentiation between disease entities are of no influence on the *illness* of patients they are in practice abandoned, e.g., the histopathological distinction between meningothelial type I and type II meningiomas is seldom made. Both tumors share the same prognosis and treatment (Copeland, 1977, p. 535–536).
17. This is particularly so in the Scandinavian health care system, where physicians administer sick leave, making them directly involved in the sphere of *sickness*, in addition to that of *disease*.
18. Additionally, at a given point in history, there is not always agreement about what is *disease* and what is *sickness* within the medical profession and the social institutions respectively.
19. Tranøy has pointed out that some of the basic concepts of health care, such as *health* and *disease*, belong to different categories and thus are not definable by each other, although they are interdependent (Tranøy, 1995a, 1995b).
20. Even Nordenfelt's health-based concept seems to suffer from this paradox. In his analysis of general health enhancement, he returns to defining medical care in terms of disease and injuries. Medical care aims at "eradicating diseases and injuries by cure or at reducing the negative consequences of diseases and injuries for the person who has been stricken" (Nordenfelt, 1998, p. 75). If health really had primacy in relation to *disease*, *illness* and *sickness* (including defects and injuries), then a system of health enhancement should not need to be based on "medical care" dealing with ailment. Furthermore, a definition of medical *care* should not need to be based on the *treatment of disease*.

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