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Getting out the Vagueness of Medicine: The Four English Names for Disease

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By scrutinizing literature, vocabularies, and encyclopedias on the subject we have found out that current English speaking presents four different names for a same substantial notion. From etymological dictionaries, in particular, we can reconstruct the period of insertion of each term into current language and the frequency of use in circulating literature, to highlight a certain historical evolution of the first three terms in dependence on the cultural framework of reference. We recognize a progressive specialization of the context of use, especially over the last two centuries. "Illness" was the traditional term from 1,680 onwards; it represents the subjective viewpoint of the patient accepting the doctor's analysis. But during the 19th century, scientific, experimental medicine was hegemonic and replaced it by "disease", representing the viewpoint of the trained doctor by academic medicine, hence an objective result of medicine's scientific progress. During the 20th century, however, to illness it was commonly attributed also a subjective experience; therefore, disease again became more recurrent. In the same years the term "sickness" was recovered, to describe the concept from the viewpoint of society through its public health institutions. "Un-healthiness" has perhaps remained as the residue of a primordial past, today little valued by the healthcare structure, yet representing a global viewpoint; it expresses the illness experienced personally as a problem of the person with his relationships, so that the cause of the disease is not considered a single and direct one, but may be the result of the interaction of multiple factors. The patient assumes a disease as a personal problem from its beginning to its end; he expresses the subjective point of view as the relationship of the disease with one's entire life (personal and associative) and takes into consideration the environmental and social components of the disease process; he therefore subjects the external scientific evaluation to his personal evaluations. These four names may be opposed two by two, giving two dichotomies, one on either the deductive viewpoint from few notions and/or principles or the viewpoint of search a method for solving a problem; and the other on the invasiveness or not of the therapeutic means adopted. The two dichotomies may be generalized to four models of medicine, which could suggest a clear point of reference against the present vagueness of this discipline.

Keywords: disease, illness, sickness, un-healthiness, two dichotomies, two etiological attitudes, two therapeutic attitudes

Foreword

Medicine is a field of science that has never had a well-defined theoretical framework; it has sometimes

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been labeled as "Art", to emphasize the behavior linked to the subjective experience of the practitioner, sometimes as "empirical science" or as science, but almost always "not exact" is added[1].

In the medical literature of recent years, a recurring concept is that of the term adopted by logic, "vagueness" (Sorensen, 2001), to express the impossibility of precise, delimiting, exhaustive definitions of the major themes of medicine[2]. This also applies to the fundamental "objects" of medicine, including health and disease, which remain vague terms, not univocally definable[3].

With the aim of overcoming this "vagueness" of medicine, we here start from the current statements of "disease" instead of theoretical reflections. Our so-called onomasiological approach, as an alternative to the semantic one, considers every lexical realization starting from the meaning of current use; actually, it may provide "precise definitions of the fundamental concepts of medicine" (Niebrój, 2006, p. 251); thus, new perspectives open up, new keys to interpretation, hopefully extendable to the entire theorization of the medical system.

Many English Names for "Malady"

Among the languages of Western cultures we find an exceptional fact: The Anglo-Saxon language has more terms for the concept of "malady"[4]. In particular, there are three expressions that have received greater attention from scholars in recent decades in order to give them an accurate characterization: disease, illness, sickness.

This custom of three names is long-lasting and is also well established in the scientific literature, which has discussed its meaning at length. We refer here in particular to Bjørn Hofmann's 2002 (Hofman, 2002) work which accurately summarizes this debate, explaining what the three different "names of Disease" express in medicine practice (in his bibliography you can find many of the previous works which addressed the subject). He starts from the finding that Parsons has already begun to distinguish multiple aspects of the disease in 1951[5],

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[1] Already Talcott Parsons (1902-1979), in his analysis of the social, considered the term "medical science" to be somewhat equivocal, not a "theoretically integrated discipline" but a "field of application" of the various other sciences (Parsons, 1951, p. 306). About the role of the physician in the relationship with the patient he goes so far as to say: "This has sometimes been called 'the art of medicine'" (Parsons, 1951, p. 311).

[2] "Medicine deals with individual persons with unique life stories and exclusive biological, physiological, mental, and social makeup. Even well-described and well-defined diseases appear differently in individuals. Therefore, the subject matter of medicine, patients, is characterized by a having wide range of borderline cases, and as such fall under the definition of vagueness (Sorensen, 2001)" (Hofmann, 2022, p. 1153).

[3] "The basic phenomena of medicine, such as pain, suffering, harm, but also wellness and wellbeing are vague phenomena … pain comes in many kinds and grades and is hard to assess. The same does suffering (Hofmann, 2017) and wellbeing (Bester, 2020) … either one believes that diseases come in natural kinds or as social constructions, they appear on continuums, with numerous borderline cases, and as such are vague" (Hofmann, 2022, p. 1153). "The long ongoing and partly heated debate on the concept of disease has not led to any consensus on the status of this apparently essential concept for modern health care. The arguments range from claims that the disease concept is vague, slippery, elusive, or complex, and to statements that the concept is indefinable and unnecessary" (Hofmann, 2010, p. 3).

[4] We deliberately use this old term *malady*, now in disuse ("old use" according to the Oxford Dictionary (Hornby, 2000), to refer to the indeterminate state of being affected by some health problem. One more merit of this term is that it can be assimilated lexically to the Italian "malattia" or the French "maladie".

[5] (Parsons, 1951, Chap. X "Social Structure and Dynamic Process: The Case of Modern Medical Practice"). He makes an initial distinction between illness and disease, recognizing in the latter the control of medical science: "Medical practice … is a 'mechanism' in the social system for coping with the illnesses of its members … Modern medical practice is organized about the application of scientific knowledge to the problems of illness and health, to the control of 'disease'" (Parsons, 1951, p. 290). As for the term sickness, he uses it generically, in the literal sense of simply "malaise" as distinct from illness: "medical practice may be said to be oriented to coping with disturbances to the 'health' of the individual, with 'illness' or 'sickness'" (Parsons, 1951, p. 289). He constructs, however, first the concept of the "sick role" for the sick person in society: "There seem to be four aspects of the institutionalized expectation system relative to the sick role … the role of the sick person as patient becomes articulated with that of the physician in a complementary role structure" (Parsons, 1951, p. 294).

but it was then A. C. Twaddle, in his doctoral thesis of 1967 (Hofmann, 2002, p. 651), who explicitly elaborated what is currently defined as the "triad of disease names".

Furthermore, this same plurality of names has confirmation in the particular case of the "stable and persistent" unfitness, handicap (i.e., disability): M. Susser finds that the three corresponding terms are: impairment, disability, and handicap (Susser, 1990).

There are many authors who refer to the different names for the "malady", but few of them go so far as to suggest precise and distinct definitions of all three terms: Andrew C. Twaddle (1981), Marshall Marinker (1975), Mervyn Susser (1990), and Leon Eisenberg (1977). In the following we will limit ourselves to considering only these, putting aside all those that have not been so detailed.

Three or Four Names?

None of the authors of works on the topic of "malady", however, clarifies why the terms they consider must be three.

In recent decades, work has also been conducted to define the concept of "health", which has never had a univocal description. In this regard, there are four names (characterized as "models") identified: three that can be combined with the three "malady" designations indicated above, plus a fourth linked to the famous 1948 WHO definition of "health"[6]. These four models identified by Larson (1999, p. 124) are: medical model (the one strictly linked to academic scientific research), wellness model (connected to subjective well-being), environmental model (linked to the relationship with the physical and social environment), WHO model. The following table is the illustration given by the author (where the researcher's second name has been moved to fourth place for a reason which will appear clear later):

Table 1

Four Models for Defining Health

Model	Definition
1. Medical model	The absence of disease or disability.
2. Wellness model	Health promotion and progress toward higher functioning, energy, comfort, and integration of mind, body, and spirit.
3. Environmental model	Adaptation to physical and social surroundings—a balance free from undue pain, discomfort, or disability.
4. World Health Organization (WHO) model	State of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

Furthermore, the link between the two notions is quite evident within the dominant medical vision: Health is not considered independently, with its own connotations, but is defined as "absence of disease"[7]. Furthermore, Hofmann notes that Twaddle himself, the first scholar to deal distinctly with the "three terms of disease", did so by always relating them to health[8]. It seems therefore that the above "disease names" have to been considered in relation to the names of health. If then we put the two concepts, "disease" and "health", in parallel, we note that

[6] The WHO definition is considered by many to be impractical, utopian, especially in its original meaning, later gradually modified; however, it remains an orientation that, according to some authors, remains inescapable and "conventional wisdom" (Larson, 1999, p. 127).

[7] "It is a traditional axiom of medicine that health is the absence of disease" (Boorse, 1977, p. 542).

[8] "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)" (Hofmann, 2002, p. 655).

the latter has four names; the question arises whether there is a fourth name of "malady", which represents the aspects not included in the three most common English terms.

In fact, we have noticed that some authors have already increased the number of "malady" names to four. It is very important what one scholar says: "… it seems necessary to introduce the term 'ailment' [in our opinion: 'unhealthiness'], after the distinction between disease, illness, and sickness has been made …" (Niebroj, 2006, p. 255).

Furthermore, by searching in dictionaries, encyclopedias, books, and specific articles on the subject we found a fourth English name that defines the state of "malady" with a more distinctive emphasis than "ailment": "unhealthiness", a noun derived from the adjective "unhealthy" with the suffix—ness emphasizing a quality, a condition (= bad health). This term represents the generic state of "non-health", also etymologically, understood as a synonym of "non-integrity"[9].

From the etymological dictionaries, in particular, we can reconstruct the period of inclusion of each term into current language and the frequency of use in circulating literature[10], in order to highlight a certain historical evolution of the three terms and therefore differences of view regarding the concept of "disease", with attention to different aspects of the problem depending on the cultural framework of reference[11]. We can certainly assume a progressive specialization of the context of use, especially over the last two centuries[12]: "illness", from 1680 onwards was the term that traditionally indicated "malady", but later during the 19th century scientific, experimental medicine gained the hegemony and this term was replaced by "disease", which became the predominant one, as a term that included as objective aspect, an expression of the scientific progress of medicine in those years. In the course of the 20th century, however, with the characterization attributed to "illness" as the subjective experience of the "disease"[13], this name became more recurrent again. In the same

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[9] Kass emphasizes the fact that the term "health" literally means "wholeness", deriving etymologically from the same root of *wholeness*, synonymous with *in-tegrity*: "The English word *health* literally means 'wholeness,' and *to heal* means 'to make whole.' (Both words go back to the Old English *hal* and the Old High German *heil*, as does the English word 'whole.') To be whole is to be healthy, and to be healthy is to be whole" (Kass, 1975, pp. 24-25).

[10] The reference is in particular to the *Online Etymology Dictionary*, https://www.etymonline.com/, which for each term shows the period of first appearance and graphically the trends in frequency of use, "*adapted from books.google.com/ngrams/*". From this we can infer, for example, that the term ailment, proposed as a fourth name by Niebroj, is less used in recent decades than unhealthy. While ailment, in fact, has a connotation closely linked to disease-induced suffering, unhealthy appears in increasingly broader contexts, with emphases on lifestyle, living environments, and social issues affecting health (examples of such contexts are in Wilkinson, 1996; Jackson, Knight, & Rafferty, 2009).

[11] What we find in etymological dictionaries suggests a historical evolution of these nouns—from Old and Middle English to Modern English—from the moral to the objective-experimental sphere; e.g.: illness (n.) "disease, sickness, ailment, malady," 1680s, from ill (adj.) + -ness. Earlier it meant "bad moral quality" (c. 1500) (disease, sickness, ailment, malady, 1680s, from ill + -ness. Earlier it meant "bad moral quality" (c. 1500). Older recorded year: 1680s); sickness (n.) "state of being sick or suffering from a disease," Middle English siknesse, from Old English seocnes "sickness, disease; a particular malady;" see sick (adj.) and -ness. It formerly was synonymous with illness; in late 19c. sickness began to be restricted to nausea and other disturbances of the stomach, leaving illness as "a rather more elegant and less definite term" (Century Dictionary in *Online Etymology Dictionary*).

[12] The reconstruction of the evolution of the three English terms by François Laplantine (1988) is interesting. Starting from a bipolar vision of "malady" [in Italian "malattia"] as either "malady in the third person" or "malady in the first person", in order to distinguish "objective medical knowledge" from the "subjectivity of the sick person", the author coined the term "*malady-subject*" to be contrasted with that of "*malady-object*", precisely to differentiate "*illness*" from the "*disease*" of "biomedical systems" (according to his definition); he also makes the same distinction with regard to Fabrega's view, according to which *illness* "represents the socio-cultural behaviours related to 'malady' in a given society", identified by Laplantine as "*malady-society*" (Fabrega, 1977, Vol. I, 2, pp. 201-228; Fabrega, 1978, Vol. II, 2, pp. 11-24). [Fabrega starts from a basic assumption: "Strictly speaking, however, all illnesses are folk in the sense that native categories always structure the form, content, and interpretation given to an illness" (Fabrega, 1971, p. 213)].

[13] Laplantine identifies in Eisenberg (1977) the first underlining of "illness" as the "subjective experience" of the sick person (Laplantine, 1988, p. 16). In his opinion the general medical landscape largely overlooked what was represented in the concept of illness: "In the dispute between the subjectively experienced malady (illness) and the scientifically observed and objectified malady (disease), biomedical practice is only concerned with completely assimilating the former into the latter" (Laplantine, 1988, p. 17).

years the term "sickness" was recovered, to describe the concept of "illness" from the point of view of society[14], the taking care of the sick person by public health institutions (and also by socialist regimes in the world), while "un- healthiness" perhaps remained as the residue of a primordial past, today little valued by the healthcare structure.

In conclusion, considering four English names of "malady" has both a theoretical basis, in Niebrój's thought, and an empirical basis, that is in dictionaries, which are well-considered and often collective works.

Table of the Four English Names of "Malady"

The following table lists the definitions given to the first three names by the authors who define them distinctly. Also added are the definitions we found of the fourth name. We list them all in detail so that the unified view of the various definitions given to each name will help us find their common content.

A few notes of clarification. The definitions listed below were given by the authors not as results of theoretical systems, but by intuition. Because of this intuitiveness, it is assumed that sometimes the author, in order to name the "malady" according to his own way of conceiving it, referred to the commonly used name of "disease", although in our opinion another name (e.g., unhealthiness) would have been appropriate in this case. We will therefore sometimes take the liberty of modifying the quoted texts (however, we indicate the original in brackets). The keywords will be explained in the next paragraph.

The following material will be organized in this way: First the definitions of the "three English names for disease" given by the four authors indicated above are listed (for Twaddle alone two quotes are reported to highlight the evolution of his thinking over the years); then we summarize their salient characteristics in table form so as to easily grasp them with an overall look. At last, we add the definitions found by us of the fourth name.

Table 2

List of the Most Important Definitions of the Four English Names for "Malady"

Disease
---"The term 'disease' is used to indicate the biological dimension of nonhealth, which has come to be the focus of medicine in the past two centuries. Disease is an 'objective' phenomenon that can be measured through laboratory tests, direct observation, or other 'signs'" (Twaddle, 1981, pp. 111-112).
---"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); both quotations in Hofmann, 2002, p. 652).
---"The first mode of unhealth is disease. This is a pathological process … The quality which identifies disease is some deviation from a biological norm. There is an objectivity about disease which doctors are able to see, touch, measure, smell" (Marinker, op. cit. p. 82).
---"Disease was the term reserved for objective physiological or mental disorder at the organic level and confined to the individual organism" (Susser, op. cit. p. 471).
---"Since the central problem is the presence or absence of disease, the only issues of interest to the doctor are the agents, the mechanisms and the treatments of diseases" (Eisenberg & Kleinman, 1980, p. 12).

[14] With regard to this social aspect of illness, Laplantine emphasizes precisely the need for "a third term capable of reinserting the *malady-object (disease)* into culture … and differentiating the *malady-subject* (Eisenberg's '*illness*') from the *malady-society* (Fabrega's '*illness*'): an operation promoted, in his view, by Jean Benoist (1983, p. 56) who gave such a sense to the term sickness, hitherto habitually understood, with respect to 'malady', as 'a much less serious and more dubious state … or, more generically, malaise'" (Laplantine, 1988, pp. 13-17). However, Benoist specifies that sickness "may henceforth be used to indicate 'the process of socialization of disease and illness'" (Laplantine, 1988, p. 17).

Illness ---"Illness refers to the more subjective or psychological dimensions of non-health that are generally of more immediate concern to the people experiencing them" (Twaddle, "Sickness and the Sickness Career: Some Implications", 1981, op. cit. p. 112). ---"Illness is a subjectively interpreted undesirable state of health. It consists of subjective feeling states … perceptions of the adequacy of their bodily functioning, and/or feelings of competence [=adequacy to his own tasks]" (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 (Twaddle, 1994a, p. 10) in: Hofmann, "On the Triad Disease, Illness and Sickness", op. cit., p. 652). ---"The second mode of unhealth is illness. Illness is a [negative] feeling, an experience of unhealth which is entirely personal, interior to the person of the patient" (Marinker, 1975, p. 82). ---"Illness was reserved for a subjective state, a psychological awareness of dysfunction at the personal level also confined to the individual" (Susser, 1990, p. 471). ---"To state it flatly, patients suffer 'illnesses', physicians diagnose and treat 'diseases'. [While] …illnesses are experiences of disvalued changes in state of being and social function; diseases, in the scientific paradigm of modern medicine, are abnormalities in the structure and function of body organ and system" (Eisenberg, 1977, p. 11).
Sickness ---"'Sickness' refers to the social dimension: the ability to meet obligations of group living. It is the result of being defined by others as 'unhealthy'. It generally results from having one's failure to meet social obligations defined by others as the result of disease or illness" (Twaddle, 1981, p. 112). ---"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". 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" (Twaddle, 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 …" (Twaddle, 1994a, p. 11) quoted by Hofmann, 2002, p. 653). ---"The third mode of unhealth is sickness**.** … is the external and public mode of unhealth. Sickness is a social role, a status, a negotiated position in the world, a bargain struck between the person henceforward called 'sick', and a society which is prepared to recognize and sustain him" (Marinker, 1975, p. 83). ---"Sickness was used … to refer to a state of social dysfunction, a social role assumed by the individual that is variously specified according to the expectations of a given society, and that thereby extends beyond the individual to include relations with others" (Susser, 1990, p. 471). ---"… social context as a determinant of disease and illness: the impact of social stress in the provocation of sickness and of social support in mitigating course and even preventing onset" (Eisenberg, 1980, p. 282).
Un-healthiness ---"The subjective experience of being unhealthy is the main … reason why people apply to doctors with the request to diagnose a disease or to be treated for a disease" (Niebrȍj, 2006, p. 255). ---"Unhealthiness**:** Not in a state of good or normal health. Not healthful" (WordReference, 2024). ---"Unhealthiness: The fact of not having good health" (Lea, 2014). ---"1. Something that is un-healthy is likely to cause illness or poor healthy…2. If you are unhealthy you are not very fit or well…" (Collins, 1997). ---Unhealthy: noun a state in which you are unable to function normally and without pain from WordNet 3.0 Copyright 2006 by Princeton University. All rights reserved.

Summary Characterization of the Four Groups of "Malady" Definition

From these four groups of definitions we can understand the four points of view that motivate them. In our opinion these are the respective points of view: (1) that of the doctor (acculturated to dominant medicine); (2) that of the patient who submits to the treatment; (3) that of society or the social obligations of the sick person; (4) that of the ill person as he feels his status from inside, with respect to his entire personal and associative life.

Then we can detail these four points of view on the basis of the elements that the previous definitions suggest. Our result is the following table (the characterizations AO, PO, ai, pi will be explained later).

Table 3

Summary Characterization of the Four Groups of "Malady" Definition

	AO	PO
ai	Disease Point of view: of the doctor who refers to scientific protocols Idea: Scientific recognition of the disease regardless of the patient's judgment and social conditioning. Disease as a scientific topic, a disease objectified by precise indications (first and foremost those of scientific measurements), described on the basis of a reference standard, especially of physiology, localized in an individual. Ultimately, disease is a well-determined "thing" according to science, which seeks the precise cause (internal: such as dysfunction, genetic or induced; external: due to specific biological or chemical factors such as micro-organisms, toxic substances). Keywords: abstract, scientific, cause (or law or norm), objective effects	Sickness Point of view: of society Idea: Social objectification of a person's malady as qualified by health care medicine. Statement of malady given by others. Social acknowledgement of being ill. Inability to fulfill social obligations. Reduction of participation in organized life, with consequences for the social relationships of others. A specific case of lack of social participation contemplated by the employment contract. Being at fault for the structure of social life. Anomalies in the structure and functioning of body systems. Keywords: social status, social role of sick person, socio-health system
pi	Illness Point of view: immediate of the patient Idea: Individual recognition of having unwanted health, of being ill, according to the canons of scientific medicine. Illness as also an individual fact. Self-referral, self-management. Patient's perception of being subject to "objective changes", valorization of one's person as it enters into an objective social functionality, subjectivity in a functional context (sanitization process). Keywords: subjective perceptions, self-reference, phenomenological-existentialist approach	Un- healthiness Point of view: of the sick person experiencing his "malady" Idea: Feeling (from inside) to be ill. State of non-integrity of the person; unhealthiness as not a pre-constituted picture but a set of subjective symptoms also felt in a private, intimate way. Symptoms are not directly produced by only external causes of "malady" but also the body's response. Even "genetic diseases" are always an expression of environmental and subjective factors that modulate genetic information. The evaluation of the unhealthiness is centered on one's own person and life expectancy, as well as the way of living. The ill's internal evaluation of his own physical and spiritual state ("state" as the totality of the person, not absolutely definable). Unhealthiness as a dynamic process, a state of experience, relational (with the external environment: emotions and lifestyle, interpersonal relationships). Keywords: globalism, holism, personal experiential state

The Goal: To Getting out of the Vagueness of Theoretical Medicine. Two Medical Dichotomies

Our aim is to at least partially overcome the aforementioned "vagueness of medicine" declared by Hofmann (2022).

In our opinion, the three "disease names" represent only a description without any structure of their inter-relationships. The importance of moving to four names lies above all in allowing us to contrast the names two by two, so as to go back from the four names to two dichotomies, whose pairs of choices on them return to define the original quatern. With the use of dichotomies, we connect to Diogenes Laertius and Protagoras: Diogenes Laertius (2013, book 7, chapter 1) wrote: "Protagoras asserted that there are two sides of every question, exactly opposite to each other". With the two dichotomies we want to suggest an intellectual structure of reference, simple but general in its purpose.

We note that, in the philosophy of medicine literature that seeks to explain the differences between the different English names of "diseases", some authors (who refer to a "normative" or "constructivist" approach to

define the terms "health" and "disease"[15]) have reached the following conclusion: "Most proponents [of these approaches] agree that we must define the terms 'disease' and 'health' explicitly and that our definitions are a function of our values (Margolis, 1976; Goosens, 1980; Sedgewick, 1982; Engelhardt, 1986)" (Reiss & Ankeny, 2022, p. 3). It is clear that here the word "values" is intended to indicate categories that cross over into philosophy.

To define these values in medical terms we begin by noting that basic medical attitudes can be grosso modo reduced to two: the etiological (or epistemic) and the therapeutic. The former collects a quantity of data which then tries to organize into a coherent framework for understanding the malady, while the latter treats the patient using a series of more or less invasive instruments.

On one hand the etiological attitude attempts to build a "theory of the malady" in question and of the patient. This attitude can be organized in two different ways: either as one axiomatic theoretical organization (AO**)** that deduces results from a few (intuited or previous) principles; or as the search for solving a problem (PO**)**, the problem of understanding the patient and the disease by finding a specific method to solve it. The therapeutic attitude, on the other hand, involves a plethora of tools (which can ultimately be represented by an infinity of tools) and for each tool an even infinite degree of invasiveness, according to the two possibilities of the infinite: actual (when the technique dominates the autonomous capabilities of the patient's body, at least the ability to initiate the cure by itself), or only potential (when the technique is related to the capacity of the patient's body and is associated with his ability to recover his health): AI/PI.

Therefore we agree with the statements cited previously, that is, the differences between the names must be traced back to "values"; we propose that: (1) the "values" on which the definitions depend are two: theoretical organization and infinity; (2) these are understood by us as general and mutually independent characteristics of life; (3) these two values are actually dichotomous variables: either the theoretical organization AO, or the organization aimed at solving a general problem PO and either infinite (in act AI, or potential infinity PI).

By cross-referencing these two dichotomies we obtain four quadrants, each indicated by a pair of choices on the two dichotomies. This structure represents thought in a simple and general way; it has only two dichotomies each allowing two choices; and at the same time it is general, because it covers the totality through four pairs of choices (each corresponding to one of the four quadrants). In fact, with it we have obtained a compass that allows our mind to orient itself in navigating the ocean of ideas and theories concerning medicine according to reference directions, as shown in the figure on the following page.

What Pattern of Thought Underlies the Four English Names for Disease? From the Four Names to the Four Pairs of Choices and Vice Versa

However, the concept of "malady" does not concern the subsequent therapy, but etiology, which corresponds to the only dichotomous variable: PO/AO. Therefore, the four English names for "malady" are to be linked only to the theoretical organization of what being (or feeling) sick means, while the dichotomy of the infinite, which

[15] The two philosophy of medicine approaches considered in this field are the "naturalist/objectivist" and the "normative/constructivist" approach just mentioned. This second approach, which we are considering, argues that the terms health and illness are defined according to societal values. The former, on the other hand, relies on a presumed objectivity, based on natural characteristics, thus exempt from subjectivity or social implications. On the other hand, the relationship with social values is emphasized above all when one considers the difficulty of unambiguously defining the terms in question, in a manner that can be shared by all, with absolute statements. Amzat and Razum (2014) define the notions of health and illness as "conceptual tools", precisely on the basis of the observation [highlighted with the term "vagueness" as the basis of our discourse] that they are multidimensional, complex, elusive: "There has not been an absolute consensus on the definitions of health, disease, and illness, … The concepts are multidimensional, complex, and often elusive … it is evident that illness is culture-bound."

comes directly into play in the adjudication of a therapy (healing techniques taking into account the context of patient care), enters only indirectly into the definition of "malady", that is, only to specify the choices subordinate to the first dichotomy

Being related to an etiology, the name "malady" first expresses a judgment or evaluation on what the malady is, that is on how the complex of symptoms can be summarized in a concept of malady. Furthermore, to be precise as a judgment, the name of the malady must indicate who makes this judgment: whether the patient himself (and then it is he who indicates the symptoms of the malady and formulates, in his opinion, his first organizational synthesis), or an authority external to the patient (and then we have for example evidence-based medicine which organizes the data (of mechanics, physiology, chemistry, cause-effect genetics) in a synthesis that often follows abstract objective and scientific models); or even the judgment comes from a social authority that formulates the organizational summary of what the malady is (and that can also indicate the symptoms: e.g., social dangerousness).

Therefore, the dichotomy on the infinite comes back into play not so much for the healing techniques, but for the infinite proximity or remoteness of the source of the patient's judgment. To indicate this dichotomy, which compared to the general one is a reduced one, we can again use the notions of either potential infinity or actual infinity, but with a slightly different meaning; so we denote them with lowercase letters: pi and ai; by this specification of the notion of infinity in etiology we characterize the four "malady" names according to both dichotomies and therefore give a justification of why there have to be four.

Furthermore, reflection on these categories suggests the immediate idea that the name of "malady" communicates (it is indicated in the first column of the previous table):

- Disease: scientific recognition (AO) through a judgment coming from very far (AO & ai).
- Illness: individual recognition of an illness declared by a highly authoritative institution (AO & pi).
- Sickness: sick person as a social problem decided by a highly authoritative institution (PO & ai).
- Un-healthiness: primarily a personal assessment of the "malady" as a personal and environmental problem (PO & pi).

So, by bringing the malady's names two by two together, we recognize the two basic choices, AO and PO and also ai and pi[16].

[16] At this point, the specific comparison between *illness* and *unhealthiness* deserves a note of clarification. The fundamental difference concerns the dichotomous variable PO/AO which concerns the etiological aspect of the "malady". *Illness* describes a concept of being ill experienced personally but stated scientifically, therefore abstracted from the specific patient and with a cause that is well defined within an equally formal framework (AO**)**. *Unhealthiness*, on the other hand, expresses the "illness" experienced personally as a problem (PO**)** of the person with his relationships; so, the cause of the "illness" cannot be single and direct but can be the result of the interaction of multiple factors. However, the two names may appear overlapping for two reasons. First, it is because both characterize the "illness" from the person's subjective point of view; furthermore because they describe the experience of "illness" according to the same choice pi, relating to the origin of the judgment on the "illness", from within oneself; but note that in the first case the patient delegates the problem to official medicine and then the "patient" (as the sick person is well called in this case) internalizes the scientific solution received, while in the second case the sick person makes a personal problem of the "illness" from its starting till up to its finishing. In other words, it is clear that according to "*illness*" the perception of the illness is a personal fact, but with the acceptance of the canons of scientific medicine. *Unhealthiness*, on the other hand, expresses the subjective point of view as the relationship of the "illness" with one's entire life (personal and associative) and takes into consideration the environmental and social components of the malady; he then subjects the external scientific evaluation to his personal evaluations.

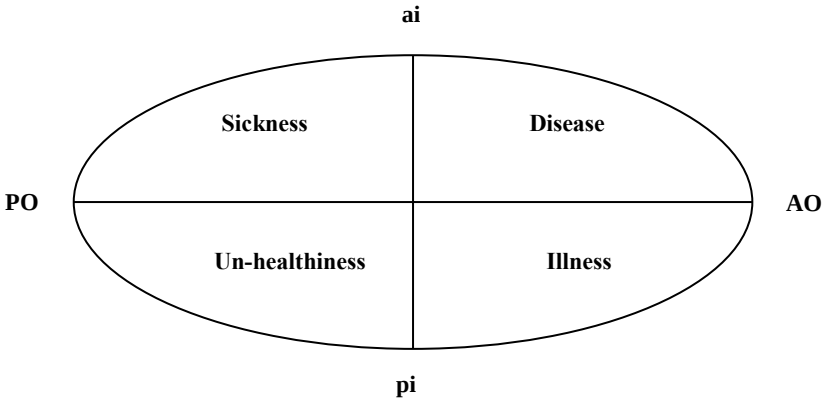

Figure 1. Graph of the distribution of the four "-malady's names-" according to the two dichotomies.

Furthermore, we now clarify that in the table for each malady name we have suggested a keyword (or two) to immediately direct your attention to what to look for in the definition at issue.

Conclusion

The reflections of many authors, independent of each other, on the popular English use of the concept of "malady", have directed us to four precise names, all independent of each other. In fact, following the given definitions we were able to construct the previous table, which shows that these names can be contrasted two by two, in order to trace back to two dichotomies, which form a conceptual structure. All in the above indicated that the popular English language suggests a theoretical quadripartition of a basic concept of medicine. So, from now on we are enabled to use the result as a working hypothesis to rethink all of medicine according to four corresponding types or models, which would have the unconscious support of the Anglo-Saxon language, which already uses to call the "malady" with four different names.

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