

**Philosophical Foundations of Health Assessment
Towards a Dynamic and Integrative Conception of Health**
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PHD Thesis

Thor Hennelund Nielsen

**Philosophical Foundations of
Health Assessment**

Towards a Dynamic and Integrative
Conception of Health

January 2023

Preface, abstracts, and acknowledgments

Preface

Carrying out this project during a time when the world underwent a pandemic was a curious experience. Suddenly, philosophical questions that ordinarily are considered remote from ordinary life, such as whether asymptomatic patients are ill or how to prioritize treatments and human lives, became heated discussions with serious societal and individual repercussions. It lent an air of legitimacy to the present project, for it investigates what health and disease are, and how these phenomena are measured through generic health assessment instruments, which forms the backbone of, for example, prioritization in health care. Indeed, events like the pandemic attest to the eternal topicality of such questions. When these fall out of vogue or seem too abstract to concern us, it does not owe to their irrelevance but perhaps rather to the human ability to repress essential parts of life, for “Illness”, as Susan Sontag once wrote:

“is the night-side of life, a more onerous citizenship. Everyone who is born holds dual citizenship, in the kingdom of the well and in the kingdom of the sick. Although we all prefer to use only the good passport, sooner or later each of us is obliged, at least for a spell, to identify ourselves as citizens of that other place” (Sontag, 1991).

This dissertation differs somewhat in structure from other anthological or article-based PhD theses. Usually, these begin with the summary containing introduction, methodical reflections, results of the thesis and so on. I have chosen to structure the thesis much more like a monograph. This means that the articles are part of chapters, which are linked together through (sub)sections. The intention behind this was to ease the reading experience but also to emphasize that, despite the sometimes kaleidoscopic nature of the present collection of articles, there is a grander context for the different themes investigated.

Here, I will only very briefly introduce where the different articles appear since the introduction contains a much more detailed summation of the overall structure of the thesis. After the introduction and methodical considerations, the first article “The Normativist-Naturalist Puzzle: Functions and Assumptions of Health Assessment Tools” appears in chapter 3. After a chapter that bridges the empirical and theoretical studies, the article “The Dynamics of Disease – Towards a Processual Theory of Health” appears in chapter 5. Chapter 6 contains the article “Issues for a Phenomenology of Illness – Transgressing Psychologizations”, while chapter 7 brings the fourth and final article of the project “Medical Individualism – What makes an Individual Individual?”.

Abstract

Contemporary trends push health care towards gaining evidence-based knowledge of the severity of health conditions and the efficacy of health interventions. To this end, generic health assessment instruments are developed, which are questionnaires designed for (self)evaluation of health on broader dimensions like physical, mental, and social health. The aggregated scores of the instruments represent a quantified assessment of the overall degree of health and well-being attached to certain health conditions.

However, when operationalizing the overall state of health and well-being into quantified and measurable items on a questionnaire, the instruments implicitly rely on substantial philosophical assumptions about the nature of these phenomena. In the first article of this project, the philosophical workings and assumptions of these instruments are elucidated through a qualitative study of health professionals' thoughts on the practice. To really gauge what conceptions of health and disease are at play in the instruments, the dichotomy of normativism and naturalism within philosophy of health is used as an interpretive key. I strive to let the empirical investigations inform the theoretical and vice versa to avoid both a strictly bottom-up and top-down approach.

The juxtaposition of philosophical theories with qualitative analysis exposes weaknesses in established positions, which the remaining articles seek to revise. The second article argues that the discussion between normativism and naturalism founded on conceptual analysis is caught in a deadlock and suggests an ontological approach instead, which construes health and disease as a relation between capacities to adapt and demands imposed upon the organism if it is to thrive. The third article criticizes the cur-

rent trend of phenomenology of illness for being too one-sided and psychologizing, instead proposing that health and illness manifest themselves phenomenologically as the preservation of or fundamental broaches upon conative activities. In recent times, certain movements within medicine like personalized medicine claim that health conditions are fundamentally individual and variable. The fourth article asks what this entails, and what model of medical anthropology is needed to accommodate such a perspective. As a whole, the project works towards providing the groundwork for a more dynamic and integrative conception of health and disease. Whether a maximalistic theory of health and disease is amenable with the measurement of generic health is, however, an open question, and the project is concluded by a discussion thereof.

Resumé

Nutidige tendenser nødvendiggør, at sundhedsvæsnen skaber sig et evidensbaseret overblik over alvorsgraden af helbredstilstande og sundhedsinterventioners effektivitet. Med dette formål in mente udvikles generiske helbedsvurderingsinstrumenter, som er spørgeskemaer, der måler selvvurderet helbred på bredere dimensioner såsom fysisk, mental og social sundhed. Instrumenternes aggregerede værdier repræsenterer en kvantificeret vurdering af den overordnede grad af sundhed og velbefindende knyttet til bestemte helbredstilstande.

I kraft af den proces, hvorved sundhed og velbefindende operationaliseres til målbare og kvantificerede størrelser, forlader instrumenterne sig imidlertid på substantielle filosofiske antagelser om sundhedens og sygdommens natur. I projektets første artikel bliver instrumenternes funktioner og filosofiske antagelser belyst gennem et kvalitativt studie af sundhedsprofessionelles holdninger til denne praksis. For at undersøge hvilke opfattelser af sundhed og sygdom, som råder i disse instrumenter, bliver dikotomien mellem normativisme og naturalisme i sundhedsfilosofien anvendt som en fortolkningsnøgle. Jeg efterstræber en ligevægt mellem de empiriske og teoretiske undersøgelser, der både undgår en rendyrket bottom-up og top-down tilgang.

Sammenstillingen af de filosofiske teorier med den kvalitative analyse afslører imidlertid svagheder i de etablerede positioner, som de resterende artikler forsøger at revidere. Den anden artikel hævder, at diskussionen mellem normativisme og naturalisme er funderet på begrebsanalysen, der er fanget i et dødvande. I stedet foreslås en ontologisk tilgang, som forstår sundhed og sygdom som en relation mellem evner til tilpasning kontra de krav om tilpasning, som organismen udsættes for, for så vidt den skal trives. Den tredje artikel kritiserer sygdomsfænomenologien, som den aktuelt praktiseres, for både at være for ensidig og psykologiserende. Artiklen foreslår i stedet, at sundhed og sygdom manifesterer sig fænomenologisk som opretholdelse af og fundamentale brud på livsaktivitet. Visse bevægelser indenfor sundhedsvidenskaberne såsom personlig medicin hævder, at helbredstilstande er fundamentalt variable og individuelle. Den fjerde artikel spørger, hvad der skal forstås derved, og hvilken medicinsk antropologisk teori kan imødekomme dette synspunkt. Som helhed stræber jeg i projektet mod at støbe fundamentet for en mere

dynamisk og integrativ forståelse af sundhed og sygdom. Spørgsmålet er imidlertid, om en sådan maximalistisk teori om sundhed og sygdom er forenelig med generisk helbreds-vurdering, og afhandlingen afsluttes med en diskussion af dette.

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I am greatly indebted to a lot of people who have helped me throughout the course of this PhD. First and foremost, my supervisor, Lasse Nielsen, who has been a tremendous aid through the whole process and who has borne with a lot of overly ambitious ideas and unfinished drafts. Similarly, I am very grateful to Søren Harnow Klausen, who has been a great source of inspiration since my first days of studying philosophy at the University of Southern Denmark and has helped me with advice and feedback throughout the PhD. I am indebted to Anna Paldam Folker who graciously took the time to be the opponent at my pre-defence, which gave me a lot of valuable feedback. I also thank Jørgen Hass whose routine visits during the later parts of the afternoon for discussions about the history of philosophy were very inspiring as always. In general, I thank the research groups *Values, Welfare and Health* along with *Human Health* and the philosophy department at SDU for all the exciting and fruitful discussions.

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Any shortcomings are the author’s alone.

Please note, the present version of this dissertation is intended for online publication. To avoid copyright infringement issues, none of the articles that were carried out during this PhD are included in this document but are or will be available online through the relevant journals.

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1. Introduction

“To believe in medicine would be the height of folly. Not to believe in it would be greater folly still”
(Proust, 1932, p. 929).

1.1 What is health assessment?

Health care in contemporary societies finds itself at a crossroad. The strides made in the advancement of health and prevention of disease at the turn of the 19th century and throughout the 20th – the democratization of health care, the virtual extermination of epidemic diseases like polio, measles, smallpox and so forth – have not continued. Though more resources than ever are channeled into the promotion of health and the prevention of disease, the prevalence of more complex clinical profiles along with health care expenses only grow. Faced with this paradox, it seems that the answer is not simply to channel further resources into health care but to put the resources to *better use*. Contemporary trends such as *evidence-based medicine* (Guyatt et al., 1992) and *value-based health care* (Miller, 2009) reflect this need. Health care, it is argued, needs a clearer picture of what works and what does not work and especially to what *degree* it works (Sackett et al., 1996). Only thereby can *resource allocation* and *prioritization* take place on rational grounds instead of through conjecture.

This also constitutes the rationale behind the practice of *generic assessment of health, disease, and well-being*. To gain evidence-based knowledge of the efficacy and utility of health

interventions as well as the severity of health conditions in terms of *health-related quality of life* (“HRQoL”), *health assessment instruments* – also known as patient-reported outcome measure (“PROMs”) – are increasingly employed to evaluate *cost effectiveness*. In essence, the instruments are questionnaires designed to evaluate the self-reported health of a person on broader dimensions like physical, mental, and social health, which are aggregated to combined scores. These scores represent an assessment of the global level of well-being connected to a state of health, i.e., “how one is doing” overall. This, sometimes in conjunction with preference elicitation, is then used to measure quality-adjusted life years, QALYs (Nord, 1999), disability-adjusted life years, DALYs (Murray, 1994), etc. Through comparative, longitudinal, and demographical studies, the instruments can assess the ways that health conditions in average affect HRQoL along with the net bonuses of carrying out certain interventions over others in a non-arbitrary and standardized fashion, so the reasoning goes.

Originally, the instruments hail from the field of health economy where they were developed to inform political decision making regarding resource allocation, ultimately with the aim of levelling out health injustices and making fair priorities (Pedersen & Wittrup-Jensen, 2002, p. 26). Since then, however, they have found much broader application in clinical and welfare practices along with the study of population health. Developers have refined the instruments for decades, primarily working on *psycho-*

metric aspects and issues. Less attention, however, has been dedicated to elucidating the strong *philosophical* assumptions and implications that the instruments are founded upon.

To measure health, disease, and well-being, one must first have an idea of what they are, but the nature of these phenomena is both contested and unclear. When a medical professional wishes to measure, e.g., the pulse, insulin levels, or bodyfat percentage of a patient, certain biomarkers can be assessed through standardized medical tools, but how does one measure the overall state of health, disease, and well-being? Health and disease are phenomena more abstract and elusive than blood pressure and are typically assumed to include both functional, emotional, cognitive, and social dimensions. In lieu of biomarkers, the practice relies on self-reported evaluations on a standardized basis. In conceptualizing and operationalizing understandings of health or disease to make them available for measurement, however, the instruments invariably make substantial assumptions about the nature of these.

1.2 Research questions and aims of the thesis

In this project I investigate *which conceptions and assumptions about health and disease the practice of generic health assessment relies upon*. The problem is at one and the same time both deeply practical and deeply philosophical. Practical, since the assessment of the overall state of health utilizes and applies concepts to collect and interpret data with the ethical aim of guiding action; theoretical, since assessment relies upon fundamentally philosophical notions about *what* health and disease as phenomena *are*. Qua practical and theoretical, it calls for both empirical and philosophical methods. Rather than a purely bottom-up or top-down approach, however, I attempt to strike a balance be-

tween both approaches by letting the empirical study inform the philosophical and vice versa. In practice, this means that the project includes a qualitative study of the applications of and thoughts on health assessment by practitioners, researchers, and developers of the instruments to gauge the underlying philosophical assumptions. The data from this study is interpreted via the distinction between naturalism and normativism within philosophy of health to investigate which conceptions of health and disease are at play. Briefly put, naturalism as a theory understands health and disease as biological and functional phenomena, whereas normativism understands them as value-laden and tied to well-being and suffering.

To claim that health and disease – and the measurement thereof – are complex phenomena is almost a truism. Nevertheless, this was exactly what the empirical study confirmed: according to the responders, the instruments primarily assess functional indicators, but health and disease, though tied to functional properties, are more akin to a subjective state of overall bodily and mental well-being. The viewpoints that emerged corresponded neither with naturalism nor normativism strictly understood. Rather than concluding that these perspectives are the result of inconsequent theorizing, however, these become the impetus for the theory-driven work of the project that critically engages with established positions within philosophy of health.

The nature of health and disease is, at heart, an *ontological* question, I claim. They concern fundamental questions about what it is for an individual to be healthy or sick. In this thesis, I strive to stake out a different method of approach than the traditional methods of conceptual analysis or a psychologizing phenomenology, namely by drawing on ontology, biophilosophy, and philosophical anthropology. A rich tradition of philosophizing on the nature of health and disease precedes the current established positions within philosophy of health, and in taking inspiration from this, I attempt to pave the way for a more dynamic and integrative account of health and disease.

1.3 Structure and resumé of the thesis

Chapters 1 and 2 introduce the topic and methods of the thesis, respectively, while chapters 3 to 7 constitute the main part of the analysis that contain the articles written during this project. The 8th chapter concludes the dissertation by relating the theoretical investigations to the practice of health assessment again. In the following, I unfold the general argument of the thesis.

Chapter 3 is the point of departure of the analysis and concerns the practice of health assessment and the philosophical pre-suppositions thereof, including questions about what it is, how it is possible, and how it takes place in practice. The chapter contains the article “The Normativist-Naturalist Puzzle: Functions and Assumptions of Health Assessment Tools” (in review at the journal *International Journal of Qualitative Studies on Health and Well-being*, co-authored with Lasse Nielsen and Søren Harnow Klausen), which delivers a qualitative study of the applications of and thoughts on health assessment by practitioners, researchers, and developers of the instruments. Unlike in the field

of health economy, the clinical application of the instruments is less well-documented, and the study was therefore in part explorative. In contrast to specific health assessment, which often measures more tangible and well-defined phenomena such as ability to stand up and sit down a certain number of times, pulse etc., which conceptions of health and disease that underlie the generic assessment practice is more diffuse. Therefore, naturalism and normativism as theories are included to interpret what is truly being measured.

Unsurprisingly, the study found that the conceptions of health and disease of the practitioners rarely corresponded exactly with philosophical positions, despite this fact, naturalistic and normativistic reflections played a part in the practice of generic health assessment. There was a tendency to understand health as a form of subjective well-being, i.e., as self-reported experience of health and well-being, the distinction between these being somewhat fuzzy. Simultaneously, it was widely recognized that there was a need for tangible, naturalistic parameters to assess this subjective state, but that the tools had clear limitations in this regard, seeing as the measurements were insufficient in themselves. There was, therefore, a two-sided issue: in practice, the instruments do not measure health, disease, and well-being the way that the practitioners understood these, at the same time, the theories were too one-sided to capture the nuances of these phenomena. This was the impetus behind moving beyond a strictly top-down

or bottom-up approach and instead attempt to strike a balance between the empirical and philosophical studies.

The 4th chapter contains the transition from the empirical work to the theoretical by treating four philosophical assumptions that underlie the operationalization of health and disease into measurable phenomena. The instruments:

1. Quantify qualitative conditions.
2. Objectivize subjective evaluations.
3. Fixate dynamic health conditions in static measurements.
4. Standardize conditions of great individual variability.

From the understandings that emerged in the qualitative studies, I choose to further explore the following three: 1) the dynamicity and processuality of health and disease 2) the subjectivity of health and disease, and 3) the individuality and contextuality of health and disease.

Chapter 5 revolves around the shortcomings of naturalism and normativism and the attempt to pave the way for a dynamic and processual theory of health and disease. Pure conceptual analysis often ends in a conflict over examples and counterexamples since the definitions prove either too narrow or broad. However, rather than claiming that the discussion is meaningless as the eliminativists do, I attempt to anchor the analysis in an ontological approach in the article “The Dynamics of Disease – Towards a Processual Theory of Health” (in press at *Journal of Medicine and Philosophy*). The article argues that health and disease is not constituted by the ability to live up to a certain abstract level of biological functionality or ability to realize well-being but instead suggests that health consists in the capacity to meet demands for

adaptation if the organism is to thrive. The article, therefore, explicates a more responsive and dynamic understanding. It includes elements from naturalism, in so far as health and disease consist in capacities for adequate responses or lack thereof, and normativism, since adequate or inadequate responses rely on the relevant norms of the individual's life, which the individual itself and its environment poses.

The 6th chapter continues the dynamic approach but in a different arena. The article "Issues for a Phenomenology of Illness – Transgressing Psychologizations" (published in *Medicine, Health Care and Philosophy*) analyses phenomenology of illness, which investigates what it is like to be ill from a first-person perspective. The article critiques the movement for mistaking the original phenomenological project, which did not consist in the exposition of private experiences but of phenomena and their essences. Furthermore, that phenomenology of illness has a too psychologizing understanding of illness as experiences of alienation, bodily uncertainty, suffering etc. These undeniably play a role but makes it difficult to distinguish between problematic embodiment and illness. To supplement a too one-sided focus on experiences, an understanding of phenomenological illness as broaches upon conative activity is proposed. This conative activity designates the normative, temporal self-unfolding of existence, which avoids a too narrow focus on either the bodily or experiential. In develop-

ing this, I take inspiration from the phenomenology of Heidegger and Waldenfels.

Chapter 7 revolves around what role individuality plays in health and disease. The article “Medical Individualism – What makes an Individual Individual?” (submitted to the journal *History and Philosophy of the Life Sciences*) concerns the theory of medical individualism, i.e., whether individuals and their pathologies and physiologies are to be considered fundamentally unique and variable. This is done with a critical view to the movement of personalized medicine, which has an inadequate conceptualization of individuality as founded in a summative and material holism. It posits that due to the interplay of highly complex networks that the patient is composed of, any individual is bound to vary in some respect from another. What it lacks is both an adequate conceptualization of how different elements and dimensions of the individual add up to a unique whole and a sufficient understanding of the individual as not just a biological object of great complexity but a self with agency and values. In the article, I draw on philosophical anthropology, especially Plessner, to elucidate this integrative model of the individual.

The 8th chapter concludes the dissertation by weaving the empirical and philosophical threads together. What consequences does it have for the practice of health assessment if health and disease are dynamic and individual, and if more psychologizing approaches contain strong limitations? Can the generic and generalizing practice then still be maintained? Or is health assessment perhaps the best among sub-optimal ways in which health, disease, and well-being can be measured on a standardized basis?

2. Methodical reflections

2.1 The general line of approach

Before describing in greater detail how the qualitative and ontological study were conducted, and how these approaches can shed light on the subject matter, I will briefly comment upon the general line of approach throughout the project. At first glance, the plurality of methods employed and topics treated might seem kaleidoscopic. From qualitative studies in the beginning to (a sort of) conceptual analysis to phenomenology and philosophical anthropology in the end. What at face value seems to be a multitude of approaches is, however, the expression and application of the principle that *the matter at hand determines the method*, as Aristotle says (1995, 1094b). Since the subject matter contains both practical and theoretical dimensions, the problematic calls for both a *qualitative* and *ontological* study.

Health assessment is to a certain extent ontologically committed regarding the nature of health, disease, and well-being. Even if granted that the readings are approximative and indicative rather than exact measurements of health conditions, they must operationalize certain assumptions about these phenomena to get measurable results. The qualitative study is a way to gauge these ontological assumptions that the practice implicitly or explicitly relies on. However, the mettle of these conceptions can only be tested or further developed upon through additional ontological

investigations, which gives occasion to the theoretical studies. Since the essence of health and disease manifests itself in various ways, the dissertation calls for a *multifaceted* investigation. There is, therefore, a guiding thread throughout the diverse topics investigated in this dissertation, namely that of an ontological investigation, which is carried out in various ways since health and disease are complex phenomena.

2.2 Doing qualitative studies

The philosophical assumptions underlying the health assessment practice are less documented, and the study therefore called for a more explorative approach. Since the instruments to a large degree are *practical*, and the application influence their philosophical workings and assumptions, the purely theoretical approach had to be supplemented by empirical data. Quantitative analysis was considered but decided against since the priority was to glean insight into the rationales behind the practice rather than gain a broader but more superficial overview. Semi-structured, qualitative interviews were therefore judged to be a better fit for the analysis, which required a certain amount of direction and flexibility (Poulsen, 2019, p. 98).

The different applications of the instruments, the varied terminologies in circulation, the fact that philosophical assumptions behind the practice were to a certain degree uncharted territory etc. – these facts called for an open but somewhat directed conversation in the form of semi-structured interviews. Although some of the responders had strong theoretical leanings and in general were very reflected regarding the practice, they were primarily practitioners, and a strictly philosophical mode of reasoning through abstract concepts might seem unfamiliar to them.

Formulating, for example, what the instruments “truly measure” can be tricky in and of itself, and the author group furthermore wanted to avoid eliciting automated responses or responses, which the interviewees felt obliged to give. From the provisional desktop study conducted before the interviews, which detailed some of the uses and purposes of instruments in circulation, it was difficult to gauge who were important actors within the field of health assessment in a Danish context, which was the area of study of this project. Qualitative interviews therefore allowed for snowball sampling by relying on the insider knowledge of the interviewees to find qualified – so-called “elite” – responders.

The interviews were conducted at the start of the first round of lockdowns in Europe due to the Covid19 pandemic in March 2020. While many struggled to carry out empirical work during these months, this project was perhaps aided by the lockdown since the responders were at home and reachable by digital means. The 13 interviews in total were carried out over a period of 1-2 months and recorded via Zoom, afterwards uploaded to an encrypted server, and then transcribed by the three student assistants affiliated with the project. The assistants also contributed to the collection of the interviews. Before being interviewed, each participant signed a declaration of consent and were informed of the purpose of the interviews. Afterwards, all personal information was anonymized except the employment status and educational background of the responders since it was deemed im-

portant to the results of the study. Because the data was less sensitive as it rarely contained personal information, this was not judged to be an issue.

The interview guide (see the appendix), contained four blocks of questions including intro and outro (Poulsen, 2019, p. 104). The starting question was deliberately very open-ended to gauge what the responders associated with the term “health assessment instruments” (“sundhedsevalueringsredskaber”). This was followed by a host of quite concrete questions to hone in on the theme, which progressively led into the more abstract and evaluative questions on the practice and rationale of health assessment. The questions were left as open as possible, while still providing some structure and direction to the conversation, to elicit the off-the-cuff responses, associations, and opinions of the responders. Though analysis of the data through coding is often suggested (Brinkmann & Kvale, 2018), we opted for a less rigid approach. The interviews were divided into two groups and through careful reading and rereading, salient points were drawn out and afterwards discussed and rechecked between the three members of the author group.

The qualitative study is driven by a more classical explorative approach, which collects its data inductively and then interprets these via theory. But in the broader project, I strive for an approach that rather resembles *grounded theory*. That is, a theory which develops and refines its concepts inductively from the data collected (Glaser & Strauss, 1967) in contrast to a hypothetico-deductive model, which draws its results from preconceived hypotheses that are put to empirical test. Although grounded theory is more nuanced than simply drawing inductive conclusions from data since it also involves the intricate process of comparing the

theoretical results to the data in feedback loops until “saturation” has been reached (Charmaz & Belgrave, 2012; David & Sutton, 2011, p. 110), it does not capture all that I attempt to elucidate. It is a crucial hypothesis of this project that the practice of health assessment and our conceptions of health and disease are to varying degrees mired in tacit theoretical assumptions even before they are operationalized into measurable properties or formulated into philosophical theories. Philosophical assumptions must be met by philosophical reasoning. Though grounded theory can shed light on assumptions, it falls short in substantial theory development and is therefore supplemented by an ontological approach.

2.3 Doing ontology

Ontology is the *study of being*. And though the term as such “only” dates to 1613, where the German philosopher Rudolf Gloce-nius invented it to refer to that subfield of philosophy, which investigates being *qua* being and therefore not the being of any particular entity as such, it is the oldest discipline of philosophy (Holm, 1964). It is the aims of ontology that Aristotle describes in book epsilon (E) of *Metaphysics* when he writes:

“We are seeking the principles and the causes of the things that are, and obviously of things *qua* being. For there is a cause of health and of good condition, and the objects of

mathematics have principles and elements and causes (...) but all these sciences mark off some particular being – some genus, and inquire into this, but not into being simply nor *qua* being, nor do they offer any discussion of the essences of the things of which they treat” (Aristotle, 1995, 1025a).

Ontology, in other words, enquires into the *essence* or *meaning* of being. What falls outside its domain, according to Aristotle, is the study of *particular* or *singular* beings such as singular biological, geological, or sociological entities etc., which constitute the objects of study for the specific sciences that stake out a certain domain of beings and declares the full analysis thereof its desiderata. To practice ontology therefore requires a certain level of abstraction in the method of analysis.

There are, however, manifold ways to be, as Aristotle remarks (Aristotle, 1995, 992b), whereby the door is left open for what can be termed *regional* ontologies that studies different *types* of being (Husserl, 2009a, p. 23). This transition is also reflected in the way that ontology is mostly done in modern philosophy: it has throughout history shifted from the attempt to elucidate what is common to all beings as beings into the study of what makes different types of being what they fundamentally are. Doing ontology, in this sense, is therefore a matter of tracing the *modalities* of certain types of phenomena.

How one exactly does this is another question. Heidegger writes in *Sein und Zeit* that “Ontologie ist nur als Phänomenologie

möglich”¹ (2006, p. 35). By *phenomenology*, what is meant is not descriptions of psychological states of mind, which is often associated with it, but rather a *method* that is best summarized in Husserl’s motto: “Zu den Sachen selbst!”² In short, the phenomenological investigation explicates the way that the object of study *appears* in its many forms. Through the careful analysis and comparison of these appearances, the gradual crystallization of what constitutes the core or essence of the thing, its invariant properties in contrast to its contingent, expose themselves, which is a method known as the *eidetic variation* (Husserl, 2009a). Through the eidetic variation, the conditions of possibility for the object as such is brought to light, whereby it, to illustrate it simply, shows itself as necessary that a triangle needs to have exactly three angles to be a triangle, but whether it is blue or red is accidental. Additionally, as phenomenologists continually point out, the thing or matter at hand always presents itself *to* a subject, from which its mode of appearance cannot be completely distinguished. Therefore, the adequate analysis of the ontology of a thing or type of being must delineate *how, why, and to whom* it manifests itself the way it does and therethrough discover what makes the type of object what it fundamentally *is*.

¹ “Ontology is only possible as phenomenology”, my translation.

² “To the things themselves”, as it is commonly translated.

The investigation of this dissertation into the nature of health and disease and how it is measured can therefore be summarized as a *regional ontological analysis* by means of a *phenomenological approach*. That is, an investigation that traces the meaning and being of health and disease through the explication of the ways that these phenomena essentially appear. What the essential features of health and disease are, is a contentious issue, though they are commonly assumed to have physical, mental, and social dimensions since they can refer to bodily functions or dysfunctions, to experiences of being healthy or ill, to the sick person as a societal role (Hofmann, 2002) etc. These distinctions are fruitful, I claim, though I prefer the nomenclature of biological, phenomenological, and social. These dimensions are manifestations of one and the same phenomenon that has an invariable core, it is argued. Therefore, the ontological study conducted in this dissertation is also an integrative account that seeks to synthesize these different aspects of health and disease.

To flesh out how the ontological approach specifically proceeded, the analysis took the theories of normativism and naturalism as a starting point into the investigation of the assumptions about health and disease that the generic assessment practice is governed by. Using traditional theories as a point of entry is common to many ontological analyses to both draw on the fruitful findings of former philosophers and to explicate “what remains unthought” in these theories, to use a Heideggerian turn of phrase (Heidegger, 1997). The comparative analysis between naturalism and normativism and the points that came to light during the qualitative work suggested that there were aspects of health and disease that the theories did not explicitly take account of.

This sparked the theoretical articles of the dissertation, which all share a structural likeliness: they begin by examining established positions and notable proponents of archetypical theories within the philosophy of health. From these, certain weaknesses or blind spots are drawn out by explicating aspects of the phenomena that they are less capable of accounting for. This gives rise to the theory development, which serves the purpose of revising and supplementing conceptions of health and disease, ultimately, with the goal of explicating the conditions of possibility for and essence of health and disease.

2.4 Beyond bottom-up and top-down

The qualitative and ontological study work in conjunction by playing off the strengths and ameliorating the blind spots of each other. The qualitative approach enables insights into practice that philosophical theorizing alone cannot access, but whether the points that it derives are of a sufficient theoretical level can be difficult to tell. While the ontological approach can qualify imprecise theorizing, it cannot *a priori* glean insights into the practice. There is, therefore, a synergy between these approaches. The ambition is to reach a method beyond an inductive, bottom-up approach, where the data drove the formation of concepts a la grounded theory, and a deductive, top-down that interprets the data through a pre-conceived theoretical lens.

There is something artificial about the application of theory to practice; it introduces an approach that to a certain degree is external to the matter. Naturally, there is always an element of arbitrariness in selecting a research approach since this choice relies upon the personal sympathies or antipathies of the researcher. Whether the researcher can act as a neutral conduit or medium for the matter in investigation is a contentious issue, nevertheless, I strive to follow the principle that there is no method independent of the matter. In other words, that the matter at hand dictates the method instead of the reverse. This leads, as stated above, to the ontological approach aided by qualitative studies. Instead of two distinct methods working in isolation, however, I aim towards *striking a balance* between these. That is, to let the ontological analysis be driven by the topics that come to light through the qualitative study and to refine the qualitative studies through ontological theorizing, namely because the subject matter, generic measurement of health, calls for both approaches.

3. Assessing health and well-being

3.1 What is generic assessment? Initial clarifications

First and foremost, some clarifications are in order since what counts as a generic, self-reported health assessment instrument, and what exact type of considerations they elicit, is debatable. Here, four main themes will be highlighted, namely: 1) generic assessment is to be understood in contrast to *specific*, 2) objective parameters of measurement in contrast to *subjective*, 3) philosophical issues in contrast to *psychometric*, and finally, 4) some clarifications regarding the terminology must be made.

1) Since medical practice utilizes a host of different ways to assess health or disease and their effects on well-being, delimiting exactly what constitutes a generic instrument can be rather difficult, and the lines are often blurry between specific and generic instruments. What is here understood as a specific health assessment instrument, however, is a type of standardized measure, which contains well-defined, concrete items that relate to a single dimension of health or a specific state of being, whereas a generic instrument contains *multiple* dimensions and assesses the total state of health, disease, and well-being. A specific instrument could, for example, be the *Hospital Anxiety and Depression Scale*, “HADS”, (Zigmond & Snaith, 1983) that gauges the emotional life of a patient in clinical contexts – how well they are or are not doing. The instrument consists of 14 questions, 7 relating

to depression, 7 to anxiety, which, when aggregated, deliver an indication of whether and to what degree the patient suffers from these conditions. Though the HADS shares similarities with generic instruments by measuring mental health and well-being, it fundamentally operationalizes clinical symptoms of specific conditions, anxiety and depression, and does not purport to measure either social, physical, or the total state of health.

Generic assessment instruments can have well-defined, concrete items as well but draw conclusions about the overall state of health and well-being on several dimensions instead. The EQ-5D (Rabin & Charro, 2001), for example, is one of the most popular generic instruments that measures health-related well-being on five dimensions, namely mobility, self-care, usual activities, pain and discomfort, and anxiety and depression. Though the instrument leaves out social health, which was originally included but left out for the sake of simplicity and brevity (EuroQol, 1990), it still comprises both physical and mental health and additionally asks the responder to assess their own health as a totality from 0 to 100, 100 being perfect health, 0 being the worst imaginable. Since it consists of several dimensions and assesses the total state of health, it counts as a generic instrument.

Generic instruments, additionally, sometimes contain an element of preference elicitation, where the responders are asked to rank several hypothetical health conditions from best to worst, which are similarly utilized to compare the severity of health states. Although why the 'gut feelings' of responders about the severity of a hypothetical condition are adequate indicators of the actual severity of said condition remains an open question (Hausman, 2006). Whereas HADS operationalizes clinical symptoms or consequences of anxiety disorders and depression, EQ-5D

operationalizes a more abstract understanding of what constitutes the salient elements in a state of good or bad health.

2) To avoid confusion, there is moreover a distinction to be drawn between the assessment of health care and assessment of health. Formerly, the quality of a health care system was primarily measured by statistical parameters such as number of incidents of certain diseases among populations, of hospital admissions, of deaths following admissions, and so forth. The issue with these parameters is that they only indirectly and with great uncertainty inform us about the quality of the health services provided or the state of the patient under or after treatments. Recent years have therefore seen a movement from volume-driven to value-driven health care (Miller, 2009), which to a higher degree measures the quality of health care systems through the generic assessment of the health status and quality of life of patients. When discussing health assessment in this context, it is the generic and self-reported health assessment of individuals as such rather than health care systems and objective parameters described above that is meant.

3) Though psychometric issues of health assessment are important, they are not the topic of investigation in this project. Health economists' concerns primarily lie with the reliability and validity of the instruments. That is, with questions regarding how well the instruments measure what they purport to measure, how to avoid 'noise' in the measurements that distort objective read-

ings, how exactly to formulate the items of the questionnaire since different people might attach different meanings to a term such as “strong pain” etc. This is not to say that there are not genuinely philosophical questions within psychometry such as how intercultural differences are levelled out. For instance, personal freedom is of large importance to western populations, whereas community is of bigger concern to other cultures. The dimension of social health might therefore affect the overall well-being of an individual in different ways according to culture, and this needs to be reflected in the weightings of the different items. Similarly, very comprehensive instruments would perhaps deliver more precise readings, but it is unfeasible in practice to have responders spend hours filling out questionnaires. Therefore, a trade-off between simplicity and comprehensiveness is needed, and this requires reflections on the most salient aspects of the different dimensions of health, which itself is a highly philosophical question. Psychometrical issues have, however, been subjected to philosophical critique by others such as Hausman (2006, 2015), Stegenga (2015) etc., and will therefore only be treated in this context when relevant.

Rather, this dissertation investigates the philosophical assumptions and workings of generic health assessment instruments more generally. Similar analyses have been carried out of specific instruments (Kusier & Folker, 2020, 2021) or of the practice of happiness measurement (Kusier & Folker, 2022; Landes, 2015), but to a lesser extent of the conceptions of health and disease that health assessment relies upon. Here, I will give two examples of what constitutes a philosophical issue, which will be fleshed out later.

Firstly, in so far as the instruments are generic and thereby purport to measure the overall state of health in some way, they must make principial and methodical choices about what physical, mental, or social health are and what are salient indicators thereof. For example, most instruments assume that physical health is fundamentally linked to mobility, and some instruments, such as the EQ-5D, weight the physical dimensions higher than the psychological by having three items concern the former and two the latter. Even the fact that health is assumed to contain three isolable dimensions, namely physical, mental, and social, is a fundamentally philosophical assumption. These methodical choices fundamentally impact the readings (Pedersen & Wittrup-Jensen, 2002, p. 26), therefore, the construction of a philosophically sound conception of health is crucial to gaining adequate readings.

A second philosophical issue concerns the connection between well-being and health. Measuring qualitatively different states of health in and of themselves is tricky. How is a broken leg, for example, comparable to severe clinical depression? Both conditions have radically different natures, causes, and impacts. In lieu thereof, most opt for the heuristic measure of comparing conditions according to their evaluated effects on well-being or the state of overall health. This procedure, however, also harbors philosophical assumption, e.g., that there is a close enough connection that the measurement of well-being is also indicative of

the severity of the state of health; or that what matters about health is its impact on well-being. It is these sorts of issues, which give rise to fundamentally philosophical questions about the nature of health and disease, that are investigated in this thesis.

4) Lastly, when conducting the interviews, some responders were puzzled by the choice of words. Though all responders were familiar with the practice, they wondered why we opted for the terminology “health assessment instruments” rather than “(health-related) well-being assessment instruments”. While true that many of the instruments, such as the EQ-5D, measure well-being or rather health-related quality of life – which I return to later – well-being is also a heuristic measure to create tangible evidence regarding the differences between conditions, which are tricky to evaluate in themselves. Without measuring the conditions in terms of an effect, it is unclear how to assess the severity of the conditions or the effects of a medical intervention. Therefore, the instruments often assess well-being but thereby *also* measure health conditions. Whether health or well-being is emphasized as the object of study partly depends on the applications of the instruments. Other generic instruments, such as the SF-36 and SF-12, seem more directly to measure health in terms of physical and mental functionality (Pedersen & Wittrup-Jensen, 2002, pp. 17-18). The terminological confusion could however indicate that there is a need for closer analysis of the practice.

3.2 Normativism and naturalism in theory and in practice

What health and disease are and what philosophical assumptions about these that the practice relies upon is another and difficult question – both because there is no consensus concerning the na-

ture of these notions and because the practice is complex and driven by several concerns simultaneously. Health professionals, when asked about the nature of health and disease, often refer to WHO's definition (Pedersen & Wittrup-Jensen, 2002): "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 2020). This definition, if taken at face value, is extremely demanding. Anything short of complete well-being on all parameters of health is considered pathological, the conclusion seemingly being that there are no healthy people. Moreover, the definition seems to conflate well-being and happiness with health, but it is entirely possible to be healthy without being happy and happy without being healthy. However, despite the philosophical inadequacies of the definition, I would argue that it is misunderstood. From a philosophical perspective, the definition does not measure up, from a practical, it constitutes an action-guiding ideal (Callahan, 1973) – the aim of health care, ultimately, is the complete well-being of humankind, although this is an utopian ideal. Several assumptions about health and disease in the practice seemingly stem from this definition, namely that health has three dimensions and that it is fundamentally related to well-being. But it seems implausible that it is the sole driving philosophical assumption behind health assessment, for the definition makes no claims about what physical, mental, social health, and well-being are and therefore offers no concrete examples of what to measure. The

theories of naturalism and normativism, however, are more specific as to the nature of health and disease, and for this reason, they are used as the interpretive key in the study.

Together, naturalism and normativism constitute the archetypical theories of health and disease. Here, I will only briefly describe the theories as they are treated in greater detail in the first and second article. Naturalism is an umbrella term for theories, which share the assumption that health and disease essentially are value-free, naturally occurring phenomena. The most influential proponent of naturalism is Boorse, who in a host of articles from the 1970's and to this day has defended his *biostatistical theory* (Boorse, 1975, 1976a, 1976b, 1977, 2014). It is telling of the qualities of Boorse's theory that most philosophers of health since then have attempted to rebuke or substantially revise it. Despite this, the theory endures and has been defended and augmented by several philosophers such as Hausman (2012), Schramme (2007), Schwartz (2007), and others.

The biostatistical theory defines health as the *statistically normal ability of biological (sub)systems to contribute to the survival and reproduction of the organism* whereas disease is *subpar deviation therefrom* (Boorse, 1977). For example, diabetes is a disease since elevated levels of blood sugar usually cause conditions, which hinder the survival and reproduction of the organism, whereas statistically normal levels of blood sugar on average promote these organismic goals. It is important to notice that only subpar abilities are considered pathological because statistically abnormal conditions can be beneficial for the organism, such as abnormal intelligence, being abnormally fast etc. What is or is not a statistically normal function can, in principle, be determined wholly without reference to values and is therefore a descriptive

and objective property. Few naturalists would, however, be radical enough to claim that normative concerns play no part in matters of health and disease. In certain cases, diseases can even be desirable. Sterility, for example, is the failure of a bodily subsystem to carry out a statistically typical function yet can be wanted if the person wishes to remain childless. In other cases, sterility can be the source of great suffering and would therefore be labelled an illness on the biostatistical account since it constitutes a disease that is bothersome or painful, medically relevant, and exempts the person from certain societal norms (Boorse, 1975).

Normativism, on the other hand, is a fuzzier term. It comprises a host of different theories, which all in some way agree that health and disease are value-laden concepts – sometimes, all that seemingly unites them is their staunch opposition to naturalism (Kingma, 2019). Some normativists such as Engelhardt (1974, 1976, 1986), Sedgwick (1973) and others emphasize the critical dimensions of normativism. They argue that diseases are social constructions, often made with the aim of discouraging deviant or socially undesirable and unacceptable behaviour, evident in cases such as the pathologization of masturbation, hysteria etc. Others such as Agich (1983), Clouser et al. (1981), Cooper (2002), and Nordenfelt (1995) have more positive conceptions of normativism. They understand disease as unwanted conditions that cause the afflicted person pain or distress and hinder well-being, while health conversely consists in conditions that are

wanted and promote well-being, though it is variable what they understand by the latter.

On Nordenfelt's account, for example, a person: "(...) is completely healthy if, and only if, A [he or she] has the ability, given standard circumstances, to reach all his or her vital goals" (Nordenfelt, 2007, p. 7), where vital goals constitute the "essential goals" for the person that promote their happiness or well-being. Therefore, a case of sterility can be both healthy or pathological depending on the context and the afflicted person. If the sufferer does not want children, a case of sterility can benefit the person in reaching their vital goals, for others, it can severely hinder the realization thereof. Health is therefore tied to the ability to realize one's happiness and therefore resembles capability approaches to well-being (Nussbaum, 1993; Venkatapuram, 2011, 2013) in contrast to more subjectivist understandings of well-being as the psychological feeling of or self-evaluation of having well-being (Kahneman, 1999).

Both types of theories are included in the interpretation of the study because medical practice often is driven by both naturalistic and normative concerns. Functional indicators are rarely the only measure or aim of health, for physiologically abnormal conditions can be desirable, and health care does not solely cure diseases and restore health but also treat non-pathological states like cosmetic or reproductive issues etc. That is, health care is also driven by more normative concerns such as the attempt to promote well-being, as this is seen as the true value of and closely tied to health. However, doing well is not the only concern of medical practice, for the aim of health care is not to promote every type of well-being but only that form of well-being, which is medically relevant. Health care therefore requires a notion of

health and disease understood as functional capacities if it is to treat only medically relevant cases. The generic health assessment practice is a marriage of convenience between normativistic and naturalistic concerns, between concerns for functional indicators and well-being. Therefore, both theories are included in the study.

3.3 Article 1: The Normativist-Naturalist Puzzle: Functions and Assumptions of Health Assessment Tools

Authors: Thor Hennelund Nielsen, Lasse Nielsen, Søren Harnow Klausen. In review at *International Journal of Qualitative Studies on Health and Well-being*.

Please note, the present version of this dissertation is intended for online publication. To avoid copyright infringement issues, none of the articles that were carried out during this PhD are included in this document but are or will be available online through the relevant journals.

3.4 Challenges of and further reflections on the study

The time since submission has given rise to some reflections on certain issues of the article, which I briefly address in this subsection before treating the philosophical aspects of the operationalization of health and disease in the following chapter.

Firstly, a concession. In the effort to encapsulate as multifaceted a trend as health assessment, the definition winds up

somewhat unclear. The article reads: “Without committing to any precise and exhaustive definition, we shall understand health assessment tools as *a generic measurement of the effect of health on assessments of health-related needs in individuals or groups, comparison of treatments and other health initiatives*” (p. 37). A clearer definition might read: “A health assessment tool is an instrument for generic measurement of the health status of an individual. It can be used to monitor health status over time, to compare health status within and between groups, and to measure the effect and quality of treatment and healthcare intervention”, which encapsulates in a more lucid way the object of study.³

Secondly, it might be objected that the latent tension in the instruments between the measurement of functional indicators and the much more elusive and subjective experience of well-being does not hold for all instruments. Some instruments are seemingly more pure measures of well-being like the WHO-5; accordingly, the analysis misses the mark. However, in these cases it becomes an open question to what degree measures of well-being are generic rather than specific instruments. They are rarely multi-dimensional as generic instruments are and do not purport to measure the overall state of health but more specifically well-being. For this reason, they do not seem to be a relevant counter-example to the tendency described above.

Thirdly and lastly, due to the conflicting aims declared in the article, which in turn is described as a study of the philosophical assumptions of health assessment instruments *per se* and the

³ I owe this clarification to Anna Paldam Folker, who very generously acted as opponent at the pre-defence of this project.

assumptions underlying the application of the tools among health professionals, the purpose might seem unclear.⁴ To put it explicitly, the purpose of the article – and the project – is to investigate philosophical assumptions about health and disease behind generic assessment *as such*. Seeing as this, to a certain extent, is influenced by the applications of the instruments, the article also analyses these utilizations. This raises other questions, however, such as to what extent the results can be generalized across several professions, whether all responders make the same philosophical assumptions etc. These are valid concerns, but the purpose of the article was not an exhaustive overview of the entire practice but rather to distil substantial assumptions underlying the practice, which glean insight into the implicit philosophical rationale. Moreover, among the responders were also developers of the instruments who must be assumed to have special insight into their intended workings.

⁴ Anna Paldam Folker also called attention to this unclarity in the article.

4. Operationalizing health and disease

4.1 Instruments and “Denkstille” – Koyré & Fleck

Throughout the first chapters of the dissertations, I have maintained that the methods and ways of operationalizing health and disease within the generic health assessment practice are neither epistemologically nor ontologically neutral. On the contrary, they affect both conceptions of health and disease and the readings that the instruments deliver in fundamental ways. To reiterate, the instrument EQ-5D has three items pertaining to physical health and two mental health. This weighting presupposes a certain understanding of health and disease that favours physical dimensions and downplays social aspects and in virtue thereof delivers certain readings, which show physical conditions to have a larger effect on well-being. This is in contrast to other types of measurements like the WALY, which show social dimensions to have a larger effect on well-being than physical (Birkjær et al., 2020). It would, however, be erroneous to assume that disputes between ways of measurement can be adjudicated and the “true” measure that delivers the most objective readings be found. Rather, all *operationalizations* harbour substantial assumptions that influence the evidence produced.

In stating this, I am emphasizing a point from the French epistemologist Koyré that the practice of science ultimately grounds upon certain foundational theoretical assumptions and epistemological attitudes. Koyré treats this issue in the exposition of the transition from *the world of more-or-less to the universe of precision* (“du monde de à-peu-près à l’univers de la précision”),

as he coins it, during the scientific revolution of the 16th and 17th century (Koyré, 1953, 1971). Why is it, Koyré asks, that it took approximately 400 years from the invention of the first spectacles to the development of the telescope and microscope (Koyré, 1998, p. 139)? Though the material conditions were not great, the technological presuppositions were present. A rudimentary telescope or pair of binoculars can be achieved merely by placing one lens in front of another, and it therefore seems unlikely that the reason was a lack of technological competency.

This did not happen, however, because people of the late Middle Ages and the Renaissance lacked the *idea*, according to Koyré. For them, the pair of glasses had a clear and practical purpose: to enhance poor eyesight and aid in viewing objects which, all other things being equal, would be viewable upon closer inspection. The pair of glasses were, differently put, an *extension* of the senses. The telescope, on the other hand, served the different purpose of viewing objects, which lie *beyond* human faculties. The idea needed to be present for Galilei to turn the first rudimentary telescope, which contained more finely honed lenses and adequately calculated angles of refractions, towards the skies to see things that otherwise could not be seen. For Koyré, this gives rise to the distinction between a *tool* and an *instrument*. A tool, as stated above, serves a practical purpose, it enhances “the human limbs and senses”, whereas the instrument is “a materialization of

thought” (Koyré, 1998, p. 141), it is manufactured because of and via theory, though it afterwards may serve practical purposes.

The distinction can be exemplified further through the popularization and refinement of “chronometers”, Koyré argues, which also roughly took place during the 15th and 16th centuries. Beforehand, watches were rare and only gave imprecise readings of time, which reflected a view of life that was less preoccupied with the exact pinpointing of time. Time and the experience thereof were regulated by the seasons, the break of day and dawn, and the occasional chime of the church bells. It was the world of more-and-less, as Koyré terms it. During this time, pocket watches gradually became more popular, but the definitive change happened with the scientific chronometers, the pendulum and spiral watches, respectively, that delivered exact readings of time. These instruments themselves were predicated on the theoretical tendency towards the *mathematization of time*, the universe of precision:

“ (...) ’the book of nature is written in geometrical character’ declared Galileo; this implies that in order to reach its goal modern science is bound to replace the system of flexible and semi-qualitative concepts of the Aristotelian science by a system of rigid and strictly quantitative ones. Which means that modern science constitutes itself in substituting for the qualitative or, more exactly, for the *mixed* world of common-sense (and Aristotelian science) an Archimedian world of geometry made real; or – which is exactly the same thing – in substituting for the world of the more-or-less of our daily life a universe of measurement and precision. Indeed this substitution implies automatically the exclusion from – or the relativation in – this universe of every-

thing that cannot be subjected to exact measurement (...) Quality, indeed, is repugnant to the precision of measure” (Koyré, 1953, p. 223).

This quantification diffused into the rest of society and imposed a different regime of ordering life, for soon enough the scientific watches also became the watches of everyday life.

In the case of health assessment, there is no need to be as hyperbolic, for the empirical study of the first article demonstrates that quantitative measurements do not rule out qualitative. Yet, it is tempting to interpret the “paradigm shift” announced with the shift from the medicine of yesterday to evidence-based medicine (Guyatt et al., 1992), which generic health assessment is spiritually related to, in the same vein. That is, as a transition of medical theory and practice from an imprecise *conjectural art* (Ginzburg, 1999, p. 88), which functioned through abductive reasonings on idiographic grounds, to a *calculable science*, which strives towards precise, nomothetic knowledge of mechanisms and effects – towards precise quantifications of qualitative phenomena.

It is through technological tools and instruments that medicine achieves this purpose. The stethoscope, for example, allows the health professional to listen to internal sounds of the body and thereby enhances the natural senses, who, before the invention of this tool, had to put their ear to the patient’s body to assess the beatings of the heart. An IQ-test, on the other hand, embodies a

host of theoretical and normative assumptions. Not only is the IQ-test predicated on an understanding of intelligence as abstract pattern recognition and problem solving measured on a quantitative scale, but it even posits standards about normal and abnormal values. The facts and evidence that the IQ-test elicits is predicated on strong theoretical assumptions, which the legitimacy of its results is contingent upon.

Though it might be to state the obvious, the facts that these instruments produce are not simply facts. Poincaré once stated that: “if a research worker had infinite time at his disposal, it would suffice to tell him: Look, but look well!”, but there is, as Fleck holds, no neutral observation (Fleck, 1986b, p. 59). Behind the observation lies a host of presuppositions, a tradition, a theoretical outlook, a scientific culture, the worldview and experiences of the researcher etc. There is a whole sociology of knowledge production that cultivate certain cultures of thinking (Fleck, 1980, 1986a), which Fleck coins “Denkstile”, *styles of thought*, that are always implicated in the practice of science.

4.2 Four tendencies

If generic health measurements are instruments that embody certain ideas and theoretical presuppositions, and if the generic health assessment practice is contingent upon a certain style of thought, which theoretical assumptions and styles of thought are then operationalized to measure health and disease? What is meant by *operationalization* in this context is essentially the process whereby theoretical or abstract assumptions and concepts are converted to measurable properties on a questionnaire. Below, four important features of this operationalization are thematized,

and to a certain extent also problematized, although the purpose here is not to deliver an extensive critique.

4.2.1 Quantifying qualitative conditions

A measurement makes a host of related phenomena conform to a standard, which structures and shapes the measured phenomena on the same scale to enable gradations and comparisons between them. Unlike measuring the magnitude of alike phenomena such as temperature in terms of Celsius or sound volume in terms of decibel, this is not immediately possible with different states of health. There is not necessarily a natural basis of comparison between a broken leg and an anxiety disorder because they are fundamentally different conditions, which affect the afflicted in various ways. One of the most common denominators would perhaps be the pain that the conditions inflict, but there is a difference between mental and physical anguish, and not all conditions cause pain. Therefore, states of health are measured in terms of their effects on well-being, which is posited as the common denominator for two reasons. Firstly, because it is important to promote well-being since it – allegedly – constitutes the value of health, and secondly, in measuring well-being an insight can be gleaned into the severity of health conditions, which on their own terms are hard to compare.

It is difficult to conceive of a person with a high degree of well-being without also assuming that she possesses a certain de-

gree of health. To imagine a clinically depressed person with a deeply satisfying and fulfilling life seems counterintuitive. Aristotle formulates this well in the thought that there are “no happy people on the rack” (Aristotle, 1995, 1153b), and furthermore, that health is a prerequisite for the good life. Evidently, there is a certain connection between these phenomena, which speaks to the fact that the severity health conditions is measurable through well-being – especially in matters of mental health. However, depending on the definition, health without well-being is possible. Though these cases might be rare, it is not impossible for a person to be physically, mentally, and socially well-functioning and still fundamentally unhappy, which indicates that it is not unproblematic to infer well-being from the often quite functionally founded items on the questionnaires. Indeed, readings offer no insight into the etiology of the measured levels of health and well-being of conditions, and what the evaluation is influenced by. There is an epistemological challenge here in that individual items on the questionnaires often concern functional indicators – here understood broadly as measurements of levels of performance, which need not solely concern physical aspects but also can refer to mental and social – while the aggregated scores amount to the overall state of health and well-being.

Though identical terms are used, several understandings of well-being are actually at play in generic assessment. The terms (good) health, well-being, and health-related quality of life are often used interchangeably, but there is, as previously stated, no theoretical consensus about the nature of these phenomena. The overall state of physical, mental, and social well-being that the instruments measure seems at first glance to invoke a more objectivist understanding of well-being as a sort of well-functioning.

The Nottingham Health Profile (NHP), for example, has dimensions concerning energy levels, pain, emotional reactions, sleep, social isolation, and physical abilities, which together amount to the overall state of well-being (Hunt et al., 1981). In these cases, the instruments seem to echo an understanding of health that already Canguilhem described: “Health, taken absolutely, is a normative concept defining an ideal type of organic structure and behavior; in this sense it is a pleonasm to speak of good health because health is organic well-being” (Canguilhem, 1991, p. 137).

However, one should be cautious to draw this conclusion, for it is *self-assessed* and *self-reported* HRQoL, which seemingly drive the instruments toward more subjectivist understandings. At times, the instruments contain questions that specifically address the evaluated well-being of the responders, i.e., how well they judge themselves to be doing, and this echoes understandings of well-being as satisfaction of subjective preferences (Griffin, 1988). The instruments, therefore, harbor substantial, conflicting assumptions about what health and HRQoL are.

Several assumptions influence the quantification of the qualitative phenomena of health and well-being. A strong enough connection is assumed to dictate the relation between self-reported, health-related quality of life and the nature and severity of “actual” conditions of health that the latter can be inferred from a measurement of the former. It is assumed that an assessment of the overall state of health and well-being can be inferred from the

specific items of the questionnaires, which often focus on functional dimensions. Finally, the instruments are predicated on a sufficient level of theorization of important aspects of health and the assumption that these are adequately defined in the items of the questionnaires.

4.2.2 Objectivizing subjective evaluations

At first glance, the instruments appear to be multidimensional. However, an equally strong case could be made for the fact that they are *unidimensional* since they solely measure the judgments of the responders. The readings hinge entirely on the (self)evaluations and elicited preferences pertaining to health conditions of the responders. From this, an inference to states of health in themselves is made – so it seems when readings are used in the context of research on, e.g., intervention effectiveness. The empirical study also confirmed a tendency among the health professionals to assume that, in principle, the patient could make the most adequate judgments about their own conditions of health, and that health generally consisted in a form of subjective well-being. Although it is an open question, if health is of a more subjective character, whether and to what degree objective measurements of health conditions “in themselves” can be made.

There are several unresolved questions concerning the objectivization of subjective evaluations. Certain philosophers like Gadamer hold that the thematization and measurement of health runs counter to health as such:

“Messungen, ihre Maßstäbe und die Maßverfahren bedienen sich einer Konvention, in deren Gefolge wir an die Dinge herantreten und sie der Messung unterwerfen. Aber es gibt

auch ein natürliches Maß, das die Dinge in sich selbst haben. Wenn man Gesundheit in Wahrheit nicht messen kann, so eben deswegen, weil sie ein Zustand der inneren Angemessenheit und der Übereinstimmung mit sich selbst ist, die man nicht durch eine andere Kontrolle überbieten kann. Deshalb bleibt die Frage an den Patienten sinnvoll, ob er sich krank fühlt“, later adding, ”Aber es wäre fast lächerlich, wenn einer einen fragte: ‘Fühlen Sie sich gesund?’ Gesundheit ist eben überhaupt nicht ein Sich-Fühlen, sondern ist Da-sein, In-der-Welt-Sein, Mit-den-Menschen-Sein, von den eigenen Aufgaben des Lebens tätig oder freudig erfüllt sein” (Gadamer, 1994, pp. 138-139 & 144).⁵

For Gadamer, health is interpreted as a phenomenological *state of flow*, which, because it is inherently subjective, is unmeasurable

⁵ “Measurements and the criteria and procedures by which we arrive at them depend on conventions. It is in light of these that we approach the object of enquiry and subject it to measurement. But there is also a natural form of ‘measure’ which things bear within themselves. If health really cannot be measured, it is because it is a condition of inner accord, of harmony with oneself that cannot be overridden by other, external forms of control. It is for this reason that it still remains meaningful to ask the patient whether he or she *feels* ill (...) but that it would be border on the absurd to ask someone ‘do you feel healthy?’ Health is not a condition that one introspectively feels in oneself. Rather, it is a condition of being involved, of being in the world, of being together with one’s fellow human beings, of active and rewarding engagement in one’s everyday tasks” (Gadamer, 1996, pp. 107-108 & 113).

and runs the danger of being broken when it is constantly evaluated. Although there is a case to be made that the preoccupation with health and the measurement thereof in itself can become unhealthy, as problems such as overdiagnosis (Brodersen et al., 2018; Green et al., 2020), medicalization (Conrad, 2007) etc. demonstrate, Gadamer overstates his case since it becomes the expression of a too one-sided subjectivism.

The relation of the self to the self and its body is an ambiguous matter. On the one hand, it is a privileged view. No one can know exactly how I experience myself and the world, therefore, the self-relation contains a unique perspective of one's bodily and mental workings and whether these accord with the goals of the person's life. On the other hand, self-knowledge is the hardest form of knowledge, as the Socratic dictum goes. Individuals in general are not infallible epistemological subjects, and objective evaluations of conditions require demanding insights. In the evaluations, the instruments also objectivize the idiosyncratic judgments of the responders. The problems with this extend beyond psychometrical issues, and often issues of adaptation, "false consciousness", biases, and so on muddy the picture (Guillemin et al., 2019). For example, empirical studies show that people are notoriously bad at judging what it is like to have a physical disability, which is consistently judged to have an extreme impact on well-being although persons with these forms of disabilities adapt to their circumstances and have normal degrees of well-being (Albrecht & Devlieger, 1999). The instruments here risk assessing the cultural and aesthetic prejudices rather than the conditions themselves. To what extent instruments assess conditions of health and well-being or rather subjective perceptions reached by questionable lines of thought is therefore debatable.

A further trend is the implicit tendency towards *psychologizations*, which in this context means to posit and focus on experience as a crucial measure and aspect of health, i.e., the experience of functional disturbances, of lacking mobility, of feeling down etc. If and to what degree psychologizations are an issue depend naturally on the object and purpose of measurements. If the purpose is to measure the experience of subjective HRQoL, applying the instruments, although still vulnerable to the epistemological issues mentioned above, is more unproblematic. Often, however, the purpose is to measure the conditions in themselves, and this inference entails substantial assumptions.

A distinction is often drawn between illness and disease (Carel, 2016), i.e., the experience of illness and the bodily state of disease. It is entirely possible to feel sick and be healthy, as in cases of hypochondria, or to feel healthy and be sick, as in asymptomatic diseases such as cancer in the early stages. This puts the relation between experiences of health and disease and the conditions as such into question – even the nature of and relation between embodiment and cognition. Indeed, whether the patient knows best seemingly depends on whether their own body and state of being are transparent to them. I return to this problem in chapter 6, but cite Kierkegaard here who problematizes namely this assumption:

”I Almindelighed antager man, at et Menneske, naar han ikke selv siger, at han er syg, er rask, end sige, naar han selv siger, at han er rask. Lægen derimod betragter Sygdommen anderledes. Og hvorfor? Fordi Lægen har en bestemt og udviklet Forestilling om, hvad det er at være sund, og efter denne prøver han et Menneskes Tilstand. Lægen veed, at som der er en Sygdom, der kun er Indbildning, saaledes ogsaa en Sundhed; han anvender derfor i sidste Tilfælde først Midler, for at faae Sygdommen til at blive aabenbar. Overhovedet har Lægen, just fordi han er Lægen (den Indsigtsfulde) ikke ubetinget Tiltro til Menneskets eget Udsagn om sit Befindende. Hvis det var Tilfældet, at hvad ethvert Menneske sagde om sit Befindende, om han er sund eller syg, om hvor han lider o. s. v., var ubetinget til at stole paa, saa var det at være Læge en indbildning”⁶ (Kierkegaard, 2006, p. 139).

4.2.3 Static assessments contra dynamic states

The readings of the instruments are snapshots. They reflect the respondents’ momentary evaluations of their state of health and well-being. Isolated readings can be fallacious and misleading,

⁶ “As a rule, a person is considered to be healthy when he himself does not say that he is sick, not to mention when he himself says that he is well. But the physician has a different view of sickness. Why? Because the physician has a defined and developed conception of what it is to be healthy and ascertains a man's condition accordingly. The physician knows that just as there is merely imaginary sickness there is also merely imaginary health, and in the latter case he first takes measures to disclose the sickness. Generally speaking, the physician, precisely because he is a physician (well informed), does not have complete confidence in what a person says about his condition. If everyone's statement about his condition, that he is healthy or sick, were completely reliable, to be a physician would be a delusion” (Kierkegaard, 1980, p. 23).

the same way that a single blood test may be, but this can to a certain extent be mitigated through comparative, longitudinal studies. That is, a series of snapshots where the relative gain or loss in self-evaluated health between readings is most important; whether improvements or deteriorations have taken place. Despite these measures, however, it could be argued that the momentary and static evaluations conflict with the way that health and disease unfold in reality. Health and disease are not fixed states but fundamentally *temporal processes*.

This holds both for the physiological disease and experienced illness. Pathological bodily processes have their courses from a point of onset to early symptoms, peak of the disease and either to remission, stabilization, or death. Experienced illness has its own peculiar phenomenological structure. It unfolds both as a “stream of ebbs and flows”, that is, as constantly shifting states of suffering, relief, hope, despair etc. (Toombs, 1990). As such, it does not consist in a series of points but in a continuum of retained memories, experiences of the present, and future expectations, known as the difference between retention, the immediate present, and protention in Husserl’s analysis of time (Husserl, 2013). The bodily and experienced dimensions do not work in isolation but as temporally interwoven. This is the case for simple as well as more complex cases like chronic illnesses that can have extended periods or short bursts of being asymptomatic or experiencing suffering and uncertainty etc.

It therefore seems, despite the attempt to mitigate the issues, that there is a structural asymmetry between the static readings and the dynamic processes of health. Can a reading pre-surgery, immediately post-surgery and after convalescence, for example, capture the way that the health condition unfolds temporally or “merely” the momentary snap judgment of the responder? Intuitively, it seems that something is lost in translation when the reading is abstracted from the lived experience.

4.2.4 Standardization contra individual variability

Generic instruments must contain a host of invariant factors common to all conditions to measure the overall state of health on a standardized basis. It is predicated on the assumption that, although individual variation exists, health conditions share certain common features. It is in virtue thereof that the instruments rely on substantial assumptions about the nature of health. The requirement for comprehension naturally steers the instruments towards more holistic models, and the influence from WHO’s definition delivers the understanding of health as having three dimensions, namely physical, mental, and social. Moreover, it implies certain choices regarding the importance of the different dimensions including the weighting of the items, i.e., how much they count in the aggregated score. Lastly, it must determine which factors offer insights into these more general dimensions, e.g., that the ability to climb stairs is a reliable indication of physical health.

A sort of essentialism is at play when health through its countless instantiations is assumed to have invariant features consisting of, for example, the absence of negative emotions, ability to climb stairs and so on. The instruments are to a certain extent

normative – although not in the technical sense described above – in that they operationalize an ideal understanding of health that consists in fixed levels of performance of various bodily and mental functions. But, to reiterate, there is no consensus regarding notions of health or disease. To cite Canguilhem, it could be argued that:

“What characterizes health is a capacity to tolerate variations in norms on which only the stability of situations and milieus – seemingly guaranteed yet in fact always necessarily precarious – confers a deceptive value of definitive normalcy. Man is truly healthy only when he is capable of several norms, when he is more than normal. The measure of health is a certain capacity to overcome organic crises and to establish a new physiological order, different from the old” (Canguilhem, 2008b, p. 132).

In other words, health consists in the individual’s ability to establish new ways of life when others become unviable. Therefore, health cannot be fixated in certain performance levels of certain capacities but is dependent on the individual’s adaptability to certain conditions. Such a conception would be decidedly more difficult to operationalize.

The practice is predicated on somewhat of a paradox. On the one hand, there is an explicit recognition of individual varia-

bility as the empirical study indicated – that conditions vary between people and affect their overall HRQoL in different ways – and, on the other, there is a need for standardization that allows for comparisons between conditions, demographics etc. If individuals and their conditions are complex and variable, and the instruments are static and fixed, then it is a matter of debate whether generic assessment is able to capture all or even the most relevant aspects of the individual's health. The answer, most likely, would be *no* since even generic instruments are not validated for all demographics, and when to apply which instrument is up to the expertise of practitioners and researchers. This concession, however, seemingly restricts the scope of generic assessment that strives to universalize standardized measures. This points to a paradox that characterizes the practice: to gain inter-comparable readings, individual factors must be levelled out, yet the individual's state of being is precisely what is elicited.

4.3 Can generic instruments measure health?

If the above analysis stands to reason, can generic instruments then measure health? Perhaps this is the wrong way to frame the question. Instead of asking about the measurability of health – a specific conceptualization of health and well-being *can* be measured as the instruments indicate – perhaps the question is rather what the measurements tell us about which type of phenomena and with what level of certainty. On the one hand, if the purpose of the instruments is restricted to the measurement of subjective evaluations, which are combined with other forms of investigation, the greater the reliability of the measurements becomes, although these assessments still have their issues. If, on the other hand, the instruments are thought to deliver objective readings of

health conditions in themselves, the readings become more imprecise and uncertain, and it is questionable whether they actually capture the desideratum. Whether and to what degree this is an issue depends on the purpose and utilization of the results.

Specific instruments deliver specific results, however, the larger the scope of the instruments, the fuzzier the results become. Health as such is something more elusive than mobility or mood, and this is most likely the reason why the rationale of the instruments exhibits somewhat contradictory tendencies. The instruments are torn between measuring functional indicators or subjective well-being, between the multi- and unidimensional, between objectivizing and subjectivizing or individualizing and universalizing approaches, between static readings and dynamic conditions. However, when the instruments contain unclear conceptualizations that make the assessment criteria more abstract, it also reflects inherent conflicts or latent issues within philosophy of health, I would argue. And, it therefore seems, a clearer picture of the nature of health and diseases is needed to provide a more adequate way to measure and assess health.

4.4 Three themes for further investigation

Like the generic assessment practice, philosophy of health is also torn but in a deadlock between normativism and naturalism. Certain themes that came to light during the empirical study and interpretations thereof, e.g., the dynamicity and individuality of

health conditions, do not figure to a significant extent in the state of the art. Instead of arguing that this is caused by lack of coherence between practice and theory or insufficient theorizing, I take inspiration from these findings. In the theoretical work that follows, I draw out and explore three themes that have emerged during the preceding analysis and let them square off with established branches of philosophy of health. Listed in the order they appear, these are:

1. An understanding of health and disease as dynamic and processual states that blend naturalistic elements of functionality with normativistic of organismic norms. This is brought to bear on the traditional discussion of concepts of health and disease in chapter 5.
2. A phenomenological understanding of health and illness that is less psychologizing and more dynamic than the current notable theories of the phenomenology of illness. This is carried out in the 6th chapter.
3. Finally, an attempt to define and stake out what it means for health and disease to be phenomena of great individual variability and to pave the way for an integrative conception of health and disease. In chapter 7, this is related to current trends within medicine towards personalized and individualized medicine, which insufficiently conceptualize what “medical individualism”, as I term it, entails.

5. A dynamic and processual theory

5.1 The deadlock of conceptual analysis

Since the 1960's, a lively and still ongoing discussion has taken place about the correct definition of health and disease that gradually crystallized into two archetypical theories, namely normativism and naturalism, which occasionally are combined to form hybrid theories (Hofmann, 2002; Wakefield, 1992). The reason why this discussion stays relevant is the fact that several fields rely upon definitions of health and disease. How medicine is practised, i.e., what is construed as a pathological or normal state that calls for treatment, is an example of this, but definitions also play a role in other fields such as health justice (Daniels, 2008; Nielsen, 2015; Venkatapuram, 2011, 2013). How to make fair prioritizations, what societal consequences ill or good health have etc. are questions that hinge upon the correct understanding of health and disease. The discussion of these concepts therefore has far-reaching implications.

Despite the differences between normativism, naturalism, and hybrid theories, they (roughly) share the same method of approach towards defining health and disease. Firstly, the theory of the opponent is rebuked through copious counterexamples, secondly, a seemingly more fitting definition is posited, thirdly, this definition is shown to cover much of what is ordinarily understood or classified as a disease – more than the opposing theory –

following which either normativism or naturalism is rejected. Though this is partly a caricature, the discussion seemingly is stricken by a stalemate, revolving around examples and counter-examples that never quite fit the bill.

There are several reasons for this – barring the fact that the concepts are complex and/or vague and therefore hard to pin down in exact and concise definitions. One important reason is the method of approach, which is rooted in conceptual analysis that seeks to harmonize philosophical definitions with everyday understandings of health and disease (Murphy, 2012). However, whether scientific and philosophical understandings are congruent with common sense or folk psychology regarding these notions is highly contestable. Both because everyday understandings are vague, and the terms have several meanings, but also because the phenomena that are to be defined are complex and multifaceted.

Given this disagreement, it might seem obvious that philosophy should side with natural science (Lemoine, 2013, 2014), but there are noteworthy cases where folk intuitions seemed more adequate than scientific, e.g., in the declassification of homosexuality as a disease, which was achieved by the peoples' rights movement. Indeed, it might be argued that medicine for a very long time had very questionable intuitions about what constituted diseases such as masturbation (Engelhardt, 1974) including a number of different classifications that have since been rejected or revised. Normativists take this to entail that concepts of health and disease are deeply political and normative, and that there are no unbiased judgments. To this critique, the naturalist could object that the failure of previous times to define and correctly apply concepts of health and disease does not preclude the existence of an adequate notion, and that medical science, though fallible, still

is better than the alternative. Or, it might be argued, that attempting to define health and disease *as such* is problematic.

5.2 Is eliminativism the answer?

Since the 1990's and in recent years, this stalemate has elicited critical responses from *eliminativists* like Hesslow (1993) and Worrall & Worrall (2001), who question both the feasibility and usefulness of constructing a concept of health and disease. Hesslow's and the Worralls' critique can be summarized as follows: if 1) there seemingly is no adequate concept of health and disease, and 2) practitioners have no issue recognizing what requires treatment and what does not, why bother defining these terms? This leads Hesslow to conclude "(...) that the concepts 'disease', 'health', and 'illness' do not play any significant role in medical science" and "(...) that the concept of disease is superfluous" (Hesslow, 1993, p. 3), while Worrall and Worrall draw the even more radical conclusion: "(...) that there is no such thing as disease [in general]", only diseases (Worrall & Worrall, 2001, p. 54).

According to the eliminativists, defining something as a disease is extraneous to the medical assessment; a second-order or meta-level judgement, or, to put it more pejoratively, a purely academic exercise. Removing the disease label will therefore have no appreciable impact on medical practice because medicine does not solely treat diseases, and because doctors can assess symptoms without these concepts. While the critics undoubtedly are

right in stating that a doctor does not strictly *need* a concept of disease to prescribe antibiotics against infections, I am not convinced that the notion is as easily disentangled or as divorced from practice as they claim. In fact, notions of health and disease play a more insidious role in medical practice by shaping inclinations and perceptions of both health professionals and patients.

For example, the status of whiplash as a disease is disputed within the medical community. It is recognized by some to be a disorder, while others claim that it is fabricated (Malleon, 2002). Taken in conjunction, some of the evidence paints quite a dubious picture of the disorder: despite attempts, researchers have yet to locate the structural damage caused by whiplash to either muscular, bony, or connective tissue (Ferrari et al., 1999). In countries where the syndrome is not commonly known or treated, the cases of late whiplash syndrome dwindle drastically. A study conducted in the mid-nineties by Schrader et al. (1996) in Lithuania, found that most of those who experienced neck pain and headaches after an injury were already afflicted by chronic neck pain and headaches pre accident. There was a marginal increase in numbers of persons who experienced pain in the upper extremities following an accident, but it was not statistically significant, and none of the persons in question reported feeling impaired because of the accident. Another study suggests that treating whiplash as a fully-fledged disorder seems to exacerbate and prolong the symptoms. When removing economic compensation from insurance in Saskatchewan, Canada (Cassidy et al., 2000), the incidence of claims greatly decreased along with the intensity of the symptoms, while recovery rates increased.

Whether whiplash is a constructed or genuine disorder is in this context a moot point since the classification of whiplash as a

disease – and the knowledge of this fact – has medically significant implications. Hypostasizing symptoms, such as a bruised and sore neck, psychological trauma etc., as a syndrome, demonstrably affects not only the judgement of the medical practitioners, e.g., a greater increase in diagnoses, but also the self-conceptions of the afflicted persons, exacerbating the symptoms, thereby requiring stronger measures to alleviate the impairment, ultimately creating looping effects (Hacking, 1996). However, since the eliminativists never claimed that medical practice was infallible, it might be objected that whiplash is merely an exception to the rule that the classification of conditions as healthy or sick is in general irrelevant to medical practice.

This seems to be a dubious claim. Another significant example to the contrary is the host of disorders known as *functional disorders*, which seems to embody the inverse relationship to that of whiplash. The disorders are grouped under the umbrella term “functional disorders” because the aetiologies of the diseases are unclear, and the symptoms seemingly remain purely functional. Especially those afflicted by chronic fatigue syndrome have been marred by the fact that functional disorders did not fit into the mould of a traditional conception of disease, which raised doubts among medical professionals whether the disorders could even be characterized as such, directly affecting the treatment – or lack thereof – that sufferers have received. Once again, it is the status as a disease that directly affects the treatment and understanding

of the conditions. These are not negligible so-called “grey-zone” cases like wrinkles (Worrall & Worrall, 2001, p. 35) but serious maladies that severely disable the afflicted persons.

A diagnosis is, at its core, the positing of certain symptoms as a disease, which is a prerequisite for treatment in modern welfare states (Schramme, 2019). This classification is, however, predicated on what we understand by the terms “health and disease” and the concepts therefore do have consequences for practice. With the tendencies towards pathologization (Conrad, 2007), medicalization (Fitzpatrick, 2001), healthization (Rose, 2007) etc. that many western countries are undergoing, the discussion is as relevant as ever. Rather than continuing in the track of conceptual analysis, however, another approach could be attempted, namely an *ontological* approach.

5.3 Article 2: The Dynamics of Disease – Towards a Processual Theory of Health

Author: Thor Hennelund Nielsen. In press at *Journal of Medicine and Philosophy*.

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5.4 A positive notion of health?

To conclude this chapter, some reflections on a notion, which was not treated in the article, is warranted, namely *positive health*. Boorse explicitly rejects the thought of positive health on several grounds (Boorse, 1977). Firstly, since health is normal function-

ing according to the statistically average species design, positive health must be a sort of excellence in natural capacities, but how does excellence in one ability, which often precludes excellence in other abilities, translate to greater health in total? Is the person with a natural propensity for mathematics, for example, healthier than the talented marathon runner? This seems to involve questions about what is most valuable to us, Boorse argues, and the argument has therefore moved beyond health and disease – as these are value-free and naturalistic phenomena – into the domain of ethics. Normative theories would welcome this development since positive health could be construed as a higher-than-normal degree of well-being, but this view still faces the circumscription problem.

Intuitively, however, there seems to be a case for the distinction between being healthy and being in good health even on naturalistic grounds. For example, newer theories within medical research are increasingly discovering the *robustness* of living systems, i.e., the “property that allows a system to maintain its functions against internal and external perturbations” (Kitano, 2007), which does not consist in excellence within specific abilities but refers to the overall ability of the organism to preserve and further itself. Canguilhem describes this characteristic of life and health in the passage, which was partially quoted above but here is rendered in full:

“Now, to live, already for animals and even more so for man, is not merely to vegetate and conserve oneself. It is to confront risks and to triumph over them. Especially in man, health is precisely a certain latitude, a certain play in the norms of life and behavior. What characterizes health is a capacity to tolerate variations in norms on which only the stability of situations and milieus – seemingly guaranteed yet in fact always necessarily precarious – confers a deceptive value of definitive normalcy. Man is truly healthy only when he is capable of several norms, when he is more than normal. The measure of health is a certain capacity to overcome organic crises and to establish a new physiological order, different from the old. Health is the luxury of being able to fall ill and recover. Every disease is, by contrast, a reduction of the power to overcome others” (2008b, p. 132).

No organism goes through life without suffering disease. From a statistical vantage point, disease is normal, and absence of disease is abnormal. What marks positive or good health of an organism is its capacity to endure, to excel in terms of robustness, resilience, and adaptability, and to establish new organismic norms – especially when these are put to the test. Though it remains provisional, this is a promising avenue for the processual theory of health to explore.

5.5 Concluding thoughts on chapter 5

This chapter sought to explicate and unfold what it means for health and disease to be dynamic, processual, and temporal phenomena, which the analysis of health assessment hinted at. By taking an ontological approach that explicates what it is for an

organism to be healthy or sick, one can circumvent the snares of conceptual analysis that seeks to harmonize folk psychology with philosophical conceptions. Inversing the relation, namely that in an organismic sense what is important is not to live up to a predetermined and abstract standard but to the demands for adaptation that the organism is exposed to given its inherent normativity, puts matters in a new light. Then it becomes a matter of doing rather than being, as the article in this chapter argued. Still, there was a distinct element that the analysis only partially unfolded, namely the givenness of the disease to the afflicted person, and what adaptation entails on a phenomenological level. The next chapter delves into the phenomenological dimensions of the ontological analysis.

6. The phenomenology of health

”It is in moments of illness that we are compelled to recognize that we live not alone but chained to a creature of a different kingdom, whole worlds apart, who has no knowledge of us and by whom it is impossible to make ourselves understood: our body. Say that we met a brigand by the way; we might yet convince him by an appeal to his personal interest, if not to our own plight. But to ask pity of our body is like discoursing before an octopus, for which our words can have no more meaning than the sound of the tides, and with which we should be appalled to find ourselves condemned to live”

(Proust, 1932, p. 928).

6.1 Phenomenology and its importance for philosophy of health

Phenomenology hails from the early beginning of the 20th century, where Husserl, inspired by Brentano’s *descriptive psychology*, conceived it as an independent and foundational method of philosophy in *Logische Untersuchungen* (Husserl, 1968; Zahavi, 2011). At the time, philosophy had devolved into unsystematic life philosophies and positivism, and Husserl wished to restore philosophy to the status of a “rigorous science” (Husserl, 1987). A purely naturalistic oriented philosophy, Husserl argues, is based on an abstraction of the things as they first and foremost and primarily are, namely as *given*. Phenomenology is, briefly put, the study of *appearances* or *phenomena* (Sokolowski, 2000). However, phenomena have distinct aspects – they contain a *what*, the phenomenal content and qualities, a *how*, the mode of appearance,

and a *to*, the subject to whom they appear. These different dimensions of the phenomena are what phenomenology analyses.

Phenomenology is, however, more than a description of the contents of mind for it does not strive to elucidate my private experiences or my private outlook of the world but rather *essences*. As such, it strives to explicate invariant structures and truths of the subject and the world and becomes a science in virtue thereof. Since the time of Husserl, phenomenology has undergone many instantiations and have expanded its repertoire of themes, for example, with Heidegger's *fundamental ontology* and its emphasis on the temporal embeddedness of existence or Merleau-Ponty's explication of the corporeal nature of the subject etc.

Phenomenology is important to philosophy of health because it provides both a method and a theme of analysis, which is unavailable to a strictly naturalistic approach. This is connected to one of the most – if not the most – crucial insights of phenomenology, namely the *non-objective nature of the subject*. The human being has a corporeal and mental nature, and it can *reify* its own existence or be *reified* by others. This happens, for example, when the human being is reduced to a diagnosis or to its body, but neither the diagnosis nor the corporeal properties adequately capture the being of the subject. Only because there is such a “thing” as a subject to which the world appears, can the world become objectivized. That is to say, there is an ontological primordially to human existence that cannot be bracketed or “preceded”. For

all understandings of being, be they scientific, aesthetic, or even medical, are contingent upon an active subject, to which the world appears, and who carries out certain interpretations of its world (Husserl, 2012). It is because health and disease appear to the subject as existential experiences of utmost significance that either promote or restrict its being – and not simply as mechanisms within the physical organism – that phenomenology becomes crucial for the full and adequate analysis of these phenomena.

There is a rich tradition for the utilization of phenomenology within *psychopathology*. Already Jaspers in his *Allgemeine Psychopathologie* sought to describe and understand the phenomenal dimensions of mental illnesses. Unlike neurology, the ambition is not to *explain* the phenomenon through a reduction to more fundamental naturalistic properties, but to *understand* it. Jaspers writes:

”Der *Gegenstand* der Psychopathologie ist das wirklich bewußte psychische Geschehen. Wir wollen wissen, was und wie Menschen erleben, wir wollen die Spannweite der seelischen Wirklichkeiten kennenlernen. Und nicht nur das Erleben der Menschen, sondern auch die Bedingungen und Ursachen, von denen es abhängt, die Beziehungen, in denen es steht, und die Weisen, wie es sich irgendwie objektiv äußert, wollen wir untersuchen”⁷ (Jaspers, 1965, p. 2).

⁷ “Psychopathology has, *as its subject-matter*, actual conscious psychic events. Although the main concern is with pathological phenomena, it is also necessary to know what people experience in general and how they experience it; in short, to take the full range of psychic reality. It is necessary not only to examine the actual experience but also the causes and conditions at work, as well

The distinction between understanding and explanation stretches back to Dilthey (1968) and has formed the basis for subsequent phenomenological analyses of psychopathology. Like the mother science, this branch of phenomenology has also undergone many iterations, for example, through Binswanger's (1922) and Boss' (1975) combination of Heidegger's analysis of *Dasein* with psychotherapy, and it is still a fruitful and active field of research represented by, e.g., Fuchs (2010), Ratcliffe (2012b), and others. The newer tradition of phenomenology of illness shares the wish to elucidate and understand the lifeworld of the ill person, "what it is like" to be ill, but broadens this from the study of psychopathology to the common and invariant core of illness as such. The following article presents a critique of this tradition and an attempt to present a revised understanding of the phenomenology of illness.

6.2 Article 3: Issues for a Phenomenology of Illness – Transgressing Psychologizations

as the relationships and the modes in which the experience comes to expression" (Jaspers, 1972, p. 2).

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6.3 A critique of the critique

The newer tradition of phenomenology of illness perceives itself as combating a one-sided reductionism but thereby ends up perpetuating an equally one-sided conception itself. Nowhere is this more evident than in the critique of biomedicine and its descentance from the philosophy of Descartes. This critique dates to Engel's article, in which the biopsychosocial model is proposed, motivated by the insufficiencies of biomedicine (Engel, 1977). In this article, it is argued that the Cartesian distinction between *res cogitans* and *res extensa*, which entailed a view of mind and body as fundamentally distinct, is the direct cause of biomedicine. Whereas mind was conceived as an independent realm of immaterial thoughts, emotions, and experience, body was interpreted as a complex physical mechanism, likened to an intricate, self-winding clockwork. This resulted in a view of the diseased body as a malfunctioning machine and entailed both a systematic downplaying of social, environmental, and experiential dimensions along with the attempt to reduce consciousness to physical processes; poignantly expressed by the 18th century French physician Cabanis: "the brain secretes thought as the liver secretes bile" (Canguilhem, 2008a, p. 7). Through this framework, the path was paved towards a view and practice of medicine that focused on

understanding and correcting bodily mechanisms while simultaneously disregarding the patient perspective.

This standard view has several issues. The glaring contradiction between the ascription of reductionism and Cartesian dualism to biomedicine has, to my knowledge, not been explicated, though it makes little sense philosophically. Dualism entails that mind and body are two fundamentally distinct and irreducible ontological spheres, while reductionism – mostly but not necessarily – is a materialistic or physicalist theory, often of a scientific sort, that views consciousness as an epiphenomenon to material properties. Not only does Descartes explicitly reject a reductionistic conception of mind, but he also devotes long passages of several works to elucidating the interaction between mind and body. Indeed, the doctrine of the pineal gland as the epicenter of interaction between mind and body directly contradicts the crude picture of the complete separation between mind and body and consequent devaluation of the experiential dimension.

In fact, Descartes has a remarkably holistic picture of man:

“(...) the soul is truly joined to the whole body, and that one cannot properly say that it is in any one of its parts to the exclusion of the others, because [the body] is one, and in a way indivisible, in proportion to the disposition of its organs, which are all so related to one another that when any of them is removed this renders the whole body defective;

and because [the soul] is of a nature which has no relation to extension, or to the dimensions or other properties of the stuff the body is composed of, but only to the whole collection of its organs – as becomes apparent from the fact that one cannot in any way conceive of a half or a third of a soul, or of what extension it occupies, and from the fact that [the soul] does not become smaller from some part of the body being cut off, but separates from it entirely when the collection of its organs is dissolved” (Descartes, 1989, p. 35).

That is, Descartes assumes a theory of embodiment. This is especially evident in his conception of *passions* or *emotions*. If a person perceives someone being wronged, the sense perception is first carried to the brain through a series of intricate mechanisms, the impression is relayed to the soul, the soul interprets and reacts to the picture, which is then relayed through the body again and manifested into action. Descartes operates with a fully and holistic picture of man, and his conception of medicine, which was a significant concern of his (Shapin, 2000), was neither reductionistic nor biomedical but *psychosomatic* (Brown, 1989). When Descartes compares the human organism to a machine, this must also be interpreted in its historical context, for medicine up to this time was influenced by Aristotelianism and humoralism (Manning, 2019, p. 9) and the unclear conceptualizations of bodily processes contained therein. On this background, the emphasis of bodily mechanisms and organic processes – which do have machine-like properties, the heart, e.g., functions like a pump – was a valuable contribution to the scientific progress of medical

science. The human being is simply much more than a machine – which Descartes would agree with.

To put it bluntly, it is not Descartes that has a reductionistic view of mind, body, and medicine; it is phenomenology of illness as it is currently practiced since it solely treats health and disease from the perspective of experience, thereby forgoing how the physical and lived body, disease and illness interact despite ambitions towards a theory of embodiment. There is both identity and difference between mind and body, and phenomenology undoubtedly constitutes a fundamental and irreducible element in this equation, but it is one side of the coin, which needs to be supplemented by a more integrative and comprehensive approach if one wishes to construct a holistic picture of the individual as well as health and disease. This is what I attempt to do in the next chapter.

6.4 Concluding thoughts on chapter 6

This chapter argued that, despite the importance of phenomenology for philosophy of health, illness cannot be narrowed down to experiences of bodily uncertainty, suffering etc., as the current tradition seemingly posits, but is constituted through fundamental broaches upon the dynamic activity that life constitutes. In this way, it harmonizes with the picture of health and disease as dynamic and processual phenomena, which was proposed in the above chapter. The article argues against a tendency to psycholo-

gize health and illness, which also has implications for the generic health assessment practice. However, the organismic and phenomenological dimensions of health are not just two isolated perspectives but truly united. What is missing within philosophy of health is a theory that truly combines these. Similarly, the question why individuals, as the empirical study suggested, differ in matters of health and disease must be addressed. These themes are what the next chapter investigates.

7. Medical individualism

7.1 Do individuals differ from one another?

The relation between the universal and the particular or individual is one of the oldest and most fundamental problems of metaphysics (Gracia, 1988). That is, the question how an individual can be a particular thing while simultaneously being universal, and why particulars, though instantiations of the same pattern or idea, differ from one another. Though this problematic may seem remote and abstract, medicine echoes this discussion, for it similarly contains the tension between the particular and universal, between its status as an *idiographic* and *nomothetic* science, i.e., as striving towards greater specifications and greater generalizations, respectively. Medicine exhibits two distinct albeit related trends: as a natural science, it delineates nomological patterns of pathological conditions, typologies, stochastic mechanisms etc.; as a therapeutic art, its *raison d'être* consists in aiding the individual patient, in relieving them of suffering and illness, and helping them to lead a fulfilling life. Medicine needs both approaches. Yet, movements such as personalized medicine argue that these approaches on closer inspection *converge* because all individuals differ in significant or miniscule ways from one another. To help the patient, medicine needs a clearer picture of what makes them unique.

Whether and in what sense individuals fundamentally vary naturally depends on what is understood thereby. Traditionally,

the body was conceived as *objective*. Qua corporeal object, it remains in the common sphere that in principle is accessible to everyone. As such, it can be made the object of scientific investigation and thereby the general traits that seemingly hold for everyone can be established. The mind, conversely, was thought of as subjective in so far as it is *private*. Despite the best attempts at empathizing, no one can experience the world from exactly my perspective, while I, though I can attempt to imagine what it must be like, cannot fully know the fellow human being's perspective. The unity and continuity of my consciousness and experiential sphere furthermore provide the impression of being a distinct person. Jaspers echoes these lines of thought when he, in discussing the limits of psychopathology, remarks:

“(...) daß er den einzelnen Menschen niemals ganz in psychologische Begriffe auflösen kann. Je mehr er auf Begriffe bringt, als typisch, als regelmäßig erkennt und charakterisiert, desto mehr erkennt er, daß in jedem einzelnen Menschen sich ihm etwas Unerkennbares verbirgt”⁸ (Jaspers, 1965, p. 1).

Therefore, the corporeal nature, our matter, constitutes what is common to human beings, while mind, given its inaccessibility, constitutes the seat of personality and therefore of what makes us individual and unique. And these views perhaps also play a part in

⁸ “(...) there can be no final analysis of human beings as such, since the more we reduce them to what is typical and normative the more we realize there is something hidden in every human individual which defies recognition” (Jaspers, 1972, p. 1)

the way that biomedicine is practised: as establishing typologies and lawlike features of the body, while relegating the experiential perspective of the patient or consciousness to an unknown X that principally cannot be the object of science.

Modern medicine does not abide by this picture of individuality. For movements like personalized medicine, the uniqueness of individuals arises in the conflux of factors from the molecular level to the conscious and social that make up an individual. Each human being varies in small or significant ways in terms of genetic makeup, personality, social circumstance etc., and when this untold number of elements in interaction are combined, a unique composite arises. For this reason, conditions of health and disease invariably differ fundamentally from each other. A sort of holism is thereby assumed as the cause of individuality. In this claim, they have some support from the history of philosophy, for Leibniz, for example, also stated that individuality arises through “the entire being of an individual” (“Omne individuum sua tota Entitate individuatur”) (Borsche, 1976, p. 311). This, however, only shifts the discussion to the question about the nature of holism.

By relating this timely question within medical anthropology to an ontological tradition, *in casu* philosophical anthropology and biophilosophy, new insights can be garnered, I claim. What I suggest as a framework through which to unite what appears to be distinct aspects and perspectives of the person, namely the organismic and phenomenological dimensions, is essentially already

expressed in a principle of Heraclitus’: “έν διαφέρειν έαυτώ” (Diels & Kranz, 1972, p. 162), a “unity in difference” (Borsche, 1976, p. 315). The article attempts to unfold what this principle entails for a medical anthropology; whether it allows for an integrative account that combines seemingly distinct dimensions of health and illness, and what consequences it has for the individuality of these phenomena.

7.2 Article 4: Medical individualism – what makes an individual individual?

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7.3 An integrative account of health and disease

So far, several far-reaching philosophical critiques and theories have been posited. This subsection will attempt to weave the threads together and show how they point to an integrative conception of health and disease. The state of the art regarding the nature of health and disease is governed by a host of – often mutually exclusive – perspectives. Health and disease are in turn interpreted as normative, naturalistic, or hybrid phenomena, as phenomenological, as holistic etc. Even within theoretical positions that argue for holistic conceptions, however, it is seldom explicated how these different dimensions of health interact. Take, for example, the biopsychosocial model that posits three

dimensions of health without showing how these add up to a unique whole, though this is exactly what holism conceptually entails. The field as it stands is caught in a deadlock, I argue, and this motivates a different manner of approach.

Rather than beginning with conceptual analysis, this project takes its point of departure with an ontological analysis, which is based on the clues yielded by investigating the generic health assessment practice. That is, through explicating fundamental modes of being for the human being, the project seeks to delineate the essence of health and disease. As a creature endowed with certain capacities and a fundamental care for itself, certain states of being run counter to its vital goals since it is incarnated and embedded in certain contexts. Consequently, there are different modes of manifestation for health and disease. These manifest themselves biologically as the capacity or failure to adapt to conditions that go against organismic norms, and phenomenologically, as the maintaining of or broaches upon life activity. Though consisting of distinct aspects, conditions of health and disease constitute totalities because they consist of differentiated functions within a complex whole. This whole, the human being, has different biological presuppositions, different norms and agentialities, take part in different contexts and exhibit highly individualized conditions in virtue thereof. Though this conception is provisional, the theories developed in each article lend themselves to

a more integrative theory that views health and disease as multi-dimensional, dynamic, systemic, and individualized phenomena.

The ontological study therefore leads to a maximalistic theory in contrast to minimalistic (Klausen, 2021a). That is, rather than health and disease consisting in isolated aspects such as levels of performance within biological functions, the notions are multidimensional because the individual is a biological, existential, and social being. Whereas minimalistic theories run the danger of being too restrictive and failing to take account of all relevant aspects, maximalistic theories carry the opposite risk. The greater the scope of a theory, the more intricate and potentially vague it also becomes. Quite concretely, it becomes difficult to tell cause, symptom, and effect of health and disease from each other. Nevertheless, health and disease harbour distinct aspects that are not easily reducible to each other. Faced with this conundrum, the ontologist's only option is to show attentiveness and diligence to the phenomenon at hand, to trace its different manifestations and show how they relate to a common core. Though a truly well-defined and worked-through integrative account still lacks, I have attempted to develop some important elements thereof through the theoretical parts of this project.

7.4 Concluding thoughts on chapter 7

The present chapter sought to analyze what it means for health and disease to be individualized and context-sensitive phenomena. This is not solely a view that circulates in practice, as the empirical study discovered, but also within current movements of medical theory. However, when pushed, the conceptions of individuality espoused within these movements builds on a philosophically ill-founded theory of holism. The theory of medical

individualism therefore gives rise to fundamental philosophical reflections about the nature of the individual, which this chapter sought to investigate. This also concludes the three themes for investigations that came to light during the empirical work. What is left to discuss is which implications this maximalistic conception of health and disease has for the generic health assessment practice.

8. Health assessment in light of theory

8.1 The best among non-optimal methods?

To return to the generic health assessment practice, which was the initial object of examination and spurred on the preceding theoretical deliberations, it was argued that this practice is founded upon strong theoretical assumptions about health, disease, and well-being. Therefore, improving the latter would seemingly provide more adequate ways of measuring generic health. It is an open question, however, whether maximalistic conceptions of health and disease such as the one explicated above can even be measured. The answer, as far as I see it, is mostly negative for several reasons.

If health is interpreted as a meta-capacity to adapt, which includes both biological adjustments to demands and the maintenance of a phenomenological conative drive, then it seems difficult to operationalize this into common indicators on a questionnaire. For this capacity is of a second order, compared to, for example, different manifestations of functional mobility such as ability to climb stairs, since it concerns the subject's relation *to* its own capacities and the demands imposed upon it. This feeds into another issue: the instruments are typically perceived to be multi-dimensional, although they solely measure self-reported data and in virtue thereof just as well could be interpreted as unidimensional. Were the instruments to measure all elements within the above conception of health and disease, it is difficult to see how this could be done without two- or three-pronged instruments that in turn would compromise the practicality. Lastly, if conditions of

health are strongly individual, then this raises doubts about the ability to capture all relevant aspects and dimensions on a generic instrument, which cannot differentiate between individuals qua generic.

If the points developed above stand to reason, it could even be argued that they put the *cardinal* assumption of health assessment concerning the *measurability* of health in itself into question. The behaviour of the patient could be observed, the vitals could be examined, and the testimonies of the patient could be elicited without any of these parameters covering health and disease as such. Because health is a temporal and dynamic activity rather than a state with clear-cut properties and biomarkers, it eludes direct measurement. At most, what measurements deliver could be *signs* or *indicators* of health or disease.

Many proponents of generic health assessment would argue, however, that this is exactly the point. It could always be contended that the instruments are not optimal, but neither are many other options such as costly, extensive individual screenings. Imperfectability is a fundamental condition of medical practice, but the answer is not to forgo the use of generic instruments or to adopt a position of *medical nihilism* (Stegenga, 2018b) that sows doubt about the validity and usefulness of health care in general, but rather a conscientious use of instruments that takes their limitations into account. That is, the generic health assessment practice, despite its weaknesses, is the best among non-optimal ap-

proaches to measuring overall states of health and well-being on a standardized basis. Namely because self-assessment – despite the epistemic fallibility of the responder – also constitutes a privileged insight into the health and well-being of the responder that cannot be reached without asking them. This assessment seemingly is the most comprehensive since it encompasses both functional workings, satisfaction with life etc. of the responder according to themselves and therefore is the best option when the purpose is to assess overall health in a convenient way.

Therefore, one thing is adequate philosophical theories; another thing is the generic health assessment practice, which relies on compromises, pragmatic decisions, and heuristic measures. While the former strives for conceptual precision, the latter is aimed at making actionable conceptualizations that can be implemented in practice, where precision sometimes must be sacrificed for pragmatism. Though there is a case to be made for these points, if the underlying theoretical assumptions are too unclear, it is debatable what the instruments measure at all. In other words, though the instruments are practical, they must to a certain extent build upon sound conceptualizations of health and disease – must strike a balance between pragmatism and precision – otherwise, the epistemological status of the measurements become too uncertain and unreliable.

Generic health assessment inscribes itself in a larger problematic regarding the nature of (good) medical evidence and the criteria therefor (Stegenga, 2018a). Throughout the ages, medicine has undergone a shift of identity from a *conjectural art* (Ginzburg, 1999, p. 88) to a *calculable science*. For the longest time, in lieu of methods or techniques of measuring vital parameters that were not rather drastic, the doctor mostly had to rely on

their judgment in making diagnoses and prognoses. Medicine posed a certain hermeneutical challenge that consisted in interpreting surface-level symptoms without access to the visceral dimensions of the body and listening to the testimonies of the patient. Medicine, therefore, was an *art* with a certain degree of imprecision, which was predicated on the experience and resourcefulness of the medical professional to make adequate *conjectures* about what was or was not wrong.

As medicine transitioned from the bedside to the hospital to the laboratory (Jewson, 2009), it gradually attained a greater degree of scientific precision. It became a *science* rather than an art, which founded its expertise on intricate knowledge of molecular processes, clinical profiles, statistical data etc. Evidence-based medicine is the latest iteration of this trend. Given that the prescriptions and methods are followed, which usually means the randomized controlled trial (“RCT”), highly precise evidence can be achieved. But evidence-based medicine promises something more; a paradigm shift (Guyatt et al., 1992) where all medical expertise is to be based on tried-and-tested evidence instead of anecdotal evidence and intuitions (Sackett et al., 1996). Evidence-based medicine itself has, however, also been subjected to much critique (Stegenga, 2018b; Worrall, 2002, 2007).

Where does generic health assessment fit in this picture? On the one hand, it is an expression of the ambition towards securing precise and standardized evidence regarding (self-assessed) con-

ditions of health and well-being, on the other, evidence-based medicine is predicated on devaluing the intuitions that health assessment explicitly hinges on. How can the responder of the questionnaire intuit their condition of health well enough that they glean insight into the severity of conditions on health-related quality of life, but a health professional with expertise cannot? Perhaps, it could be argued, because responders possess special insight into their own conditions. But, to reiterate, human beings are not infallible epistemological subjects, and preferences regarding hypothetical conditions of health are routinely elicited as well. The fact that standardized data can be gathered through generic forms is indisputable. The question is what kind of evidence they elicit and what level of certainty this evidence possesses – even if granted that generic measurements are indicators rather than exact readings. In this context, the answer is not immediately clear. Despite its ambitions, it seems that the generic health assessment practice straddles a line between a conjectural art and a calculable science.

Although the theory of health sketched above does not immediately lend itself to generic assessment, and although it problematizes core assumptions of this practice, there is more cause for optimism concerning the implementation of certain theory points into the current practice. In this regard, the practice often relies upon conceptualizations that make it unclear exactly what they measure and with what degree of validity. For example, the conflicting views on well-being as both a more objective and subjective state, the conflict between standardization and individuality etc. There are several avenues for implementation that can refine the philosophical assumptions about health and disease that

underlie the instruments, which, in turn, hopefully can further qualify the utilization of generic health assessment instruments.

8.2 Future avenues for research

A project with as broad a scope as the present one naturally raises as many questions as it answers. Although not exhaustive, in this subsection I will list four themes that warrant further research.

Firstly, this project has a more generalizing approach to the investigation of notions of health and disease and how these affect health assessment instruments, but it would be equally interesting with a more specified approach that investigates concrete instruments. Though the instruments share certain assumptions that have been outlined in this project, they also contain variations, e.g., in weightings, items, dimensions, extensiveness and so on. Therefore, it could be quite interesting with a more in-depth investigation of nuances within specific conceptions of health of concrete instruments.

Secondly, it emerged throughout the qualitative study that perceptions of health, disease, and well-being among health professionals are very nuanced and a far cry from the biomedical reductionism that they often are accused of being. This might reflect a sample bias, nevertheless, it warrants attention and could be a very interesting subject matter for further research, since health professionals' views on health and disease often differ

from theoretical positions since they are formed both through experience and with practical goals in mind.

Thirdly, the integrative conception of health and disease teased in the latter part of this project similarly calls for more in-depth analysis. Current holistic theories posit several aspects or perspectives of health and disease without showing how they add up to a unique whole, though this is what holism implies on a conceptual level. Researching an integrative conception further might lend more credence to holistic conceptions in general and more adequately reflect what medical research is increasingly investigating, namely states of health and disease as complex totalities.

Fourthly, the theory of medical individualism warrants a thorough examination. As suggested, it is a trend, which has cropped up throughout history at different times and has gained a lot of traction in contemporary medicine. What it means for health and disease to be individual, and what it means to be an individual are questions of central importance that, however, lack substantiation since much of current medicine relies on inadequate conceptualizations thereof, as argued in the fourth article.

8.3 Results and final thoughts

Throughout this project, I hope to have showed how the generic health assessment practice is founded upon strong philosophical assumptions about health, disease, and well-being, which shape what kind of evidence the instruments produce, and what degree of certainty they have. Through the qualitative study, the first steps towards elucidating the sprawling practice that is the utilization of generic assessment tools in a Danish context are taken. This explorative approach contributes to a greater overview of the

practice since many ways of using these instruments are in circulation, although little is known about the overall landscape. The inherent operationalizations of the instruments are found to be conflicted between measuring functional indicators and subjective well-being, between the multi- and unidimensional, between objectivizing and subjectivizing, individualizing and universalizing approaches, and in wishing to make static readings of dynamic conditions. However, theoretical notions of health and disease cannot capture the practice either, which spurs on renewed engagement with traditional positions within philosophy of health.

In the theoretical parts of the project, the ambition was to demonstrate that classical philosophy has much to offer philosophy of health; in revising the deadlock of normativism and naturalism along with a one-sided and psychologizing understanding phenomenology of health and an inadequate conceptualization of individuality and holism in newer medical trends. The ontological approach instead uncovers how health and disease are dynamic and processual phenomena that consist in the capacities for adaptation in the face of demands imposed on the organism; how it from a phenomenological point of view manifests itself as maintenance of or broaches upon conative activities of existence; how a more adequate conceptualization of holism can accommodate an integrative account of these dimensions while simultaneously outlining why each individual differs in matters of health and disease. These insights in turn point towards future avenues

for research within both health assessment and medicine and the philosophy of health that are, as the project has demonstrated, inextricably linked.

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10. Appendix

10.1 Interview guide in Danish

Herefter følger en interviewguide. Udgangspunktet er et semi-struktureret interview af udvalgte sundhedsprofessionelle mhp. at afdække deres anvendelse af og holdning til sundhedsevalueringsredskaber. At det er semistruktureret vil i denne sammenhæng sige, at interviewguiden primært tjener som en tjekliste af spørgsmål, som interviewererne gerne vil afdække i løbet af interviewet, men at interviewererne forsøger, ikke at lade sig binde af interviewguiden og dens kronologi, og i øvrigt forholder sig åbent til interviewpersonens indvirken på interviewsituationen.

Det betyder, at interviewererne foruden interviewguidens spørgsmål bør være forberedt på at stille såkaldte ”probing”-spørgsmål, det vil sige, opfølgende uddybende spørgsmål såsom, ”hvordan det?”, ”kan du uddybe det?”, ”kan du give et eksempel?”, ”hvordan oplevede du det?”, ”hvad fik det dig til at tænke?” mv.

Forskningsspørgsmålet er, *hvad er sundhedsprofessionelles anvendelse af og holdning til sundhedsevalueringsredskaber?* Og det skal tjene et projekt om anvendelsen af sundhedsevalueringsredskaber i sundhedsvæsenet. Interviewets ses i den henseende at spille den rolle at afdække både den faktiske anvendelse samt sundhedsprofessionelles holdning. Det kan man ikke bare spørge alle mulige læger og sygeplejersker om, da sundhedsevalueringsredskabers anvendelse oftest foregår på et mere abstrakt niveau. Derfor er interviewpersonerne strategisk udvalgt ud fra kriterier om kendskab til sundhedsevalueringsmetoder. Interviewene er

derfor en form for ”eliteinterview”, idet interviewpersonen er udvalgt ud fra deres profession, men er samtidig ”repræsentantinterview”, da de søger at afdække interviewpersonernes oplevelser af og holdning til anvendelsen af sundhedsevalueringsredskaber.

Den strategiske samplingsproces følges op af såkaldt snowball sampling, hvorved interviewpersonerne kan give inputs til, hvem der ellers skal samples til interviews. Det overvejes, om interviews skal følges op af spørgeskema survey.

Forskergruppen er Thor Hennelund Nielsen, Søren Harnow Klausen og Lasse Nielsen. Interviewene påtænkes gennemført af en forskningsassistent og evt. Thor Hennelund Nielsen.

- *Lasse Nielsen*

Interviewguiden er lavet på inspiration fra følgende kilder:

Bryman, A. (2004), *Social Research Methods* 2nd Ed., Ch. 15 “Interviewing in qualitative research”, Oxford: Oxford University Press.

Harrits, G. S., Pedersen, C. S. & Bente Halkier (2010), ”Indsamling af interviewdata”, kap. 6, i Andersen, L., Hansen, K. L. & Klemmensen, R. (red.), *Metoder i statskundskab*. København: Hans Reitzels Forlag.

Vromen, A. (2017), "Qualitative Methods", Ch. 14 in Lowndes, V., Marsh, D. & Stoker, G. (eds.), *Theory and Methods in Political Science*. Palgrave MacMillan.

Interviewguide

	<i>Forskningsspørgsmål</i>	<i>Interviewspørgsmål</i>
Te- ma	Intro	
	Hvem er interviewpersonen og hvad er vedkommendes stilling og arbejdsopgaver?	<p><i>Hej, og mange tak fordi, du vil stille op til interview. Jeg vil stille dig en række spørgsmål</i></p> <p>- <i>Hvad er dit navn?</i></p> <p>- <i>Hvad er din stilling?</i></p> <p>- <i>Hvad er din funktion?</i></p> <p>- <i>Hvad er dine mest typiske arbejdsopgaver?</i></p>
Te- ma	Anvendelse og udbredelse af sundhedsmål og evalueringsskemaer	
	Hvad er de sundhedsprofessionelles kendskab til sundhedsmål og evaluering?	<p>- <i>Hvad forstår du ved "sundhedsevalueringsskemaer"?</i></p> <p>- <i>Hvilke sundhedsevalueringsskemaer er du bekendt med?</i></p> <p>- <i>Her er nogle forskellige sundhedsmål og evalueringsskemaer</i></p>

		<p><i>skaber (fx Short form 36 (SF-36), EQ-5D, WHO-5, QALY). Hvilke af dem kender du?</i></p> <p><i>- Hvad siger evalueringsredskaberne og evt. hvordan er de forskellige?</i></p> <p><i>- Hvor udbredt er kendskabet til disse sundhedsmål, vil du vurdere?</i></p> <p><i>- Kender du til andre redskaber?</i></p>
	<p>Hvad er de sundhedsprofessionelles brug af sundhedsmål og evalueringsredskaber?</p>	<p><i>- Hvordan anvender du sundhedsevalueringsredskaber i dit arbejde?</i></p> <p><i>- Hvilke sundhedsevalueringsredskaber anvender du?</i></p> <p><i>- Kan du give eksempler, hvor du har anvendt sundhedsevalueringsredskaber?</i></p> <p><i>- Er anvendelsen af sundheds-</i></p>

		<p><i>evalueringsredskaber særlig udtalt i dit arbejde?</i></p> <p><i>- Hvordan er anvendelsen af sundhedsevalueringsredskaber i dit arbejde forskelligt fra anvendelsen i dine kollegers arbejde (fx indenfor givne specialer).</i></p>
Te- ma	Opfattelse af og holdning til sundhedsmål og evalueringsredskaber	
	<p>Hvad er de sundhedsprofessionelles holdning til sundhedsmål og evalueringsredskaber?</p>	<p><i>- Hvad mener du om brugen af sundhedsevalueringsredskaber?</i></p> <p><i>- Mener du, at sundhedsevalueringsredskaber er brugbare mål? Hvis ja, brugbare til hvad? Fx iht. at vurdere behandlinger og lave prioriteringer?</i></p> <p><i>- Hvad er succeskriterierne for et godt sundhedsevalueringsredskab? Og lever de, du er bekendt med, op til dem?</i></p> <p><i>- Hvad er problemerne med sundhedsevalueringsredskaberne og anvendelsen af dem?</i></p> <p><i>- Hvis du skulle bestemme, hvordan skulle man så evaluere?</i></p>

		<p><i>Og evt. hvordan skulle man så designe sundhedsevalueringsredskaber?</i></p> <p><i>- Er det nødvendigt at bruge sundhedsevalueringsredskaber? Kunne man fx udføre din arbejdsfunktion lige så godt uden evalueringsredskaber?</i></p> <p><i>- Er der noget alternativ til at bruge sundhedsevalueringsredskaber, og hvis ja, hvad er alternativet så?</i></p> <p><i>- Hvis du skulle give en anbefaling til myndighederne om brugen af sundhedsevalueringsredskaber, hvad ville din anbefaling så være?</i></p>
Te- ma	Afrunding	
	Afslutning og snowball sampling	<i>Tusind tak for din tid og alle dine svar. Det har været en stor hjælp.</i>

		<p><i>- Er du interesseret i at blive opdateret på, hvad vi finder ud af med studiet?</i></p> <p><i>- Kender du til andre, som du mener, det kunne være relevant at interviewe?</i></p>
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