Philosophy of Medicine
Original Research

Health Concepts in Medicine and the Role of Philosophy

Elisabetta Lalumera[1]

1 Department for Life Quality Studies, University of Bologna, Bologna, Italy; Centre for Philosophy of Epidemiology, Medicine, and Public Health, University of Johannesburg, Johannesburg, South Africa. Email: elisabetta.lalumera@unibo.it

Abstract

Philosophers interested in medicine and healthcare research should focus on the choice of health concepts. Conceptual choice is akin to conceptual engineering but, in addition to assessing whether a concept suits an objective, or offering a better one, it evaluates objectives, ranks them, and discusses stakeholders' entitlement. To show the importance of choosing health concepts, I summarize the internal debate in medicine, showcasing definitions, constructs, and scales. To argue it is a philosophical task, I analyze the medical controversy over health as adaptation and self-management. I conclude with a to-do list of conceptual choice tasks, generalizable beyond medicine.

1. Introduction

In this article, I argue that philosophers of medicine should focus on the task of choosing concepts of health. More precisely, philosophers should help scientific communities and institutions to determine appropriate health concepts that correspond with their objectives, as well as intervene in prioritizing these objectives when they are in conflict with one another. Some philosophers of medicine have recently discovered conceptual engineering—which is a well-established methodology in other branches of philosophy (Isaac, Koch, and Nefdt 2022)—and have realized that rather than arguing over what the concept of health or disease really is, one can discuss what it should be in relation to what one wants to achieve in the first place (Schwartz 2007; Varga 2020; Van der Linden and Schermer 2022; Kingma 2019; Gagné-Julien 2024). Recent work analyzes discussions about definitions in medicine (for example, cancer and obesity, or positive health) as cases of conceptual engineering (Lalumera, forthcoming; Van der Linden and Schermer 2024). What I call "conceptual choice" is akin to conceptual engineering, but it goes beyond that. The methodology I recommend here is more complete because, in addition to determining whether a particular concept is appropriate for a specific purpose, or offering a better one, it considers a broader question: is the objective important? How does it compare to others? Are those who are

ISSN 2692-3963 | Date Received 06-08-2024 | Date Accepted 11-03-2025 | Date First Published 15-04-2025
Philosophy of Medicine | DOI 10.5195/pom.2025.220 | Volume 6 | Issue 1 | pp.1–23

campaigning for this goal entitled to do so?[1] To keep with the corporate metaphor, once an engineer has created the best tool to fulfill a specific demand, the management of the company needs to consider if they truly want to concentrate on this particular product. Does it have sustainability? What are the benefits and costs? For whom, specifically, is it intended? And, finally, are there more pressing demands to prioritize? This is a metaphor, of course, but hopefully it makes the point. I elaborate on this metaphor in section 2.

To demonstrate the importance of choosing health concepts, I provide an overview of the continuing debate in medical and healthcare literature, showcasing a variety of definitions of health, constructs, and measuring scales (section 3). To demonstrate that choosing health concepts is a philosophical task, I use a case study in section 4: the controversy over Machteld Huber and colleagues' proposal to define health as the ability for adaptation and self-management (Huber et al. 2011). My case study aims to show that this dispute has a conceptual engineering component, as well as a further evaluative component, as described in the conceptual choice methodology. Although it has primarily been undertaken by doctors and health researchers, I would describe it as a philosophical task (section 5). I also implicitly contend that philosophers of medicine should apply the approach of conceptual choice to views put forward within the medical community. I address this point by not engaging with the various concepts of health proposed by philosophers over the decades, or with the philosophical arguments asserting that a definition of health is unnecessary or impossible to establish. This is meant to counterbalance the philosophy-only diet that has been prevalent in the philosophy of medicine up to this point, which risks neglecting the rich and ongoing philosophical debates taking place within the medical community itself.

I conclude with a list of things to do for those interested in the task of choosing health concepts, an endeavor that I believe has the fringe sociological benefit of providing philosophy with a meaningful position in medical and healthcare research and policy-making (section 6).

2. Conceptual Engineering and Conceptual Choice

I am assuming the simplest semantic framework possible: concepts are representations of categories (types of things in the world) and they have an intension (how they are characterized) and an extension (the series of things to which they apply). Philosophy has long been divided on the nature of concepts: are they abstract semantic entities that fix what being something really is (true justice, true truth, true gold, the true Pythagorean Theorem) (Peacocke 1992), or are they what each of us has in mind when we categorize and reason about something (psychological concepts)? Both psychological and semantic concepts are terrible study subjects—the first being variable, imprecise, and not easily sharable, and the second enigmatic and difficult to access (Isaac 2023). In fact, there are occasional philosophical discussions suggesting that concepts should no longer be studied (Cappelen 2018; Machery 2009). Luckily, there is a third option available to those interested in the philosophy of science. In science, concepts often take the form of explicit definitions of terms found in scientific society documents, regulations, guidelines, research papers, and

[1] A discussion of criteria for evaluating concepts—closely aligned with the conceptual choice methodology presented here—can be found in a book chapter by Rik van der Linden and Maartje Schermer (2024); see also Lalumera (2023).

textbooks. In sociology, this characteristic has been called "regulatory objectivity," with particular reference to medicine (Cambrosio et al. 2006, 2009). This feature is convenient for anyone who wants to study, criticize, or fix medical concepts since it makes them explicit, public, and accessible (Lalumera, forthcoming).

In research, concepts that refer to something not directly observable, such as bone fragility, well-being, hunger, or corruption, are usually called constructs; they can be associated with different measurement scales if used for quantitative studies, a process known by neopositivist philosophers as operationalization (Chang 2004; Cronbach and Meehl 1955). Following a schematization offered by Anna Alexandrova in her work on well-being (2017), we may state that a general concept, such as well-being or—as we shall see—health, can correspond to different constructs, which, in turn, can be associated with different measuring scales.

Scientific concepts can change. They can be formed or eliminated, and can be modified, both as a result of new evidence and for what philosophers call non-epistemic reasons (ethical and prudential values) (Andreas 2021; Wilson 2006). Since the International Astronomical Union changed the definition of "planet of the solar system," Pluto is no longer a planet of the solar system: choosing a different definition or intension changed the extension of the concept (Montmerle et al. 2015). As is well known to the mental health community and philosophers, when the revision committee for the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) changed the definition of mental disorder, homosexuality was excluded from the extension of the concept, meaning it can no longer be considered a disorder (again, this is a considerable simplification of a fascinating scientific, sociological, and philosophical episode) (Drescher 2015; Spitzer 1981; Zachar and Kendler 2012).

Both Pluto and the DSM example above are arguably cases of conceptual engineering, an explicit and self-conscious way of changing concepts, which does not only concern science but potentially all areas (Burgess and Plunkett 2020; Cappelen 2018; Isaac 2021). It involves the assessment and enhancement of concepts to achieve positive outcomes, whether they are social, theoretical, political, or otherwise. An acknowledged ancestor of conceptual engineering is Rudolf Carnap, the neopositivist philosopher, who aimed to enhance scientific accuracy by replacing imprecise scientific concepts with more precise alternatives (Dutilh Novaes 2020). However, conceptual engineering is not limited to scientific objectives; it usually encompasses ethical and political goals, too. Sally Haslanger's redefinition of the concept of "woman" may exemplify this. She argues that the traditional biological understanding of womanhood fails to address social justice and gender discrimination adequately. Hence, she proposes redefining "woman" as an individual systematically subjected to social hierarchies, based on perceived or imagined female bodily traits (Haslanger 2000).

Let me describe the procedure a simplified manner. Initially, one sets a specific goal, then assesses existing concepts related to it. Conceptual goals encompass various objectives, including scientific representation, induction, classification, discrimination, expression of emotions, empowerment of groups, and de-stigmatization, among others. If the assessed concepts are deemed insufficient with respect to the goal specified, a new concept is proposed, which should subsequently put to practical use. This process can be broken down into three phases: needs analysis, engineering, and implementation.

Conceptual engineering is different from traditional conceptual analysis, which seeks to find out what the genuine and unique concept of "woman," "planet," or "disorder" is, intended as a definition stating necessary and sufficient conditions for something to be included in the concept's extension. When counterexamples to the suggested definition or characterization are presented by opponents in the philosophical debate, a conceptual analysis project fails, which means it is false, and the game is over (Laurence and Margolis 2003). In contrast, a concept outlined in a conceptual engineering project does not face the challenge of counterexamples. It is impossible to claim a prescription to be false; at most, we can give reasons for not adhering to it. This is why conceptual engineering is presented here as more effective than the methodology of conceptual analysis.

Moving closer to our target, the philosophy of medicine is now overused to lament the impasse in the discussion of the conceptual analysis of health and disease (Lemoine 2013; Sholl 2020). Harriet Fagerberg also recently argued that proponents of major philosophical analyses of medical concepts, such as Christopher Boorse, Jerome Wakefield, and Rachel Cooper, were fundamentally careless in their methodology (Fagerberg 2023). Thus, many have now moved on to invoking conceptual engineering as the method for investigating disease, mental disorder (Gagné-Julien 2024; Varga 2020), or health (Kingma 2019; Van der Linden and Schermer 2022). This current "prescriptive turn" in the philosophy of medicine retrieves an insight from Peter Schwartz (2007), combining it with the already established methodology of conceptual engineering, which has been practiced for a decade in the philosophy of language, epistemology, and other areas.[2]

I embrace the prescriptive turn in philosophy of medicine (as elsewhere), but I believe that conceptual engineering is only one part of the philosophical job. I refer to the complete work as a conceptual choice.[3] I now introduce the concept of "conceptual choice," a term not explicitly present in current discussions on conceptual engineering but discernible in recent deliberations on conceptual objectives (Queloz 2022; Simion and Kelp 2020). Returning to the corporate analogy previously used for conceptual engineering, after analyzing needs and designing a suitable solution, the process enters a critical phase, characterized by questioning: Is the new product worth the effort? Is it addressing a fundamental need, or are there more pressing concerns for a larger population? Even if the product (the new concept) achieves its goal effectively, it may not align with our primary concerns.

Conceptual choice involves evaluating concepts based on the relative importance of the goals they serve and potential conflicts between these objectives. This shift reframes the question from "What concept is appropriate for this purpose?" to "What is the most significant purpose in this domain, and therefore, what concept must we select?". Although the definition of conceptual goals is still up for debate when a community—such as a group of scientists or medical research professionals—explicitly defines a concept, the concept's aim is the explicit reason or concern expressed by the group (Queloz 2022). This is one of the benefits that the previously described regulative objectivity of science offers.

[2] A different trend is to focus on the metaphysics of health, by arguing, for instance, that it is a secondary property (Broadbent 2019) or a disposition (Werkhoven 2019). I believe that the concept of "health" and the metaphysics of health are closely related, and that the two endeavors are complementary, rather than competing. However, I am not able to address this issue in this paper (see section 6 below).

[3] I think the approach I recommend is among the alternatives envisaged in Plunkett and Sundell (2023). See Lalumera (2023).

Why is conceptual choice necessary after conceptual engineering? Let us consider Haslanger's proposal (2000). Her concept—defining "woman" as a person systematically subordinated, based on perceived or imagined female bodily features—may seem plausible and non-empty, significantly overlapping with the ordinary concept of "woman." Haslanger argues that implementing her concept would promote social justice and combat gender discrimination, suggesting its adequacy for the category of "woman." However, alternative conceptual goals may arise. For instance, some argue that Haslanger's concept excludes trans individuals who do not exhibit perceived or imagined feminine body traits, suggesting it lacks inclusivity (Jenkins 2016). Others contend that while her concept may enhance social justice, it may not align with other goals, such as public health needs and epidemiological research, where different criteria are required. This example underscores the distinction between conceptual adequacy and conceptual choice. Reasons for agreeing or disagreeing with Haslanger's concept, based on its effectiveness in promoting social justice, may differ from considerations regarding its suitability for other goals. Thus, deciding on the best goal for a concept involves weighing competing objectives—whether public health is more valuable than social justice, or if different contexts warrant alternative concepts.

3. The Debate on Health in Medicine

In this section I show that there is a continuing conversation about the definition of health in the medical and healthcare communities. I briefly explain why it is important to have health concepts in medicine and health research, and I point out that, as many others have noted, having too many varied and unexamined health concepts is a problem for research and clinical practice. The discussion I review is internal to the medical community but, as will be seen, it is a work of conceptual choice.

Since the 1950s, several health-related concepts—such as health, well-being, and quality of life—have been developed and applied in the medical and healthcare fields. The development of health concepts (my focus from now on) in medicine addresses three main demands or macro-objectives. One is to create increasingly comprehensive models of people's medically relevant conditions that encompass not only pathology but also relationships, spirituality, environment, socioeconomic status, and other factors. The ways in which an individual lives, the diseases they get, and their level of happiness are all influenced by their income, social networks, employment, gender, and ethnicity. Statistics show that poverty and prejudice, albeit indirectly, cause people to die younger. The idea here is that with a wide definition of health, one may capture this crucial information (Marmot and Wilkinson 2005).

The second important function of concepts and measures of health in medicine is to assess the influence of therapy or disease on nonmedical aspects of people's lives. Medicine has shifted towards the patient's point of view (and the term "patient" is becoming obsolete—the patient is more an active participant in the relationship with the healthcare professional). Conceptualizing and then evaluating people's positive condition allows us to integrate the individual's perspective with medical research. In the case of a novel anti-tumor medication, for instance, a clinical trial now will be designed to assess not only how well the medication lowers the disease but also whether it improves the patient's quality of life in areas unrelated to the disease (Brock 1993).

The third objective of developing and using concepts of health is evaluation of the sustainability and effectiveness of interventions in health economics and health technology assessments. How many years of disease-free or "good" condition does this new drug provide to the population it is intended for? How much health benefit may be realized by investing in an informative campaign promoting a papillomavirus vaccine, rather than a herpes zoster vaccine? Here, what is meant by "health" is, roughly, what can be of interest to the institution, whether it be healthcare or political; namely, more or less the ability to function, combined with the absence of symptoms or suffering that would require assistance (Hall 2020).

In sum, there are reasons why concepts of health (rather than just disease) are needed in medical research and healthcare: a concept of health (along with a construct and a measurement scale) is a valuable tool. Which concept, though? There are several being discussed. Review articles typically present four families of health concepts: health as no disease; health as well-being; health as capacity or functioning; and health as adaptation or resilience (Locker and Gibson 2006; Badash et al. 2017; Leonardi 2018; Larson 1999).

The no-disease concept is the negative and basic definition of health, which is typically connected to the biological model of care and frequently criticized. Because it is easily measured, it still proves useful in epidemiology (Prinsen and Terwee 2019); moreover, it aligns with the political goal of defending health as a right for all and campaigning for universal healthcare systems (Daniels 2007). In philosophy, Boorse (1977) famously defended a member of this family of concepts, the pathologists' concept of health, against what he called "positive" (rich, complex) explanations. Initially, Boorse was concerned with the same question that preoccupies medical professionals—whether health is best defined negatively, as the absence of disease, or whether a positive concept of health, incorporating multiple definitional components, is preferable. However, philosophical critiques of his defense of the negative definition gradually shifted the debate toward a different question: Are health and disease objective, or do they depend on values? Accordingly, Boorse's philosophical agenda shifted, too, prioritizing issues such as defending the objectivity and value-neutrality of concepts of health and disease—and neglecting the initial question about positive versus negative health (Boorse 1997). I suspect that at this critical juncture, the philosophical discussion of health (and disease) drifted away from the medical debate, which concentrates on the defining characteristics of health, rather than arguing its naturalistic or humanistic basis; at least, this is my interpretation of how the discussion evolved.

Let us then go back to the health-concept families within the medical debate. After the no-disease family, on the opposite end of complexity and richness, there is the well-being family, of which the World Health Organization (WHO) definition of health as complete well-being is the most famous representative (WHO 1948). Beyond medicine, the idea that health is not only the absence of disease, but complete well-being, has had a significant impact on health marketing and popular conceptions of health, too. Despite this widespread popularity, the WHO definition has drawn criticism ever since it was adopted. There have been arguments that it is an unreachable ideal; its scope is empty (because who is ever completely well?); it is poorly defined; it is hard to operationalize; it is inappropriate for use with populations that are elderly or chronically ill; and, lastly, it medicalizes all human existence by essentially linking happiness and a good life with health (Smith 2008; Callahan 1973; Saracci 2011). However, it is also acknowledged that the years following

World War II gave the supranational organization WHO the freedom to intervene on many issues that previously were beyond the medical sphere, such as poverty or education (Larsen 2022; Schramme 2023). "One Health" is an even more expansive concept that unifies the health of our species with that of other species and the environment. During the pandemic years, it acquired considerable momentum because Covid-19 is a zoonotic disease (OHHLEP et al. 2022).

The third family of concepts revolves around the idea of functioning or capacity. The concept of health as functioning can be spelled out in various ways.[4] An influential one was proposed by a group of Dutch healthcare professionals in 2011: health is the ability to adapt and manage oneself in the face of social, physical, and emotional challenges (Huber et al. 2011). If a person is healthy when they are able to do something, or function in everyday life, even very elderly people and those with one or more illnesses can be healthy, and this inclusivity is one of the goals or advantages of this concept (Huber et al. 2011; Huber 2014). I discuss this in more detail, as my case study, in the next section.

Finally, a family of concepts of health has environment and balance as defining ingredients. Here, the guiding idea is that an organism's ability to maintain equilibrium with its surroundings (social and natural) constitutes its health. When an organism can grow, function, and flourish in its environment, it is said to be healthy, and it is ill otherwise (Menatti, Bich, and Saborido 2022; The Lancet 2009). Here, pathology is considered just a contingent obstacle to health, as individuals with pathologies can reach and maintain their balance in appropriate environments, an insight borrowed from the French philosopher Georges Canguilhem (see also Horton 1995).[5]

As mentioned above, following Alexandrova (2017), these families of general, high-level concepts of health correspond to various constructs and scales. It is notoriously difficult to select and operationalize the construct that corresponds to the WHO's notion of health; this is one of the most common objections leveled at this concept (Locker and Gibson 2006); nevertheless, it has been attempted. The first major effort to operationalize the WHO's holistic definition of health was in the RAND Health Insurance Experiment (Ware et al. 1981). This large-scale study, conducted between 1971 and 1982, aimed to measure health outcomes by assessing physical function, psychological well-being, social participation, and self-rated health. While it provided valuable insights into healthcare access and outcomes, it also revealed a fundamental challenge: treating all aspects of well-being as integral to health can lead to counterintuitive results. For example, a change in social support—such as the loss of a loved one—would be classified as a decline in health status, even if physical and mental health remained unchanged. Similarly, two individuals

[4] "Capacities," "capabilities," and "abilities" are technical terms in philosophy, whereas the medical literature tends to blur the distinction. For example, in the philosophical debate, Lennart Nordenfelt famously defended a version of the concept of health as ability, introducing the distinction between first- and second-order abilities (Nordenfelt 1995, 2013). By way of example, I currently have the first-order ability to whistle "Happy Birthday" since I can do it right now. I also possess the second-order ability to learn Danish—a language I do not currently speak—because I have the capacity to undertake the necessary steps, and my circumstances allow for such an achievement. However, since this article focuses on medical definitions of health, I do not consider Nordenfelt's proposal here.

[5] In *The Normal and the Pathological,* Georges Canguilhem says: "Being healthy means being not only normal in a given situation but also normative in this and other eventual situations. What characterizes health is the possibility of transcending the norm, which defines the momentary normal, the possibility of tolerating infractions of the habitual norm and instituting new norms in new situations … Health is a margin of tolerance for the inconstancies of the environment" (Canguilhem 1991: 196–197).

with identical medical conditions might be evaluated differently, based on external factors such as social isolation or conflict-ridden environments.

As a result of these difficulties, later measurement tools derived from the study—such as the 36-Item Short Form Health Survey (SF-36)—focused primarily on physical and mental health, with minimal emphasis on social well-being (Ware and Sherbourne 1992).[6] Despite its technical strengths and widespread use, the SF-36 has limitations. Notably, it does not explicitly measure absence of disease, leading to paradoxical results. For instance, patients with fractures may score lower than those with leukemia, as fractures significantly impair daily activities, even though leukemia is arguably more severe (Laucis, Hays, and Bhattacharyya 2015). Similarly, caregivers of chronically ill patients often report lower health-related quality of life than the patients themselves, as patients may adapt psychologically over time, while caregivers endure persistent emotional and physical strain (Rostami et al. 2023). While the WHO's concept has inspired many health-related constructs, no single measurement tool fully captures its scope, illustrating the difficulty of balancing conceptual clarity with practical application.

There are many measurement scales designed to assess health as functioning, such as the SF-36, which assesses a wide range of life aspects, such as physical functioning, subjective well-being, and ability to perform work and social activities. There are also specific measures for clinical populations, such as the European Organisation for Research and Treatment of Cancer Core Quality of Life questionnaire (EORTC QlQ-C30) for cancer patients.[7] Like the generic ones, these scales address areas such as physical functioning and emotional state, but they also cover aspects relevant to people with that disease or undergoing that treatment (hair loss in the case of cancer) (Ware and Sherbourne 1992). For the objectives of healthcare economy, too, health can be operationalized by different measurement scales. One of the main ones is the EuroQol-5D (EQ-5D-5L), which addresses five dimensions: mobility, self-care, usual activities, pain or discomfort, and anxiety or depression.[8] The EQ-5D-5L provides the health component for another important measurement, the calculation of quality-adjusted life years (QALYs). Treatment costs can be related to the number of QALYs gained (Krabbe 2016; Haraldstad et al. 2019; Pettitt et al. 2016).

This summary only introduces the theme of the variety of concepts (definitions), constructs (operationalizations), and measurement scales that correspond to the term "health" in medicine today. In fact, nearly every study on the nonmedical effect of drugs or interventions in a medical or psychological scientific journal begins by summarizing the list of current alternative health concepts, or at least those in its own narrow research area, before positioning itself or proposing one. A review from 2022 categorizes scientific publications on health by the point of view that was adopted, including that of patients, the elderly, doctors, philosophers, and the general public (Van Druten et al. 2022). The authors conclude that health might mean different things to different people, depending on their perspective and particular circumstances. Therefore, they recommend, to prevent misconceptions, it is crucial that everyone involved in a given context of interaction between healthcare professionals and consumers, or of healthcare policy, understands what constitutes "health" in that context (Van Druten et al. 2022). The variety becomes considerably more apparent if we consider not only medical scientific articles using health concepts, but

[6] https://www.rand.org/content/dam/rand/www/external/health/surveys_tools/mos/mos_core_36item_survey.pdf.
[7] https://www.eortc.org/app/uploads/sites/2/2018/08/Specimen-QLQ-C30-English.pdf.
[8] https://euroqol.org/information-and-support/euroqol-instruments/eq-5d-5l/.

also psychological articles that directly examine people's conceptions of health. A qualitative study conducted in 2018 on populations stratified by level of education (a proxy for socioeconomic status) found that people with fewer years of education view health as the absence of illness and functionality, whereas those with higher levels of education view health as enjoyment of life and healthy habits (Stronks et al. 2018).

But let us focus on concepts of health in medical and healthcare research only (the scientific concepts and constructs): what to do with this multiplicity? It is widely agreed that it should somehow be addressed (Bodryzlova and Moullec 2023), not only for conceptual clarity, but also because systematizing research that employs different concepts of health, in addition to disparate measuring scales, is challenging, if not impossible. If we want to know, for example, whether Pilates is beneficial to health throughout menopause, we ought to utilize research that defines health in the same way. Because not all studies define health in the same way, it appears vital to choose, but here is where the challenge lies. The concept and related measurements of health that best serve the aims of clinicians may differ from those that serve the purposes of a supranational and political organization, such as WHO. And, as we shall see in the next section, the concept of health as the ability to adapt and self-manage can meet the needs of research on healthy aging, but it cannot serve epidemiology, public health, or the political purpose of understanding health inequalities. Different health concepts may be appropriate for different goals. Yet, we must make this plain and, if possible, analyze the goal ourselves. This, in a nutshell, is the philosophical task of choosing health concepts, which the medical community considers urgent.

Note that is not even obvious that one must choose a single concept of health, even though the cognitive costs and the damage to research and clinics caused by the often-implicit variety has emerged from the two review articles cited above. In fact, it is not obvious that one can. A work of conceptual choice may well end with the conclusion that the objectives of different concepts are not comparable or that none is more important. We will therefore have different ways of conceptualizing health in medical research and healthcare (which is more or less what is happening now). One of the results that Alexandrova (2017) takes seriously in her research on concepts of well-being is precisely pluralism about well-being. However, my aim here is not to assess pluralism, or any other outcome of the task of choosing health concepts, but merely to demonstrate the need for engaging in conceptual choice, and that it is better viewed as a philosophical task.

4. A Case Study

In this section, I illustrate a recent debate within the medical community on a proposed definition of health, as a conceptual choice activity. Here is the definition: health is the ability to adapt and self-manage in the face of social, physical, and emotional challenges. This definition emerged from a conference involving clinicians and public health experts in the Netherlands and is contained in an article published in 2011 in the *British Medical Journal,* written by the Dutch general practitioner Machteld Huber and 13 other authors (Huber et al. 2011). One of the goals that motivates the proponents of the new concept is that it should be appropriate for older and chronically ill populations in research and therapeutic contexts, as well as at various other phases of life. The new concept is more inclusive than health as complete well-being, or health as the absence of disease, since it allows for a discussion of health regarding the elderly and chronically ill populations. In

contrast to the WHO definition, this is a more dynamic concept that adjusts to a person's changing circumstances throughout life. Thus, what Huber and her colleagues put forward is a proposal of conceptual engineering, which typically begins by demonstrating that earlier conceptions are inadequate to accomplish one's favored goals, as seen above.

Let us add some detail to the proposal. Huber et al. (2016) conducted a mixed-methods study to explore indicators of health. They categorized these indicators into six domains (bodily functions; mental functions and perception; spiritual/existential dimension; quality of life; social and societal participation; and daily functioning) and identified 32 underlying aspects of health, each with a patient-centered definition. They termed their construct "positive health" and suggested its use for monitoring and empowering patients in shared decision making by allowing them to choose which aspect of health they would like to improve. This represents yet another explicit objective of the new concept: It is intended as a tool to quantify health from the viewpoint of the patient.

However, a subsequent study conducted what I describe as a test of appropriateness with respect to the objective. Using a mixed-methods approach (experts, reviews, and citizen focus groups), Cecilia A.C. Prinsen and Caroline B. Terwee (2019) conclude that positive health as a construct is not psychometrically valid, which means it has technical and methodological flaws; specifically, it does not measure what it should measure (content validity). Not only is it incomprehensible in sections, but it also lacks logical justification for the presence of certain items and the removal of others. In sum, Huber and colleagues' concept of positive health looks insufficient for the goal of measuring health (even from an individual perspective) because the proposed operationalization fails to perform well.

Leaving aside the goal of quantitative assessment, one may still argue that the novel concept can influence or inspire healthcare decisions, particularly in the doctor–patient interaction. This is Huber's strategy in a subsequent work (Huber 2023). She argues that the concept of positive health has the potential to maximize patients' satisfaction while also curbing excessive medical interventions—that is, the "too much medicine" phenomenon (Fritz and Holton 2019). Too much medicine means classifying too many conditions as diseases, and treating too many diseases unnecessarily, or inappropriately (Uusitalo and Howick 2018). This is a conceptual and medical problem, but it also becomes a political problem in social contexts where it clashes with the scarcity of resources of healthcare systems. Huber (2023) makes her point with a case study of an elderly woman who prioritized maintaining her vision over other medical interventions, despite having both a hip condition and an eye condition. The woman's decision stemmed from her desire to see her relatives, indicating a preference for this relational aspect of life over physical mobility. Huber suggests that shifting toward a health concept focused on adaptation and self-management could lead to a change in healthcare delivery, prioritizing what individuals truly value over mere disease treatment. By refraining from unnecessary interventions in cases where adaptation and self-management are evident, healthcare systems could avoid excessive medicalization and overtreatment, ensuring both well-being and fair resource allocation. This introduces an additional goal for the new concept of health: addressing the issue of overtreatment and the problem of "too much medicine."

However, this added goal gives rise to two further objections to Huber and colleagues' proposal of conceptual engineering (2011). The first objection is that we can eliminate unnecessary medicalization and overtreatment even without modifying the definition of health. Critics have pointed out that the concept of health as no disease does not inevitably

lead to "too much medicine" in the form of useless and unnecessary treatments. Pathologies do not inherently necessitate inappropriate treatment; instead, effective communication between patient and doctor, encompassing comprehensive information and ethical considerations, is paramount. In the ideal scenario, the doctor explains the procedure, recovery process, and benefits, while the patient expresses their priorities, leading to a decision not to intervene unnecessarily (Fritz and Holton 2019; Uusitalo and Howick 2018).

Moreover, aside from communication, there is another, more "conservative" method to limit excessive medicine, which involves maintaining the old biomedical concept of health as no disease. This approach entails a more nuanced evaluation, incorporating ethical considerations, to distinguish between what constitutes a disease and what does not, at a nosological level. Less medicalization can be achieved with not inflating diagnostic labels. This is particularly pertinent in mental health, where there is a risk of medicalizing aspects of the individual such as melancholy or shyness (Frances 2013). Even in oncology, there is a concern regarding excessive medicine and unnecessary diagnostics and therapy, with discussions within the scientific community on reclassifying certain conditions to prevent unnecessary treatments (Carter et al. 2012). If these arguments hold water, Huber and colleagues' conceptual engineering effort falls short in one area—namely, the section where they were supposed to show that previous concepts of health are inappropriate for one of the goals they identified as crucial (2011).

The second critique of the definition of health as adaptivity and self-management—prompted by Huber's case study (2023) of the elderly woman with hip and vision problems—is that we already have a way to describe the elderly lady's case; that is, her hip condition is not a disability for her, while her eye problem is. The ICF (International Classification of Functioning, Disability and Health), introduced by WHO in 2001, largely disconnects the degree of disability from the physical condition—making it possible, for example, to attribute a minimal degree of disability to a person with mobility impairments if their environment enables them to live well (WHO 2001). Following the ICF, the elderly lady's ability to adapt and manage herself within her environment corresponds to her degree of disability, rather than her health status (Sundar 2011). Defining health, too, in terms of adaptation and self-management blurs the distinction between health and ability, potentially undermining the achievements of disability culture in differentiating itself from the health–illness axis (Hayes and Hannold 2007). In terms of conceptual engineering, this objection states that adopting the new idea results in an epistemic loss, or a loss of knowledge, which is the inability to make a useful and informative distinction. According to Mona Simion, when a newly proposed concept incurs epistemic loss, its ameliorative aim fails (Simion 2018).

Here we come to the fundamental issue in our conceptual choice assessment of health as adaptation and self-management. The most serious concern raised by critics within the medical scientific community regarding Huber and colleagues' concept pertains to inequalities. If adaptation and self-management are deemed essential for health, various groups may struggle to meet these criteria because of significant differences in individual characteristics. For instance, frail, elderly individuals, or those with mild mental disorders, may face challenges in managing their health effectively, while individuals who are less privileged in terms of education, income, or social status might have lower health-literacy skills, hindering their ability to adapt and self-manage. By defining health as the capacity to adapt and self-manage, these groups are inevitably labeled as "unhealthy" and may never

attain a state of good health. It is crucial to acknowledge that this applies to a considerable portion of the global population (Jambroes et al. 2016).

A related aspect is that healthy behaviors, from diet and exercise to abstaining from smoking or moderate alcohol consumption, are closely linked to health literacy—a domain predominantly accessible to socioeconomically advantaged groups. Essentially, those unable to adapt and self-manage often lack the necessary information, cultural understanding, or cognitive resources, and they may not have access to environments that facilitate these practices. For instance, many obese individuals reside in environments that foster unhealthy lifestyles as a result of factors such as the high cost or cultural unattractiveness of nutritious foods, limited time for physical activity, and a lack of recreational urban facilities conducive to exercise. In such circumstances, adapting and self-managing becomes inherently challenging. Ultimately, defining health solely in terms of self-management risks exacerbating socioeconomic inequalities and translating them into health disparities.

These critiques are articulated by public health expert Jennie Popay (2011) in a debate facilitated by the *British Medical Journal* since 2011 regarding the new definition of health (and still going on). Popay criticizes Huber and colleagues' new concept of health for placing undue emphasis on individuals and their capacity to adapt and self-manage. She underlines that such capacity is heavily influenced by sociopolitical systems, rather than being inherently individual. She adds that the new concept fails to acknowledge the role of collective social dynamics and relationships in shaping, promoting, managing, and sustaining health, well-being, and functionality.

To grasp the significance of adaptability in relation to sociopolitical systems, let us consider an example. A single mother, an immigrant, living in poverty and relative social isolation, continues to work as a cleaner at night despite chronic bronchitis. When asked, she reports feeling relatively well overall. Conversely, a young permanent employee in Northern Europe stays home sick due to chronic bronchitis and describes feeling quite unwell and unable to manage. Would we categorize the first individual as healthy because of her adaptability, while labeling the second as sick? We would rather not. The single mother's ability to endure demanding work while unwell stems from her disadvantaged circumstances and is not a trait to be praised or reinforced—it should not equate to health. Conversely, the option for the young employee to abstain from work because of illness is a result of societal advancements in legislative, economic, and cultural conditions, giving him a permissible inability to adapt. In both scenarios, the individuals are not accountable for their varying levels of adaptability, or for their declarations of illness; rather, their capacity is inherently relational. Failing to consider this aspect renders the concept of health as the ability to adapt and self-manage insufficient for application beyond the sheltered reality of the Global North (Sundar 2011).

On a general level, establishing a conceptual connection between health and responsibility entails navigating complex ethical and social implications. Contemporary studies reveal a trend towards the moralization of health, where health assumes moral virtues, rather than merely functional benefits (Rhee et al. 2019). Moralization encompasses victim blaming and represents a detrimental consequence of the link between self-management and responsibility—an aspect that Huber and colleagues' concept fails to adequately address. In the framework of conceptual choice, what does this mean? It means that the new idea put out by Huber and others comes at too great a social and ethical cost to medicine and healthcare.

It would be incompatible with other values that the research community appears to care about, even if it were adequate for achieving its own stated goals (more inclusive health and fewer needless interventions).

5. A Philosophical Task

In the previous section, I illustrated how Huber and her colleagues' proposal of a new concept of health is an example of conceptual engineering: some goals are taken into account (in this case, broadening the concept of health to include the elderly and chronically ill, halting the medicalization process), it is argued that the current concepts fall short of these goals, and a new concept is put forth. I then went on to show that the conceptual choice task I am advocating here is precisely what happened in the discussion sparked by the new notion of health in the medical community. It has been claimed that the concept of health as adaptability and self-management may not be the best way to achieve one of its goals, lowering medicalization (as alternative methods exist). It has also been noted that the concept may be inadequate compared to another objective—measurement in research and healthcare assessment contexts—as it is difficult to operationalize. It has also been observed that this concept of health may be lacking in coherence in not distinguishing health functioning. Finally, the main criticism has been that it might exacerbate victim blaming and moralization of health. What to do? One possibility is to go contextual, as suggested by Rik van der Linden and Maartje Schermer (2022). In this case, it would mean that the applicability of the proposed concept of health is scaled down to privileged socioeconomic contexts, where, under the same socioeconomic circumstances, better self-management capacity will actually correspond to better health.

I am abandoning this topic here since my focus is not on Huber and colleagues' proposal, but on supporting a methodological claim on the role of philosophers in choosing health concepts. Let me underline that assessing a health concept in the manner described in the previous section is a philosophical endeavor, even though it has been carried out entirely within the medical community.

Firstly, this is because my case study above fits perfectly the methodology of conceptual engineering, as practiced, for example, by Haslanger (2000) with the concept of "woman," codified by philosophers in detail (Isaac 2021), and succinctly described above. Philosophers have certified methodological expertise in conceptual engineering. They have debated when a conceptual engineering project is genuinely an amelioration project (Jenkins 2016; Marques 2020), and what counts as the goal or function of a given concept (Simion and Kelp 2020). They have addressed the question of pluralism (Belleri 2021), as well as the issue of authority for those submitting new concepts (Queloz 2022).

To this, I need to add another significant point. As said, my proposal is that the discussion of health concepts should not end when it is claimed that concept C is superior to concept D for objective O; it must be concluded by arguing the value of objective O. For example, why is it necessary to expand the scope of health to people with pathologies? Do we need both a concept of ill-health and a concept of disability? Why is victim blaming a bad outcome? This is a level of debate that extends beyond conceptual engineering and involves what I term "conceptual choice." The final stage of conceptual choice is to prioritize goals and hence select the best concept. Appraising the value of goals and their ranking are ethical-philosophical questions, rather than just medical ones. They concern ethics, political

philosophy, and the philosophy of science. Even if we acknowledge that philosophers alone cannot determine whether a goal of social non-marginalization is more critical than minimizing medicalization, they can work on identifying key stakeholders and developing decision-making techniques. This adds to the reasons why choosing health concepts is a job for philosophers.

Philosophers of science currently discuss the thesis that if a scientific concept is both descriptive and evaluative, its definition or reengineering should be done not only by scientists or professionals (and philosophers), but also by the people to whom that concept will be applied, by the interested communities. This has been argued concerning the concept of well-being: Anna Alexandrova and Mark Fabian (2022) claim that because well-being is at least partially evaluative (there is evaluation in establishing what counts as "good life"), it must be defined or changed via participatory science techniques— that is, "democratized." Following this line of thought, Anne-Marie Gagnè-Julien (2024) contends that people with mental health conditions should be involved in conceptual decisions about mental disorders.

I believe this is an important thesis that should be carefully examined. I also believe, however, that it is not evident that every partially evaluative concept should be defined or chosen with the participation of the community to which it will be applied. Consider, taken to an extreme, the concept of a murderer or terrorist. In the case of the concept of health, those who are involved in engineering a choice task will most likely be clinicians, health decision makers, medical researchers, and … all of us—or, alternatively, representatives from patient or citizen organisations. The question then is: What kind of representation and which associations? What I am suggesting here is that the issue of representing the stakeholders engaged in conceptual choices is complex and cannot be solved with a default solution (Kitcher et al. 2021). It is beyond the scope of this article to go into this any further, but recognizing the problem's complexity reinforces my claim in this section: coming up with a task of conceptual choice is a job for philosophers.

6. To-Do List

In medicine there is a plethora of definitions of health and ways to measure it. Different concepts are related to different research, policy, clinical, and healthcare management objectives. Some are better than others for their own goals; some are better than others for other goals that we, as evaluators, find important. The concept of health as the ability to adapt and self-manage is suitable for conducting research and clinical studies on the elderly and chronically ill populations of affluent societies, but less so if we want to measure overall health for epidemiological purposes. I have described Huber and her colleagues' proposal as a conceptual engineering project and outlined the conceptual choice work initiated on that proposal within the medical community. Philosophers have not yet participated in this discussion—very few exceptions aside—and I have argued that this is a shame, as it is work for philosophers.[9] In section 2, I also noted, relying on other authors, that this is possible and feasible work, given that health concepts in medicine are not mysterious abstract entities like Platonic ideas, or elusive and variable psychological representations, but explicit definitions contained in documents, guidelines, and scientific papers.

[9] Exceptions are: Van der Linden and Schermer (2022, 2024) and Schramme (2023).

There is work to be done. Here is a list of tasks, ranked in logical order, for those who wish to engage in the work package of choosing health concepts:

1. Descriptive conceptual analysis of health concepts in medical and healthcare research

This is a description of how a community defines and uses a concept. It gives the evidence basis for a conceptual choice work. In section 2, I extracted four families of often-discussed health concepts from review papers in the medical and healthcare literature. It may be beneficial to perform a more thorough investigation on each. How it is used—for example, the family of "environmental" health concepts—in what form, and by which communities of researchers or users. The descriptive conceptual analysis here focuses on documents and publications, rather than individuals' mental representations, as previously mentioned, as concepts are explicitly defined constructs. It consists of quantitative or narrative reviews.

2. Adequacy tests

Each health concept, once individuated in its agreed-upon definition, can be compared against the objectives of those who have proposed it. For example, one of the goals of the WHO definition was to increase the institution's legitimate scope of action (Larsen 2022). Running a test of adequacy is debating whether and how it attained this goal. Each concept may also be related to other crucial goals, such as assessing health in healthcare economics settings. A test of adequacy can then be performed in relation to this new goal. Philosophers have not tested medical concepts of health for adequacy, so far—an exception being Thomas Schramme (2023).

3. Ranking of health concept objectives

This is the most challenging meta-task, and it is representative of conceptual choice, rather than conceptual engineering. What is more crucial about a health concept? Which costs are acceptable, and which are not? For example, a concept of health could have a cost in terms of epistemic injustice (fail the adequacy test with respect to epistemic justice) but bring benefits in terms of fair distribution of resources to citizens. These are philosophical considerations to develop.

4. Discussion about legitimacy and representativeness

The conversation can also be framed politically: who among the medical community has the authority to declare their objective in defining health? Who is invited to the conceptual decision table in the case of health? As previously mentioned, new work in philosophy of science suggests that the answer is determined by whether the concept is evaluative or independent. In any case, how does representativeness function within the health community? Applied political philosophy work is required in medicine, which can be done at each concept level, or by attempting to construct a general framework.

5. Connection to previous philosophical work

A great deal of philosophical work has been done on the dispute between normativity and factuality of health concepts. Is it possible to amalgamate evidence; that is, to connect philosophers' arguments and conclusions on these two opposing perspectives

to the local debate in medicine about competing definitions and measures of health? For example, if one accepts on philosophical grounds that the concept of health cannot be nonevaluative, one would need to prove that a number of definitions of health in medicine might involve hidden evaluations that must be traced, and so forth. There are also philosophers who have developed proposals on what health is from a metaphysical point of view—for example, a property, like being red or blue (Broadbent 2019), or a disposition, like being fragile (Werkhoven 2019), rather than a natural kind, like being cadmium. Nevertheless, the connection between the metaphysics of health and the notion of health has not yet been investigated (philosophers typically argue that one must address one or the other). As a result, this issue, too, ought to be included on the list of tasks for the conceptual choice work package.

If I am right in what I have been arguing thus far, conceptual choice applied to the concepts of health utilized in medicine today—which has been largely neglected by philosophers of medicine—promises to provide an occupation for many. From a folk-sociological perspective, and purely speculatively, I believe that these "service" tasks could increase philosophers' visibility, relevance, and significance in medical research projects and healthcare decisions.

While this article focuses on the concept of health, the methodology of conceptual choice is applicable to many other concepts in medicine. Medical concepts are often defined and refined through consensus methods or open discussion, particularly when they serve specific practical, clinical, or policy-related purposes. Like health, these concepts are closely tied to measurement, research, and healthcare decision making.

Recent discussions within medicine that deserve philosophical attention include the new definition of pain (Raja et al. 2020) and the classification of obesity as a disease (Allison et al. 2008)—both of which have significant implications for diagnosis, treatment, and public health policies. Additionally, there is a broad set of medical concepts that remain inconsistently defined, despite their ethical and practical consequences. These include incidental findings, overdiagnosis, overtreatment, remission (in oncology), and appropriateness—all of which influence clinical decision making, patient communication, and healthcare resource allocation.

Translating philosophical work into medical practice requires engagement with institutions where health-related discussions and decisions take place. One of the most promising avenues for this is interdisciplinary research collaborations. Many research projects funded by the European Union (EU) already encourage interdisciplinarity in medicine, promoting collaboration between philosophers, medical researchers, patients, and policymakers. Philosophers could contribute to these projects by clarifying conceptual assumptions, assessing the adequacy of definitions for their intended purposes, and identifying ethical and epistemic trade-offs, with the aim of producing guidelines and recommendations. For example, a recent EU-funded research project by the Premio Collab Consortium,[10] involving a clinical trial to compare diagnostic modalities in metastatic breast cancer, includes philosophical work on the concept of incidental findings—examining how they are defined in oncology and how they should be defined, given that this definition impacts both the patient's right not to know and the imaging specialist's duty to refer. This

[10] https://cordis.europa.eu/project/id/101136812.

is just one instance where philosophical work on medical concepts directly informs clinical and ethical guidelines.

Beyond research, philosophers could also contribute within insurance companies and national healthcare institutions (where present). These entities rely on specific definitions of health, disease, and treatment effectiveness to determine coverage, resource allocation, and patient eligibility for care. Philosophers could help refine definitions and criteria (for example, of debated diseases) to ensure they align with both ethical and practical considerations, preventing unintended epistemic injustices, or reinforcing social inequalities. This could take the form of advisory roles, ethics committees, or dedicated research units within these organizations.

Additionally, some philosophers might consider working as consultants in medical associations or policy organizations, where they could provide conceptual clarity in discussions on healthcare policies and guidelines. However, the most natural fit seems to be in research collaborations and institutional advisory roles, where conceptual clarity is directly relevant to policy and practice. By embedding philosophical analysis and conceptual choice in these settings, philosophers could make a meaningful impact on the definitions that shape healthcare research, policy, and patient outcomes.

Of course, this is not meant to undermine the role of patients, patient representatives, and other experts by experience in such settings. Their perspectives are essential in shaping definitions and policies that impact healthcare practices, and philosophers should work alongside them to ensure conceptual clarity serves the needs of all stakeholders.

Acknowledgments
I thank Klemens Kappel for a discussion in June 2022 on evaluating conceptual goals; the University of Rijeka audience for feedback on multiple presentations; and three anonymous reviewers for their insightful comments.

Disclosure Statement
No competing interest was reported by the author.

References
Alexandrova, Anna. 2017. *A Philosophy for the Science of Well-Being*. Oxford: Oxford University Press.

Alexandrova, Anna, and Mark Fabian. 2022. "Democratising Measurement: Or Why Thick Concepts Call for Coproduction." *European Journal for Philosophy of Science* 12, no. 1, article 7. https://doi.org/10.1007/s13194-021-00437-7.

Allison, David B., Morgan Downey, Richard L. Atkinson, Charles J. Billington, George A. Bray, Robert H. Eckel, Eric A. Finkelstein, Michael D. Jensen, and Angelo Tremblay. 2008. "Obesity as a Disease: A White Paper on Evidence and Arguments Commissioned by the Council of the Obesity Society." *Obesity* 16, no. 6: 1161–1177. https://doi.org/10.1038/oby.2008.231.

Andreas, Holger. 2021. "Theoretical Terms in Science." In *The Stanford Encyclopedia of Philosophy,* edited by Edward N. Zalta. https://plato.stanford.edu/entries/theoretical-terms-science/.

Badash, Ido, Nicole P. Kleinman, Stephanie Barr, Julie Jang, Suraiya Rahman, and Brian W. Wu. 2017. "Redefining Health: The Evolution of Health Ideas from Antiquity to the Era of Value-Based Care." *Cureus* 9, no. 2, article e1018. https://doi.org/10.7759/cureus.1018.

Belleri, Delia. 2021. "On Pluralism and Conceptual Engineering: Introduction and Overview." *Inquiry:* 1–19. https://doi.org/10.1080/0020174X.2021.1983457.

Bodryzlova, Yuliya, and Gregory Moullec. 2023. "Definitions of Positive Health: A Systematic Scoping Review." *Global Health Promotion* 30, no. 3: 6–14. https://doi.org/10.1177/17579759221139802.

Boorse, Christopher. 1977. "Health as a Theoretical Concept." *Philosophy of Science* 44, no. 4: 542–573. https://doi.org/10.1086/288768.

———. 1997. "A Rebuttal on Health." In *What Is Disease?,* edited by James M. Humber and Robert F. Almeder, 1–134. Biomedical Ethics Reviews. Totowa, NJ: Humana Press. https://doi.org/10.1007/978-1-59259-451-1_1.

Broadbent, Alex. 2019. "Health as a Secondary Property." *British Journal for the Philosophy of Science* 70, no. 2: 609–627. https://doi.org/10.1093/bjps/axx014.

Brock, Dan. 1993. "Quality of Life Measures in Health Care and Medical Ethics." In *The Quality of Life,* edited by Martha Nussbaum and Amartya Sen, 95–132. Oxford: Oxford University Press. https://doi.org/10.1093/0198287976.003.0009.

Burgess, Alexis, and David Plunkett. 2020. "On the Relation Between Conceptual Engineering and Conceptual Ethics." *Ratio* 33, no. 4: 281–294. https://doi.org/10.1111/rati.12265.

Callahan, Daniel. 1973. "The WHO Definition of 'Health'." *The Hastings Center Studies* 1, no. 3: 77–88. https://doi.org/10.2307/3527467.

Cambrosio, Alberto, Peter Keating, Thomas Schlich, and George Weisz. 2006. "Regulatory Objectivity and the Generation and Management of Evidence in Medicine." *Social Science & Medicine* 63, no. 1: 189–199. https://doi.org/10.1016/j.socscimed.2005.12.007.

———. 2009. "Biomedical Conventions and Regulatory Objectivity: A Few Introductory Remarks." *Social Studies of Science* 39, no. 5: 651–664. https://doi.org/10.1177/0306312709334640.

Canguilhem, Georges. 1991. *The Normal and the Pathological*. Translated by Carolyn R. Fawcett, with an introduction by Michel Foucault. New York: Zone Books.

Cappelen, Herman. 2018. *Fixing Language: An Essay on Conceptual Engineering*. Oxford: Oxford University Press.

Carter, H. Ballentine, Alan W. Partin, Patrick C. Walsh, Bruce J. Trock, Robert W. Veltri, William G. Nelson, Donald S. Coffey, Eric A. Singer, and Jonathan I. Epstein. 2012. "Gleason Score 6 Adenocarcinoma: Should It Be Labeled as Cancer?" *Journal of Clinical Oncology* 30, no. 35: 4294–4296. https://doi.org/10.1200/JCO.2012.44.0586.

Chang, Hasok. 2004. *Inventing Temperature: Measurement and Scientific Progress*. Oxford: Oxford University Press.

Cronbach, L.J., and P.E. Meehl. 1955. "Construct Validity in Psychological Tests." *Psychological Bulletin* 52, no. 4: 281–302. https://doi.org/10.1037/h0040957.

Daniels, Norman. 2007. *Just Health: Meeting Health Needs Fairly*. Cambridge: Cambridge University Press.

Drescher, Jack. 2015. "Out of DSM: Depathologizing Homosexuality." *Behavioral Sciences* 5, no. 4: 565–575. https://doi.org/10.3390/bs5040565.

Dutilh Novaes, Catarina. 2020. "Carnapian Explication and Ameliorative Analysis: A Systematic Comparison." *Synthese* 197: 1011–1034. https://doi.org/10.1007/s11229-018-1732-9.

Fagerberg, Harriet. 2023. "What We Argue About When We Argue About Disease." *Philosophy of Medicine* 4, no. 1: 1–20. https://doi.org/10.5195/pom.2023.172.

Frances, Allen. 2013. *Saving Normal: An Insider's Revolt Against Out-of-Control Psychiatric Diagnosis, DSM-5, Big Pharma, and the Medicalization of Ordinary Life*. New York: Harper Collins.

Fritz, Zoë, and Richard Holton. 2019. "Too Much Medicine: Not Enough Trust?" *Journal of Medical Ethics* 45, no. 1: 31–35. https://doi.org/10.1136/medethics-2018-104866.

Gagné-Julien, Anne-Marie. 2024. "Beyond Conceptual Analysis: Social Objectivity and Conceptual Engineering to Define Disease." *Journal of Medicine and Philosophy* 49, no. 2: 147–159. https://doi.org/10.1093/jmp/jhae002.

Hall, Alicia. 2020. "Quality of Life and Value Assessment in Health Care." *Health Care Analysis* 28, no. 1: 45–61. https://doi.org/10.1007/s10728-019-00382-w.

Haraldstad, K., A. Wahl, R. Andenæs, J.R. Andersen, M.H. Andersen, E. Beisland, C.R. Borge, et al., on behalf of the LIVSFORSK network. 2019. "A Systematic Review of Quality of Life Research in Medicine and Health Sciences." *Quality of Life Research* 28: 2641–2650. https://doi.org/10.1007/s11136-019-02214-9.

Haslanger, Sally. 2000. "Gender and Race: (What) Are They? (What) Do We Want Them to Be?" *Noûs* 34, no. 1: 31–55. https://doi.org/10.1111/0029-4624.00201.

Hayes, Jeanne, and Elizabeth Lisa M. Hannold. 2007. "The Road to Empowerment: A Historical Perspective on the Medicalization of Disability." *Journal of Health and Human Services Administration* 30, no. 3: 352–377. https://doi.org/10.1177/107937390703000303.

Horton, Richard. 1995. "Georges Canguilhem: Philosopher of Disease." *Journal of the Royal Society of Medicine* 88, no. 6: 316–319. https://pmc.ncbi.nlm.nih.gov/articles/PMC1295232/pdf/jrsocmed00069-0016.pdf.

Huber, M.A.S. 2014. "Towards a New, Dynamic Concept of Health: Its Operationalisation and Use in Public Health and Healthcare and in Evaluating Health Effects of Food." D.Phil., Maastricht University. https://doi.org/10.26481/dis.20141217mh.

Huber, Machteld. 2023. "I Expect That the New Definition of Health Will Bring the Cost of Healthcare Down." University of Groningen, *Faculty of Economics and Business News,* 1 February. https://www.rug.nl/feb/research/frn/news/oay/machteld-huber-i-expect-that-the-new-definition-of-health-will-bring-the-cost-of-healthcare-do.

Huber, Machteld, J. André Knottnerus, Lawrence Green, Henriëtte van der Horst, Alejandro R. Jadad, Daan Kromhout, Brian Leonard, et al. 2011. "How Should We Define Health?" *BMJ* 343, article d4163. https://doi.org/10.1136/bmj.d4163.

Huber, M., M. Vliet, M. van Giezenberg, B. Winkens, Y. Heerkens, P,C. Dagnelie, and J.A. Knottnerus. 2016. "Towards a 'Patient-Centred' Operationalisation of the New Dynamic Concept of Health: A Mixed Methods Study." *BMJ Open* 6, no. 1, article e010091. https://doi.org/10.1136/bmjopen-2015-010091.

Isaac, Manuel Gustavo. 2021. "What Should Conceptual Engineering Be All About?" *Philosophia* 49, no. 5: 2053–2065. https://doi.org/10.1007/s11406-021-00367-x.

———. 2023. "Which Concept of Concept for Conceptual Engineering?" *Erkenntnis* 88, no. 5: 2145–2169. https://doi.org/10.1007/s10670-021-00447-0.

Isaac, Manuel Gustavo, Steffen Koch, and Ryan Nefdt. 2022. "Conceptual Engineering: A Road Map to Practice." *Philosophy Compass* 17, no. 10, article e12879. https://doi.org/10.1111/phc3.12879.

Jambroes, Marielle, Trudi Nederland, Marian Kaljouw, Katja van Vliet, Marie-Louise Essink-Bot, and Dirk Ruwaard. 2016. "Implications of Health as 'the Ability to Adapt and Self-Manage' for Public Health Policy: A Qualitative Study." *European Journal of Public Health* 26, no. 3: 412–416. https://doi.org/10.1093/eurpub/ckv206.

Jenkins, Katharine. 2016. "Amelioration and Inclusion: Gender Identity and the Concept of *Woman*." *Ethics* 126, no. 2: 394–421. https://doi.org/10.1086/683535.

Kingma, Elselijn. 2019. "Contemporary Accounts of Health." In *Health: A History,* edited by Peter Adamson, 289–318. Oxford: Oxford University Press. https://doi.org/10.1093/oso/9780199916429.003.0015.

Kitcher, Philip, Jan-Christoph Heilinger, Rahel Jaeggi, Susan Neiman, and Amia Srinivasan. 2021. *Moral Progress*. Oxford: Oxford University Press.

Krabbe, Paul. 2016. *The Measurement of Health and Health Status: Concepts, Methods and Applications From a Multidisciplinary Perspective*. Cambridge, MA: Academic Press.

Lalumera, Elisabetta. 2023. "'Are Mental Disorders Brain Disorders?' Is a Question of Conceptual Choice." *Philosophical Psychology* 37, no. 3: 631–643. https://doi.org/10.1080/09515089.2023.2269985.

———. Forthcoming. "Conceptual Engineering of Medical Concepts." In *New Perspectives on Conceptual Engineering (Vol. 3),* edited by Manuel Gustavo Isaac, Kevin Scharp and Steffen Koch. New York: Springer.

Larsen, Lars Thorup. 2022. "Not Merely the Absence of Disease: A Genealogy of the WHO's Positive Health Definition." *History of the Human Sciences* 35, no. 1: 111–131. https://doi.org/10.1177/0952695121995355.

Larson, James S. 1999. "The Conceptualization of Health." *Medical Care Research and Review* 56, no. 2: 123–136. https://doi.org/10.1177/107755879905600201.

Laucis, Nicholas C., Ron D. Hays, and Timothy Bhattacharyya. 2015. "Scoring the SF-36 in Orthopaedics: A Brief Guide." *Journal of Bone and Joint Surgery* 97, no. 19: 1628–1634. https://doi.org/10.2106/JBJS.O.00030.

Laurence, Stephen, and Eric Margolis. 2003. "Concepts and Conceptual Analysis." *Philosophy and Phenomenological Research* 67, no. 2: 253–282. https://doi.org/10.1111/j.1933-1592.2003.tb00290.x.

Lemoine, Maël. 2013. "Defining Disease Beyond Conceptual Analysis: An Analysis of Conceptual Analysis in Philosophy of Medicine." *Theoretical Medicine and Bioethics* 34, no. 4: 309–325. https://doi.org/10.1007/s11017-013-9261-5.

Leonardi, Fabio. 2018. "The Definition of Health: Towards New Perspectives." *International Journal of Social Determinants of Health and Health Services* 48, no. 4: 735–748. https://doi.org/10.1177/0020731418782653.

Locker, David, and Barry Gibson. 2006. "The Concept of Positive Health: A Review and Commentary on Its Application in Oral Health Research." *Community Dentistry and Oral Epidemiology* 34, no. 3: 161–173. https://doi.org/10.1111/j.1600-0528.2006.00263.x.

Machery, Edouard. 2009. *Doing Without Concepts*. Oxford: Oxford University Press.

Marmot, Michael, and Richard Wilkinson, eds. 2005. *Social Determinants of Health*. Oxford: Oxford University Press.

Marques, Teresa. 2020. "Amelioration vs. Perversion." In *Shifting Concepts: The Philosophy and Psychology of Conceptual Variability,* 260–284. Oxford: Oxford University Press. https://academic.oup.com/book/31933/chapter/267642056.

Menatti, Laura, Leonardo Bich, and Cristian Saborido. 2022. "Health and Environment From Adaptation to Adaptivity: A Situated Relational Account." *History and Philosophy of the Life Sciences* 44, no. 3: article 38. https://doi.org/10.1007/s40656-022-00515-w.

Montmerle, Thierry, Piero Benvenuti, Sze-leung Cheung, Lars Lindberg Christensen, Alain Lecavelier des Etangs, Xiaowei Liu, Donald Lubowich, et al. 2015. "Executive Committee Working Group: Public Naming of Planets and Planetary Satellites." *Proceedings of the International Astronomical Union* 11, no. T29A: 539–548. https://doi.org/10.1017/S1743921316001009.

Nordenfelt, Lennart. 1995. *On the Nature of Health: An Action-Theoretic Approach (Vol. 26)*. Dordrecht: Springer Science & Business Media.

———. 2013. *Action, Ability and Health: Essays in the Philosophy of Action and Welfare (Vol. 1)*. Dordrecht: Springer Science & Business Media.

OHHLEP (One Health High-Level Expert Panel), Wiku B. Adisasmito, Salama Almuhairi, Casey Barton Behravesh, Pépé Bilivogui, Salome A. Bukachi, Natalia Casas, et al. 2022. "One Health: A New Definition for a Sustainable and Healthy Future." *PLOS Pathogens* 18, no. 6, article e1010537. https://doi.org/10.1371/journal.ppat.1010537.

Peacocke, Christopher. 1992. *A Study of Concepts*. Cambridge, MA: MIT Press.

Pettitt, D., S. Raza, B. Naughton, A. Roscoe, A. Ramakrishnan, A. Ali, B. Davies, et al. 2016. "The Limitations of QALY: A Literature Review." *Journal of Stem Cell Research and Therapy* 6, no. 4, article 1000334. http://dx.doi.org/10.4172/2157-7633.1000334.

Plunkett, David, and Timothy Sundell. 2023. "Varieties of Metalinguistic Negotiation." *Topoi* 42, no. 4: 983–999. https://doi.org/10.1007/s11245-023-09941-2.

Popay, Jennie. 2011. "Re: WHO Definition of Health Does Remain Fit for Purpose." Letter, *BMJ,* September 16. https://doi.org/10.1136/bmj.d4163.

Prinsen, Cecilia A.C., and Caroline B. Terwee. 2019. "Measuring Positive Health: For Now, a Bridge Too Far." *Public Health* 170: 70–77. https://doi.org/10.1016/j.puhe.2019.02.024.

Queloz, Matthieu. 2022. "Function-Based Conceptual Engineering and the Authority Problem." *Mind* 131, no. 524: 1247–1278. https://doi.org/10.1093/mind/fzac028.

Raja, Srinivasa N., Daniel B. Carr, Milton Cohen, Nanna B. Finnerup, Herta Flor, Stephen Gibson, Francis Keefe, et al. 2020. "The Revised IASP Definition of Pain: Concepts, Challenges, and Compromises." *Pain* 161, no. 9: 1976–1982. https://doi.org/10.1097/j.pain.0000000000001939.

Rhee, Joshua J., Chelsea Schein, and Brock Bastian. 2019. "The What, How, and Why of Moralization: A Review of Current Definitions, Methods, and Evidence in Moralization Research." *Social and Personality Psychology Compass* 13, no. 12, article e12511. https://doi.org/10.1111/spc3.12511.

Rostami, Mina, Mahsa Abbasi, Morteza Soleimani, Zhaleh Karimi Moghaddam, and Alireza Zeraatchi. 2023. "Quality of Life Among Family Caregivers of Cancer Patients: An Investigation of SF-36 Domains." *BMC Psychology* 11, no. 1, article 445. https://doi.org/10.1186/s40359-023-01399-6.

Saracci, Rodolfo. 2011. "Re: How Should We Define Health?" Rapid Response, *BMJ,* August 4. https://doi.org/10.1136/bmj.d4163.

Schramme, Thomas. 2023. "Health as Complete Well-Being: The WHO Definition and Beyond." *Public Health Ethics* 16, no. 3: 210–218. https://doi.org/10.1093/phe/phad017.

Schwartz, Peter H. 2007. "Decision and Discovery in Defining 'Disease'." In *Establishing Medical Reality: Essays in the Metaphysics and Epistemology of Biomedical Science,* edited by Harold Kincaid and Jennifer McKitrick, 47–63. Dordrecht: Springer Netherlands. https://doi.org/10.1007/1-4020-5216-2_5.

Sholl, Jonathan. 2020. "Health in Philosophy: Definitions Abound but a Theory Awaits." In *Explaining Health Across the Sciences,* edited by Jonathan Sholl and Suresh I.S. Rattan, 79–95. Cham: Springer. https://doi.org/10.1007/978-3-030-52663-4_6.

Simion, Mona. 2018. "The 'Should' in Conceptual Engineering." *Inquiry* 61, no. 8: 914–928. https://doi.org/10.1080/0020174X.2017.1392894.

Simion, Mona, and Christoph Kelp. 2020. "Conceptual Innovation, Function First." *Noûs* 54, no. 4: 985–1002. https://doi.org/10.1111/nous.12302.

Smith, Richard. 2008. "The End of Disease and the Beginning of Health." *The BMJ (Opinion),* July 8. https://blogs.bmj.com/bmj/2008/07/08/richard-smith-the-end-of-disease-and-the-beginning-of-health/.

Spitzer, Robert L. 1981. "The Diagnostic Status of Homosexuality in DSM-III: A Reformulation of the Issues." *American Journal of Psychiatry* 138, no. 2: 210–215. https://doi.org/10.1176/ajp.138.2.210.

Stronks, Karien, Nancy Hoeymans, Beatrijs Haverkamp, Frank R.J. den Hertog, Marja J.H. van Bon-Martens, Henrike Galenkamp, Marcel Verweij, and Hans A.M. van Oers. 2018. "Do Conceptualisations of Health Differ Across Social Strata? A Concept Mapping Study Among Lay People." *BMJ Open* 8, no. 4, article e020210. https://doi.org/10.1136/bmjopen-2017-020210.

Sundar, S. 2011. "Blurring of Health-Disease-Health Transitions." Rapid Response, *BMJ,* September 18. https://doi.org/10.1136/bmj.d4163.

The Lancet. 2009. "What Is Health? The Ability to Adapt." Editorial, March 7. *The Lancet* 373, no. 9666: 781. https://doi.org/10.1016/S0140-6736(09)60456-6.

Uusitalo, Susanne, and Jeremy Howick. 2018. "Philosophy of Too Much Medicine Conference Report." *Journal of Evaluation in Clinical Practice* 24, no. 5: 1011–1012. https://doi.org/10.1111/jep.13000.

Van der Linden, Rik, and Maartje Schermer. 2022. "Health and Disease as Practical Concepts: Exploring Function in Context-Specific Definitions." *Medicine, Health Care and Philosophy* 25, no. 1: 131–140. https://doi.org/10.1007/s11019-021-10058-9.

———. 2024. "Conceptual Engineering Health: A Historical-Philosophical Analysis of the Concept of Positive Health." In *A Pragmatic Approach to Conceptualization of Health and Disease,* edited by Maartje Schermer and Nicholas Binney, 245–268. Cham: Springer. https://doi.org/10.1007/978-3-031-62241-0_19.

Van Druten, V.P., E.A. Bartels, D. van de Mheen, E. de Vries, A.P.M. Kerckhoffs, and L.M.W. Nahar-van Venrooij. 2022. "Concepts of Health in Different Contexts: A Scoping Review." *BMC Health Services Research* 22, no. 1, article 389. https://doi.org/10.1186/s12913-022-07702-2.

Varga, Somogy. 2020. "Epistemic Authority, Philosophical Explication, and the Bio-statistical Theory of Disease." *Erkenntnis* 85, no. 4: 937–956. https://doi.org/10.1007/s10670-018-0058-9.

Ware, J.E., R.H. Brook, A.R. Davies, and K.N. Lohr. 1981. "Choosing Measures of Health Status for Individuals in General Populations." *American Journal of Public Health* 71, no. 6: 620–625. https://doi.org/10.2105/AJPH.71.6.620.

Ware, John E. Jr., and Cathy Donald Sherbourne. 1992. "The MOS 36-Item Short-Form Health Survey (SF-36): I. Conceptual Framework and Item Selection." *Medical Care* 30, no. 6: 473–483. https://journals.lww.com/lww-medicalcare/abstract/1992/06000/The_MOS_36_ltem_Short_Form_Health_Survey__SF_36__.2.aspx.

Werkhoven, Sander. 2019. "A Dispositional Theory of Health." *British Journal for the Philosophy of Science* 70, no. 4: 927–952. https://doi.org/10.1093/bjps/axy003.

WHO (World Health Organization). 1948. *Constitution of the World Health Organization*. Geneva: WHO.

———. 2001. *International Classification of Functioning, Disability and Health (ICF)*. Geneva: WHO.

Wilson, Mark. 2006. *Wandering Significance: An Essay on Conceptual Behaviour*. Oxford: Clarendon Press.

Zachar, Peter, and Kenneth S. Kendler. 2012. "The Removal of Pluto from the Class of Planets and Homosexuality from the Class of Psychiatric Disorders: A Comparison." *Philosophy, Ethics, and Humanities in Medicine* 7, no. 1, article 4. https://doi.org/10.1186/1747-5341-7-4.