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ORIGINAL RESEARCH

# Diseases as social problems

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**Abstract**
In this paper we articulate a characterization of the concept of disease as a social problem. We argue that, from a social ontology point of view, diseases are problems that are identified and addressed within the framework of concrete social institutions and practices (those that shape medicine). This approach allows us to overcome the classical distinction between naturalist and normativist approaches in the philosophy of medicine, taking into account both the material and the symbolic factors that shape the categories and determine the practices of medicine.

**Keywords** Disease · Philosophy of medicine · Social ontology · Social problem

## 1 Introduction

It seems undeniable that diseases are problematic events. A disease is a condition that we tend to consider undesirable, either because it causes us suffering or limits our abilities, or because it threatens to do so. In response to diseases and their consequences, our societies have developed sophisticated institutions and practices. Indeed, we devote significant resources to avoiding, reversing, and alleviating those states that we view as negative.

In this paper, we approach the question of the theoretical characterization of the notion of disease specifically from the point of view of social ontology. It is societies that categorize, and define in medical theory and practice, certain bodily or mental states as "healthy" or "diseased". It is also societies that develop organizations and implement measures and policies aimed at dealing with diseases; that is, at finding solutions to these problems. Consequently, a complete and useful theoretical (or, as we would say, ontological) characterization of the notions of health and disease must address the social dimension of this concept. Diseases ultimately affect particular individuals, but their theoretical characterization and practical approach are social.

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We argue here that a social ontology approach applied to basic medical categories helps us understand how medical concepts are shaped and how they change in relation to changes in social contexts.

The health/disease distinction is founded on a prior normative distinction between right and wrong bodily states that is supposedly based on objective scientific knowledge about biological functioning. However, it should be noted that there is no single way of theoretically grounding the health/disease distinction; rather, the current debate in the philosophy of medicine presents different positions on the subject.[1] This is crucial from a practical point of view, for the way in which diseases are identified and dealt with varies according to the particular characterization of health and disease.[2] Medical practice—understood as the set of social actions aimed at solving the specific problems we call diseases—ultimately depends on our theory of medicine.

This paper focuses specifically on this relationship between medical theory (the definition of disease) and the practice of medicine (the way societies deal with disease). Although many theorists have already emphasized the social relevance of the notion of disease (for instance, Dubos, 1959; Gert et al., 1986; Wildes, 2001), in this paper we propose to go one step further arguing that it is possible to characterize the notion of disease precisely by the response that societies put into practice in the face of phenomena that are considered to be diseases. In particular, we suggest that diseases are a particular type of *social problem*.

Though not always explicitly stated, the concept of social problem is a key notion in social ontology and in the philosophy of the social sciences (Treviño, 2016; Zamora-Bonilla, 2022). We argue that this notion allows us to understand diseases from a perspective that—in contrast to the more naturalist approaches—recognizes the institutional and socially determining character of our medical concepts, but without falling into a constructivist relativism that denies any objective justification of this distinction on the basis of 'natural' (or, as we will say, 'material') facts. We do not argue that diseases have no biological basis. We assume, instead, that the notions of health and disease are thick concepts that combine evaluative and descriptive dimensions. We also take as given that scientific considerations and the cultural and subjective particularities of the people who use these notions play a determining role in the conceptualization of certain states as healthy or diseased.

In fact, our main goal is not to offer an absolute criterion to identify, in a totally objective way, what diseases "really are". We simply propose an analytical framework that helps us to understand *how real people construct disease categories*, and the different roles that the *natural* and the *social* have in that construction and in the measures implemented to address it. One very important point or our argument is that characterizing disease as a category in social ontology must help not only to understand *what is to be* a disease, but also *why it is the disease it is*; or, stated otherwise, an ontology of diseases must not only answer to the question of how is the

[1] On the philosophical debate about definitions of health and disease see, for instance, (Culvert & Gert, 1982, Cooper 2002, Murphy 2008, Lemoine 2013).

[2] As we will see in the following sections of this paper, naturalist and normativist approaches assume that the category of disease may have a more material or symbolic substrate, which implies that its treatment should be more restricted to the biological (interventions on the body) or cultural (changes in social structures and people's values).

*general* category of disease constructed or understood, but why are *specific* diseases classified and categorized in the way they are. And our answer will basically consist in pointing to the cluster of responsibilities, rights and duties that in each particular social context the occurrence of a specific disease brings up.

## 2 What's disease?

The theoretical distinction between healthy and pathological states is one of the central problems in the philosophy of medicine (see Humber & Almeder, 1997; Stegenga, 2018; Saborido, 2020). This question is fundamental not only for the ontological determination of medical categories, but also for determining the goals of medicine—and for thinking about its practical and ethical implications. However, despite being fundamental to the theory and philosophy of medicine, the theoretical characterization of the term *disease* is especially controversial, for it has two distinct but intimately intertwined dimensions. As Marc Ereshefsky (2009) has argued, characterizing a condition as a disease involves, firstly, making a state description about the characteristics of the individual we consider diseased and, secondly, a normative statement, that is, an evaluation in terms of right or wrong, good or bad, of that condition. In this line of thought, health and disease can be seen as *thick concepts* in which both a descriptive and an evaluative dimension are present (Nelson, 1995). In a way, it could be said that the categorization of certain states as healthy or diseased includes both a description of what these states are like *and* an evaluation of what these states mean for us, in the same way that other concepts such as *brave* or *cruel* are also descriptive and evaluative at the same time. A diseased individual is someone who has been attributed a state that has been medically described and evaluated as bad. Distinguishing the healthy from the pathological involves not only description but also evaluation.

From a social point of view, the concept of disease has a strong normative charge, as it constitutes a categorization that implies a certain social duty to try to fix (i.e., medicalization) a negative condition. To assume that a certain bodily or mental state is a disease is to assume that it is something negative to which the institutionalized social practice of medicine must devote its efforts. The social nature of the concept of disease cannot be ignored. *A disease is a phenomenon that involves the activation of a number of collective practices*. This social dimension of disease explains, to some extent, the conceptual change in medicine. Historical social changes imply changes in the characterization of certain states as diseases or not (think of such striking cases as drapetomania). It also explains why different societies may consider certain states as diseases while others do not (as in the case of homosexuality). The characterization of a condition as a disease implies a concrete theoretical treatment and a particular practical approach to these very specific conditions, and this is clearly framed by social values and beliefs. The normative burden of the concept of disease stems from, and has an impact on, the social context of medical institutions.

Philosophers of medicine have defined disease in very different ways. Broadly speaking, it is frequently asserted that there are two main approaches: *naturalism* and *normativism*. Naturalism in medicine holds that it is possible to objectively characterize the biological properties that determine certain states as healthy or pathological.

According to this approach, biological organisms present certain states that can be qualified as healthy or pathological in and of themselves, independently of our personal or cultural criteria.

The most prevalent naturalist theory is the biostatistical approach advocated by Christopher Boorse. For Boorse—probably the most influential theorist in this debate—health is statistically normal functional behavior, and disease is an organic functioning that leads an individual to behave at a lower level of efficiency than the rest of the members of his reference class (i.e., beings of the same species, age and sex) (Boorse, 1977). From this point of view, the evaluative considerations that external observers may have regarding these behaviors are irrelevant: health is simply normal biological functioning from a frequentist statistical point of view.

This approach advocates an axiologically neutral approach to the notions of health and disease. This does not mean that this approach does not consider disease as a normative concept, but that this normativity is not based on the values of the observer, but is inferred from the observed properties. This is what James Lennox (1995) called "objective values". On many occasions, this approach is based on the assumption of a kind of *natural normativity* in biological organizations. This natural normativity is sometimes justified by the disposition of the organization of living beings to self-regulate (Saborido & Moreno, 2015), or by the action of natural selection to maximize organic designs to improve fitness (Boorse, 1977). In any case, this alleged objectivist approach assumes that the organic design of living beings allows the inference of suitable norms for organisms, and that this design can be inferred from the statistical distribution of individuals: the normal in a statistical sense corresponds to the normative (González de Prado, 2018).

Naturalists, like Boorse (1977, p. 549), strongly criticize approaches that understand health in terms of social values because, they argue, this opens the door to a problematic relativism. From an approach that understands health to be defined in terms of individuals' "success" or "efficiency" in relation to some expected value, the same state could be categorized as either healthy or pathological depending on the subjective particularities of each society and even each individual. This would mean that the same condition, such as myopia or obesity, could be a disease for some people and a completely healthy state for others. The efficiency of a state is something that will depend on the specific expectations and desires of each particular individual. The indiscriminate nature of these relativist approaches would be an important limitation. Physicians do not understand health and disease in this way. Myopia and obesity are diseases regardless of the judgment of those who suffer from them. Thus, these approaches would be systematically under-specified, allowing the ascriptions of health or disease to states of organisms for which these categorizations do not seem to be appropriate. For naturalism, a definition of health and disease must be able to offer objective criteria applicable to all members of the same reference class, irrespective of the specific context in which they currently live.

For the naturalist approach, the social environment would primarily be something like a set of boundary conditions for the functioning of individuals. For naturalists, the social environment plays the same role as the natural environment. The correct functioning is that which has been shaped by the *species design*, so the social context to be taken into account is that in which this design has been forged. This implies that

the naturalist approach assumes an idea of "normal environment" in its conception of "normal functioning," i.e. healthy behavior.[3] The normal (social or natural) environment is the context in which normal functioning makes a positive contribution to the survival or the fitness of organisms. The notion of "normal functioning" is allegedly objective; it is not dependent on any subjective personal or social considerations.

On the other hand, theorists who argue that it is not possible to objectively define health and disease are usually grouped under the label of *constructivists* or *normativists*. According to them, the notions of healthy and diseased are so culturally embedded that it is impossible to dissociate the social context from the medical categories. There is no such thing as a "natural normativity" because the distinction between right and wrong is always up to us. In medical and popular discourse, the difference between healthy and diseased depends intimately on our personal values. Thus, health would be, primarily, the condition we desire, and disease would be the condition we want to avoid. Current theorists such as Lennart Nordenfelt (1987) argue that underlying our medical distinctions are our cultural and highly unobjectifiable valuations of what we consider beneficial, both personally and socially.

Normativists have been highly critical of those who have attempted to categorize health and disease as "scientific" or "objective" categories. The distinction between the healthy and the diseased, they argue, hides a political imposition of one over the other that, on many occasions, has dishonorable motivations and pernicious effects. Medicine is a practical knowledge and, therefore, its most basic categories cannot be separated from the moral criteria of those who use them.

It does not seem appropriate, normativist theorists point out, to ignore the social nature of the notion of disease. Nor is it true that there is such a thing as a "standard" or "normal" environment. The medical categorizations are always relational because they reflect the way in which organisms cope with their ever-changing environment (Menatti et al., 2022). The way in which organisms interpret their context and adapt to it is intimately determined in a dynamic interaction. Not recognizing this may lead us to the misconception that the cultural values and the beliefs of individuals have no influence on our characterization of certain states as diseases. This, they argue, is obviously false. In fact, it would not be possible to understand conceptual change in medicine without alluding to social change. Obvious examples of conceptual change in medicine, as exemplified by "diseases" such as the aforementioned drapetomania, or others, such as hysteria or homosexuality, reflect how social values are determinants of our medical categories. The evaluative character of our notions of health and disease is not only

[3] However, this recourse to a notion of "normal environment" to account for health and disease is also problematic, even for cases where social values do not seem to play a major role. As Elselijn Kingma (2010) has pointed out, the biostatistical conception of biologically correct functioning behind naturalist approaches to health must be relativized to situations. The same functioning can be correct in relation to one situation and incorrect in relation to another. For example, Kingma argues that in the case of a paracetamol overdose, liver function is extremely low. This low functioning may intuitively be understood as dysfunctional but is nevertheless statistically typical for the situation of paracetamol overdose. One could argue that paracetamol overdose is not a typical situation for the biological species—the biological design has not been evolutionarily shaped in such situations—but this problem of situation-specificity can also be seen in much more typical cases such as malaria. Organic design has indeed been evolutionarily shaped in environments with *Plasmodium falciforum*, as well as many other pathogens, and these pathogens are therefore part of the "normal" environment for naturalists. In such a case, how can we assert that the functioning of the organs of a person with malaria constitutes a malfunction, and therefore a disease?

based on scientific knowledge, but also on our shared and mutable preconceptions about which states are acceptable and which should be corrected. Thus, as opposed to the purely objectivist character of the naturalist approach, for normativism the social and subjective aspects are central to the characterization of notions of health and disease.

The current debate in philosophy of medicine between naturalism and normativism leaves us in a situation in which some authors defend the notions of health and disease as objective and value-free (naturalists), while others (normativists) emphasize the subjectivity and cultural relativity of this distinction. The problem with naturalism is that it leads to disregard for the obvious influences of social context on the theory of medicine, which is an important limitation if we really want to understand how the characterizations of health and disease are constituted and transformed. Medical classifications are constantly changing; we cannot ignore the fact that the social substratum in which they are formed influences these changes.

However, normativists run the risk of falling into a radical relativism in which medical concepts are drained of meaning. If no clear criterion is offered, the concept of "disease" becomes synonymous with "undesirable state". And not all undesirable states are diseases. Only some conditions, linked to phenomena such as disability, pain or suffering, seem legitimate candidates to be qualified as diseases. The excessive liberality of the normativist approach can lead to a cultural relativism that ignores the differences between diseases and other social problems. An approach that aims to address the distinctiveness of diseases must also consider, in addition to subjective values, the determining role of natural scientific knowledge.

There are hybrid proposals that have recognized the contextual and social character of the normativist notion of disease, but without giving up the naturalist search for scientific objective elements that allow us to distinguish between healthy and diseased states (see, for instance, Wakefield, 1992). However, we claim that it is worth questioning the basic theoretical assumptions on which the confrontation between naturalism and normativism is based. There are several recent proposals (Broadbent, 2019; Conley & Glackin, 2021; Kingma, 2013, 2014; Simon, 2007) that argue for an ultimate compatibility between naturalist objectivism and normativist subjectivism that allows us to overcome this debate, foundational in philosophy of medicine, but which seems to be a dead end.

Some of these proposals have adopted a social or institutional approach to the notions of health and disease, arguing that this perspective allows both supposedly objectivist and supposedly subjectivist considerations to be addressed in a unified framework that ultimately challenges the same distinction between objectivism and subjectivism that underpins the debate between naturalism and normativism. According to that approach, medical categories are constituted within social entities that establish and validate them. The criteria according to which medical notions, such as that of disease, are articulated are ultimately determined both by factors that are often considered "value free" (or material) and "value laden" (or symbolic). Proposals such as the *social constructivism* of Kingma (2013) and Conley and Glackin (2021), the *institutionalist account* of Knox (2023), the *radically pluralist pragmatism* of Kukla (2014, 2022), the *social objective account* of Gagné-Julian (2021), or the *state-funded*

*account* of Maung (2018) would be instances of such approach. However, these proposals mainly aim at finding a theoretical characterization of diseases with prescriptive capacity, i.e., one that guides medical theory and practice. In this paper, we focus instead on the very nature of the concept of disease, looking at how this category is de facto shaped in medical theory and practice. We are therefore not interested in providing a definition of what we should understand by disease, but rather in clarifying why certain conditions are categorized as diseases. To this end, we propose to approach the question of the nature of disease from a social ontology perspective. From an approach that is unexplored in the current philosophy of medicine, we propose to draw on the ontological notion of *social problem*.

## 3 Social problems

We argue that a disease is primarily a kind of *social problem*. We will approach this notion of social problem from the point of view of social ontology, that is, the branch of the philosophy of social sciences that discusses the most fundamental aspects or the basic nature of entities, classes and social processes (Zamora-Bonilla, 2022; see Epstein, 2021 for a summary of the main topics and approaches to social ontology). The category of social problem is interesting from an ontological point of view (in spite of not having been much studied by authors working in social ontology) because social problems are among the most basic ontological categories of the social world. Indeed, most, if not all other social "things," exist and are what they are because of their relation to some social problem or problems. Our goal here is to interpret the notion of disease as a species of the genus *social problem*, and to use that interpretation in order to understand what aspects of the debate between naturalists and normativists it helps to illuminate and (hopefully) adjudicate.

The basic question about the ontology of anything is what makes it what it is. In the case of social problems, this can be interpreted as three separate, though related questions: in the first place, *what makes a social problem a problem?* In the second place, *what makes a social problem the problem it is?* And, in the third place, *what makes a social problem social?* In order to clarify these questions, we propose to start from the sociologist Hornell Hart's classic definition, which holds that:

> A social problem is a problem which actually or potentially affects large numbers of people in a common way so that it may best be solved by some measure or measures applied to the problem as a whole rather than by dealing with each individual as an isolated case, or which requires concerted or organized human action. (Hart, 1923)

The essential elements in this definition are the following:

(1) A social problem is *a kind of problem*. This, of course, is just a truism, but it points to the fact that we need to clearly understand the category of "problem" from an ontological point of view, before discussing what makes social problems distinctive.

(2) A social problem affects *a large number of people*, not just a single or a few separate individuals, though we suggest interpreting "large" rather loosely.
(3) It does it *in a common way*. This is fundamental in order to enable us to talk about the same problem affecting different people in different places and occasions. Or, stated in other way, this is what allows us to talk about social problems as *kinds*.
(4) The problem has to be *tackled preferably as a whole*. This means that usually some aspects of the solution to the problem will constitute what economists call a public good, i.e., one that cannot be merely divided into the portions allotted to each single individual, but that has to be offered or consumed jointly (though the solution may have other aspects that can be so divided; for example, the *discovery* of a vaccine and the design of a vaccination campaign are public in that technical sense, whereas each individual *dose* is given to just one person). Incidentally, Hart's expression "so that" is a little confusing here, because it is not only the "common *identity*" of the problem that justifies that a "common *solution*" is considered preferable: these two "commonnesses" are conceptually and even empirically different questions.
(5) Most importantly, the solution requires *concerted social action*, i.e., it is not achievable by separate individuals acting in isolation, but only through some kind of social organization and cooperation. On another note, Hart introduces points 4 and 5 by means of a disjunction, as if tackling the problem as a hole and tackling the problem collectively were two possibly independent facts. In contrast, we think that most often it is simply impossible to perform something like 4 without doing something like 5 at the same time (and this would probably be closer to what Hart really had in mind).

We may synthesize the definition as follows: *a social problem is a problem that affects many people in a common way and that is seen as something that requires a common and concerted social response*.

So, we have to start by asking, *what is a problem?* or, a little bit more philosophically, *what does the world have to be like (what other things must exist) so that there are problems?* Our suggestion is that the minimal ontological furniture necessary for problems to exist is that there must be agents capable of having goals and plans, for a problem is basically an obstacle that precludes, hinders or complicates the achievement of a goal or the carrying out of a plan. One important issue to discuss at this point is that the goals or plans that a specific problem hinders do not need to be *social* plans or goals for the problem to be a *social problem*. That is, a problem can be a social problem because it frustrates many individual plans (but demands concerted solutions), whereas it does not necessarily frustrate any collective goal.

With regard to the commonality of the problem itself, this relates more directly with the second fundamental ontological question we put forward before: not what makes a problem a problem, but what makes a problem *the problem it is*. Obviously there will always be numerous and profound differences between the situations and circumstances of different individuals, but what is necessary for us at this point is only that the agents perceive a sufficient degree of similarity between the single cases so that they find it reasonable to classify them as examples of "the same" problem (for our goal in this paper is not to find an objective criterion to identify social problems according

to their intrinsic nature, or similar, but simply to understand how and why real people categorize some situations as social problems, and as determinate social problems). Of course, people can be more or less wrong in making a judgment like that one. The best proof of the pudding, from the practical point of view, would be the degree of success of the *common and concerted solutions* suggested by that common perception of the problem's nature. Usually, if a concerted solution "works," this strengthens the idea that the problem was the one that people thought it was. Instead, if the proposed solutions don't work well enough, this stimulates not only the search for other possible solutions, but also the re-conceptualization of the problem, and in some cases even its dissolution, concluding, for example, that it was not really one problem, but a mix of very different ones, demanding separate solutions, or even that it was no problem at all.

Lastly, regarding the commonality of the desired solutions, i.e., the fact that these solutions must preferably emerge out of one single collective action (as complex as we want), here is of course where sociality enters more intensely into the ontological constitution of social problems, for the collective or concerted actions that have to be performed are basically constituted through a network of rights and duties: things that some individuals have the obligation to do, or the right to do, or the right to demand others to do. Clusters of such rights and duties are what we usually call institutions. Our view, hence, is that institutions, and most other social entities and facts, depend for their existence on the creation or modification of rights and duties that, in their turn, are ultimately collective responses to social problems. Again, this does not presuppose that the rights, duties, and institutions that have been constituted in a particular case for trying to solve a particular problem will necessarily be successful. Rather, on the contrary, they can often fail miserably, and they can even create more and worse problems than the one they were attempting to solve or to alleviate.

We shall close this section with another important reflection. Rights, duties, plans and goals have an intrinsic subjective nature: they are what they are, basically thanks to the significance or meaning they have for real people, and this meaning depends a lot on the way these entities relate to the moral ideas of the people. In the identification of a social problem, therefore, there is an essential role to be played by what we shall call *symbolic* elements. But many, if not most or all, social problems are problems because there is in the natural world something that hinders the realization of someone's plans. Hence, we have also to take into account what we shall call the *material* elements of a problem. We admit that it is convenient to separate, conceptually at least, "facts" and "values," but one essential aspect of social problems is that they are a kind of reality in which values and facts are constitutively intermingled: material facts and symbolic values unavoidably are both involved in the process of determining *whether* something is a problem and *which* problem it is, as well as in the comprehension (however fortunate or unfortunate) social agents themselves have of the problem.

## 4 Diseases as social problems

This notion of social problem fits quite well in the case of diseases. Diseases are problems that affect large groups of people—even for rare diseases, they always

affect groups of individuals—in a relatively uniform way, which allows diseases to be identified and medically categorized under specific labels (tuberculosis, hypertension, schizophrenia,…). Furthermore, even though the experience of disease is a subjective experience, the way in which it is responded to is through the coordinated and complex action of medical institutions, which involve very different social agents: physicians, patients, financial backers, governments, insurance companies, etc.

Accordingly, we claim that this social approach allows us to understand the distinctiveness of diseases. Diseases are social problems of a very particular kind, since they are based on a prior theoretical distinction between healthy and unhealthy states. The main difference between diseases and other social problems –such as loneliness, unemployment, or poverty– is that diseases are basically categorized and evaluated from that institution or family of institutions we call 'medicine', and not from other fields such as economics, politics, religion, etc.

Thus, following the main elements of the definition of social problem presented in the previous section, we can characterize a disease as follows:

A disease:

1. is a problem.
2. which actually or potentially affects large numbers of people (even in the case of rare diseases, diseases affect to more than one person).
3. in a common way, (which makes it possible to categorize and classify diseases into kinds).
   so that
4. it may best be solved by some measure or measures applied to the problem as a whole rather than by dealing with each individual as an isolated case (medicine as a social phenomenon),
   or (and?)
5. which requires concerted or organized human action (medicine as an institutionalized practice).

This social ontology approach to the notion of disease is useful because it reminds us that the central point of social problems is that they play a fundamental role in the dynamic, conflictual, and dialectical process that makes other social entities emerge and change, and hence social problems, such as diseases, are an indispensable part of any social ontological theory that attempts to have at the least an explanatory value.

This allows us to overcome the distinction between naturalist and normativist approaches in philosophy of medicine,[4] for it forces us to reconsider the relation between "facts" and "values" in social thought and social reality. Social problems like diseases are facts, after all, and they can be objectively measured, can be subject to statistical causality tests, etc., but, as we have just seen, they are unavoidably value-laden, not only in the sense that it is people's valuations that make them problems to begin with, but also, and much more interestingly from a philosophical point of view, because some of the concepts by means of which those facts are described (and hence, some of the properties that constitute the facts themselves, to the extent that

[4] For this reason, our proposal is aligned with the above-mentioned accounts proposed by Simon, (2007); Kingma (2013, 2014), Kukla (2014, 2022); Maung (2018); Broadbent, (2019); Conley & Glackin (2021); Gagné-Julian (2021), or Knox (2023).

proper concepts reflect real properties) are intrinsically normative, especially when they involve rights and duties, statuses, and institutional or cultural roles. This means, of course, that the descriptions and theoretical explanations of the facts that constitute diseases cannot be purely descriptive[5] but have to point in the direction of possible solutions to the problem; i.e., the analysis of those facts has to be "experienced" (so to speak) by the social agents to the service of which the former act as "experts," as an analysis from which positive courses of action should appear as derivable.

Understanding diseases as social problems is not equivalent to a merely functionalist view that groups, norms, and institutions are 'responses' to social problems. Medical institutions and medical practices are consequences, often unintended, and often dysfunctional, of conflicting attempts to attack diseases. This does not assume that there is no objective rationale for the identification of diseases as social problems. Also, the essential value-ladenness of social facts and social science entailed by the constitutive normativity of social problems is in no way an obstacle for the application of "hard" empirical methods of testing, but rather a strong incentive for hardening those methods in the attempt to discard "bad" solutions. In this sense, medicine is no different from other "practical," problem-centered sciences, like engineering: that disease is an intrinsically normative or value-laden concept does not make the testing of therapies and drugs a purely subjective question.

An important implication of this approach is that it puts the focus on the meaning that a physical or mental condition has for the people that interpret and address these conditions, and this meaning includes the perceived or institutionalized distribution of responsibilities regarding what has to be done by whom, or, in some cases, who is to blame. This thus opens the way to consider *radical pluralism* –in Kukla's (2022) terms– with respect to disease categorizations:

> Different cultures have different medical institutions that fit together only imperfectly and sometimes actively conflict [...]. Moreover, these different institutions sometimes classify and count diseases quite differently from one another [...]. Even within one region, it is not at all clear that there is one unified medical institution for the very rich and the very poor, and so forth. Some diseases are medicalized within some medical institutions and not others. Hence medicalizing a condition does not mean inserting it into one unified institution, but into a messy web of institutions. (Kukla, 2022: 10)

[5] A possible good metaphysical justification for this approach can be found in Glackin (2019), also based on concepts developed within social ontology. For Glackin, "the state of being ill or having a disease *is grounded* by the patient's underlying biological or behavioural state" (p.5). The notion of *grounding* is taken mainly from Epstein (2014), for whom this notion serves to explain the dependency relation that seems to exist between certain descriptions of social states and the judgments that people make about them. For Glackin, the evaluation of certain states as diseases is metaphysically dependent on grounding states (i.e. the "underlying biological or behavioural state"), but also on considerations that people have towards these states and that are called "framing-principles". This approach thus makes it possible to explain some of the discrepancies around the categorization of certain disease states (think again of cases such as drapetomania or homosexuality) as disagreements about what framing principles are the correct ones for judging certain states, even if in all cases these judgments are grounded on the same states. The notion of disease as a social problem that we introduce in this paper allows us to address the relationship in each specific case between these grounding states and the framing principles.

The different institutions that make up this "messy web" (medical organizations, public health agencies, legislators, the welfare industry, political bodies, workplaces, insurance companies, among others) use the concepts of health and disease in very different ways and for very different purposes. Hence, there is no single characterization that satisfies all the divergent criteria used to categorize diseases.[6] Therefore, in order to understand how a certain condition has come to be categorized as a disease in a particular social framework and what the theoretical and practical implications of this are, it is necessary to go on a case-by-case basis.

In addition, as we have advanced in the Introduction, this approach allows us to understand the distinctive nature of each particular disease. Collective agency is grounded in a kind of problem-oriented normativity. Medical practices are determined by the problems to be solved (the diseases), and the kind of collective actions these problems demand. Symbolic elements are central to understanding how diseases are categorized. However, the material elements of these conditions are also important. Medicine also categorizes certain conditions as diseases on the basis of the characteristics of these conditions themselves, and not only because of the moral significance they have for us. This social ontology of medicine is a kind of deconstruction (or reverse social engineering): diseases are in a continuum according to how much of their problematicity is material (i.e., mainly caused by natural biological causes) or symbolic (mainly caused by the hypertrophy of the goals and values existing in some groups). Consequently, the solutions to these problems should be more material (e.g. interventions on the body) or symbolic (e.g. changes in values and social structures).[7]

Thus, there are diseases that are closer to the material end of the continuum, insofar as their characterization depends to a greater extent on the phenomenon's own (biological) features. Let us think, for example, of fractures, infections or cancers. These conditions seem to be determined mainly by identifiable material aspects, and their solution, i.e. their medical approach, is generally focused mainly on interventions on these material aspects of the body. There are also other conditions that would be more on the symbolic end, since their problematic character seems to reside mainly in the subjective evaluation that is made of these states (which, incidentally, seems to be behind the controversy that often accompanies the medicalization of these states). Extreme examples of these conditions would be baldness, infertility, or even ugliness itself. These conditions are very much determined by considerations of a symbolic nature. The evaluation of baldness, infertility, or ugliness as negative conditions—and ultimately as diseases—seems to be determined more by cultural and personal factors than by strictly material ones. Indeed, the way in which these conditions are dealt with socially requires, to a large extent, measures in the symbolic domain, for instance through changes in the aesthetic or moral values of a society (see Aquino, 2022;

[6] We would like to thank an anonymous reviewer for bringing this important point to our attention.

[7] The material should not be confused with the causal. Interventions in the domain of the material imply an assumption of causality (e.g., applying a tourniquet causes bleeding to stop), but this also occurs in the domain of the symbolic (e.g., giving up the desire to have offspring causes infertility to no longer be seen as negative). Both the material and the symbolic have causal power in our evaluations of certain states as healthy or diseased, and medical measures frequently involve intervening in both domains. The paradigmatic example of this would be when a physician recommends life changes in patients (better diet, more exercise, etc.) or psychological treatment combining therapy and medication.

Conrad, 2007; Maung, 2018). Finally, there are also, of course, conditions that are situated in the middle of the continuum and which include, to a more or less similar extent, material and symbolic elements. This would be the case with lifestyle-related conditions such as obesity, some disabilities such as deafness, or certain mental conditions such as anxiety. The characterization of these conditions is largely determined by both material and symbolic components and their treatment necessarily has to take both dimensions into account combining interventions on bodies as well as on social structures.[8]

## 5 Conclusions

This interpretation of diseases as social problems overcomes the distinction between naturalism and normativism, opening the way to develop a different approach to the conceptual distinction between health and disease. Indeed, this approach forces us to reconsider the opposition between facts and values in medicine.

As has been pointed out, theoretical accounts and explanations of social problems cannot be purely descriptive, but must point in the direction of possible solutions to the problem and, in this way, towards specific rights, duties and responsibilities. However, although the characterization of diseases cannot be detached from normative assessments, this does not imply assuming that there is no objective rationality for the identification of diseases. Medicine is no different from other problem-oriented "practical" sciences, such as pedagogy, finance or engineering: that "disease" is an inherently normative or value-laden concept does not make the theory and practice of medicine a purely subjective matter.[9]

An advantage of this approach is that it makes it possible to address the diversity of conditions defined as diseases by locating them on a continuum ranging from

[8] It should be noted that conceptual changes in medicine can cause a particular condition to move from one place on the continuum to another. For example, epilepsy has moved from being closer to the symbolic end (insofar as it was understood in ancient and medieval times as a sign of supernatural intervention) to being closer to the material end (as a condition caused by an imbalance in the electrical activity of neurons in an area of the brain). Similarly, a condition may be considered to be near the material end of the continuum and move toward the more symbolic end. Such is the case of homosexuality, which until relatively recently was considered a disease of cerebral or even hormonal origin, and which is now generally understood to be exclusively a cultural matter in its characterization as a negative condition and therefore as a disease. There are many other examples of conditions shifting along this continuum between the material and the symbolic. Probably, one of the most striking is probably the change that is currently taking place in the medical conceptualization of aging (see Saborido & García-Barranquero, 2022).

[9] It is probably worth noting that understanding diseases as social problems does not imply assuming that diseases are states that primarily affect societies, and not individuals. As Amoretti and Lalumera (2020) have recently pointed out, such an approach risks overshadowing the subjective and phenomenological aspects of disease and, as a result, the patient's first-person perspective would likely be overlooked. In the approach we propose, this first-person perspective plays a role in the categorization of diseases that depends on the extent to which the patient's personal perspective is considered for the categorization and treatment of diseases. Obviously, this is case-specific for each institution, for each category of disease, and even for each individual patient, but, in any case, an interpretation of diseases as social problems, in the sense presented in this paper, does not entail ignoring the personal perspective. We would like to thank an anonymous reviewer for pointing this out to us. For a theoretical approach that helps to understand collective normative statuses without assuming that collectives are something like super-individuals, see González de Prado and Zamora-Bonilla (2015).

the material to the symbolic. Its theoretical and practical approach will be different depending on the weight of the material and the symbolic in each case (e.g. conditions that are at one end, such as fractures, or at the other, such as infertility, cannot be understood and treated in the same way). This allows us to understand that, for each specific case, there is a different balance between symbolic and material elements, which would explain the discrepancies not only with regard to which criteria should be followed for the categorization of diseases (the medical theory), but also on which are the best ways to deal with them (the medical practice). Depending on the weight of the symbolic and material elements, the way in which diseases are addressed can range from interventions on the body to changes in social structures and values.

Of course, this approach is not intended to provide a complete set of necessary and sufficient conditions to define the notion of disease, but rather to show a central characteristic of all those conditions that are characterized as diseases: that they are social problems, in the technical sense that has been explained in this paper. This allows us to better understand how medical concepts are created and used by real people and how they shape our practices.

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## Declarations

**Conflict of interest** The authors have no conflicts of interest to declare.

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