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How do medical students conceptualize the relationship between body and mind in hypothetical patient consultations?

By

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Abstract

Critics have repeatedly appealed to the metaphysical basis of medicine to account for observed dehumanizing tendencies. In particular, metaphysical dualism and reductive physicalism have been identified as ethically untenable positions. This line of critique rests either on theoretical grounds or empirical research that implicitly assumes that metaphysical beliefs are temporally consistent and formed independent from situational pressures. Turning away from this assumption, this study attends to metaphysical commitments as contributions to an ongoing care relationship emerging from individual patient-physician interactions. In three online focus group sessions, medical students were prompted to explicate their clinical reasoning in response to a patient vignette depicting a case of medically unexplained symptoms (MUS). The recorded responses were then coded and analyzed with a focus on metaphysical reasoning. Considering the students' responses in light of concepts from the work of Byron Good and Wilfrid Sellars revealed a more nuanced and dynamic engagement with metaphysical questions than has been represented in the literature.

Introduction

> The living creature does not live among laws but among creatures and events which vary these laws. What holds up the bird is the branch and not the laws of elasticity. If we reduce the branch to the laws of elasticity, we must no longer speak of a bird, but of colloidal solutions. At such a level of analytical abstraction, it is no longer a question of environment for a living being, nor of health nor of disease.
>
> — Georges Canguilhem, *The Normal and the Pathological*

Different lines of medical critique share a common argumentative structure. According to its critics, contemporary biomedicine tacitly endorses a conceptual scheme that strips its human subjects of their basic personhood. This dehumanizing tendency, so the argument proceeds, has grown from medicine's metaphysical foundation.[1] One influential strain of critique that promotes the treatment of human bodies analogous to the manipulation of mechanical systems cites mind-body dualism - usually in its Cartesian formulation - as the culprit behind a strict separation of the mental and the physical (Cassell, 2004; Engel, 1978, 1981; Gendle, 2016; J. Gold, 1985; Irvine & Spencer, 2017; Mehta, 2011; Quintner et al., 2008; Sullivan, 1986; Toombs, 1992). Accordingly, anti-dualist critics maintain that, even though epistemically advantageous, the mechanization of the body has promoted the exclusion of the mind from clinical practice. A second line of critique has singled out reductive forms of physicalism - the position according to which only the concepts of physical science are requisite for an exhaustive account of the world - to explain medicine's inability to accommodate distinctly human aspects of suffering (Duncan, 2000; Joubert, 2014; Kleinman, 1988;

[1] Throughout this thesis, I will use the terms metaphysics and ontology interchangeably to represent questions about the basic constituents of reality (e.g., the ontological status of mental states as opposed to other philosophical questions traditionally subsumed under the former term, say, those regarding the existence of God). A slight distinction regarding the meaning of the two terms could be made by pointing towards the technical denotation of ontology as objects of medicine narrowly conceived (e.g., diseases, symptoms, biological processes). Such ontological stocktaking is, however, far from metaphysically inconsequential - for example, when decisions about the purview of medicine proper exclude the mind from clinical consideration. This dynamic will receive a separate discussion in a later section in the context of the work of anthropologist Byron Good.

Switankowsky, 2000).[2] In their argumentation, anti-reductionist critiques center around the inadequacy of translating phenomenological reports into a naturalistic language that allows only those aspects of a given case presentation to shape medical practice that can be in this way represented.

As the foregoing arguments typically rest on historical or philosophical analysis, some underlying claims about the metaphysical beliefs of medical practitioners still await empirical confirmation. In the area of psychiatry, where beliefs about the ontological status of mental illness seem especially consequential, early research points towards a high prevalence of metaphysical dualism. A number of studies operating under a quantitative paradigm confirmed the prevalence of dualistic reasoning in mental health professionals mostly reflected in causal ascriptions of mental illness (W.-K. Ahn et al., 2006; W. Ahn et al., 2013; N. S. Kim et al., 2016, 2017; Lebowitz et al., 2015; Miresco & Kirmayer, 2006). But despite their indisputable value, these studies touch only obliquely on what is arguably one of the most consequential aspects of the metaphysics of medicine, its expression within the communication practice of medical professionals. By linking up temporally stable, decontextualized attitudes towards mental illness with diagnosis and treatment, they implicitly assert that clinical decision making, unmediated by external factors, reflexively accords with beliefs inhering in the minds of individuals. This type of methodological individualism - possibly inherited from the very discipline the studies seek to examine - is deliberately abandoned in this study. Accordingly, I will be concerned not so much with interpreting the statements of medical practitioners in light of preconceived philosophical positions but with illuminating the discursive space in which metaphysical reasoning is enacted as a collective project. What can hopefully be gained from this form of analysis is a more nuanced picture that, aside from accounting for perspectival incongruencies and miscommunication, can also explain the remarkable success of medical communication across seemingly unbridgeable conceptual divides.

The study presented in this thesis offers initial insights into the metaphysical commitments of medical practitioners understood as contributions to an ongoing negotiation of conceptual schemes – in other

[2] For arguments against mental-to-physical reduction based on the (at least provisional) explanatory insufficiency of the biological sciences regarding the brain's contribution to global functioning see Gold (2009) and Kendler (2005).

words, as a form of collective philosophizing. To capture the dynamic, interactional character of metaphysical commitments as they unfold in the clinical encounter, I conducted three focus group interviews with medical students framed as research on medical communication. In the three sessions, the students were presented with a fictitious medical case suggesting the presence of medically unexplained symptoms (MUS) and encouraged to discuss the case in light of potential obstacles for the physician-patient interaction.[3] By circumventing explicit queries of metaphysical beliefs through an outward focus on medical communication, metaphysical reasoning appeared within the conversation only to the extent stimulated by the medical case itself. Although reducing the likelihood of contributions with substantive import for the study, this methodological choice allowed for the natural emergence of metaphysical reasoning in a conversation predominantly revolving around diagnosis and treatment.

A conceptual challenge arose from the lack of domain-relevant classifications of metaphysical commitments that could support the subsequent analysis, as constructing a classificatory framework was complicated not only by the relative scarcity of data on metaphysical commitments in medical practice but a lack of empirical research on the subject in general.[4] As a consequence, the study focuses not so much on categorizing the student's responses along a pre-existing taxonomy but on developing an analytic framework from the ground up, borrowing insights from medical anthropology, the philosophy of medicine, and the philosophy of mind. While I will present most of the relevant theoretical background for my analysis in passing, two conceptual frameworks taken from the works of philosopher Wilfrid Sellars and anthropologist Byron Good will receive a separate exposition in the beginning of the paper. By bringing these theoretical positions and the students' responses into conversation, I hope to show how successful medical

[3] The umbrella term medically unexplained symptoms (MUS) denotes bodily symptoms that are considered either unconnected or disproportionate to a detectable organic disease (Greco, 2012; Haller et al., 2015; Smith & Dwamena, 2007). I have chosen MUS for this study to introduce an element of metaphysical uncertainty or conflict in the clinical encounter, as the absence of a physical substrate can be expected to complicate disease classification in terms of physical or mental etiology.

[4] Outside the domain of psychiatry, Chudek et al. have found cross-cultural evidence of intuitive dualism (2013). Bourget and Chalmers have conducted a survey on the philosophical views of professional philosophers in which they recorded a prevalence of physicalist interpretations of the mind (56.5% physicalists, 27.1% non-physicalists, 16.4% other) (2014). Unfortunately, both studies are of limited value for extrapolating to a medical population. The contrived nature of body-switching scenarios used in the first study bears little resemblance to the clinical setting in which metaphysical determinations have real-life consequences, as is also the case with the academically honed beliefs of professional philosophers.

communication can require balancing ostensibly irreconcilable metaphysical views and finding one's bearings within a logical space in which metaphysical, epistemological, and ethical determinations can never be made independently from one another.

Part 1: Theoretical Background

Good's Soteriological Ontology

In his book *Medicine, rationality, and experience*, the anthropologist Byron Good evokes the manifold transformative experiences medical students undergo in their training to account for the profound conceptual incongruity between physicians and laypeople that, according to some critics, lies at the heart of medical miscommunication. Reflecting on his long-time engagement teaching social medicine and anthropology to medical students, Good writes:

> Early in the course of our study of Harvard Medical School, we came increasingly to understand that learning medicine is not simply the incorporation of new cognitive knowledge, or even learning new approaches to problem-solving and new skills. It is a process of coming to inhabit a new world. (1994a, p. 70)

Over time, medical students learn to enact specific ways of seeing, writing, and speaking that give rise to a unique layered ontology of the human body. To that effect, the anatomy lab serves as a morally neutral space for the exploration of a compartmentalized body, the write-up reconstitutes the patient as an assemblage of pathophysiological facts, and verbal case presentations give narrative form to illness as a medical project. What emerges from these practices is a special kind of depth perception that looks behind the surface layer of patient reports to access an unchanging reality. Importantly, this reality is conceived as a mind-independent domain of natural facts which, by virtue of its alleged currency as cultural universal, acquires a singular epistemic status that simultaneously enables and complicates mutual understanding across the conceptual

schemes of patient and physician. Understanding this seemingly paradoxical effect on medical communication will require a brief review of Good's analytical framework.

Central to Good's argument is the theory of symbolic forms of the Neo-Kantian philosopher and intellectual historian Ernst Cassirer. On Cassirer's account, rather than perfectly replicating the structure of a mind-independent environment in thought and language, humans interpolate mediating symbols between mind and world, so that a person's access to their environment is always symbolically inflected both by the basic intentionality of consciousness as well as by cultural schemata. The former point is particularly important to Good who rejects anti-individualist approaches epitomized by Michel Foucault's analyses as inadequate to account for the subjectivity of the intrinsically embodied experiences pertaining to medicine. By attending to the clinical encounter between physician and patient as a clash of symbolic systems that encode divergent formative principles of active world-making such as cosmological schemes, he hopes to get to the crux of what he perceives as a conceptual incommensurability.

Good gives an example of these formative principles that ties back to his fieldwork in east Azerbaijan (a province of Iran) in the 1970s, where his interlocutors repeatedly reported bodily complaints in terms of excessive warmth. To understand the concept of warmth in cultural contexts that deploy a humoral conception of the body, Good contends, requires us to understand its significance in a symbolic system that conceives of the nutritive upkeep of a healthy physiology in terms of cooking and fermentation, rotting or spoiling (1977, p. 29f, 1994b, p. 103). Without attending to local contexts, physicians solely trained in Western biomedicine are destined to overlook the culturally idiosyncratic disease processes underlying patients' reports. Such comprehensive contextualization, Good maintains, can quickly reach the limits of what is practically manageable in medical communication. He goes on to contrast this lack of cultural translatability to the conventional scientific realist perspective according to which all that is required to translate between different conceptual frameworks is mutual clarification in terms of which object in the real world an idiomatic term refers to. If, however, medical terms draw from a rich history of enactments that substantiates presuppositions regarding cosmology and social order, close intercultural communication becomes difficult if not improbable. What's more, modeling processes of medical translation on the successful mapping of

idiomatic terms on scientific objects in a supposedly mind-independent and instrumentally accessible world obscures the epistemic significance of apprehending the cultural mediation of reality.

In his analysis, Good explicitly deviates from the path laid out by Hilary Putnam and Donald Davidson who famously rejected the idea of fundamentally incommensurable conceptual schemes on logical grounds (Davidson, 1973; Putnam, 1981, p. 114). While the two authors held that if conceptual schemes were really incommensurable we could not begin to perceive others as minimally reliable interlocutors, Good defends a notion of local incommensurability. Calling to mind Niklas Luhmann's methodological admonition to conceptualize mutual understanding as in-principle improbable, he underlines the inherent challenge associated with communication across systemic boundaries.[5] In outlining medicine's system of symbolic forms, Good discovers a formative principle in its soteriological function. Against the popular critique of anthropologist Arthur Kleinman who contends that medicine lacks a deeper teleological orientation, Good situates medicine in a conceptual space that combines the technoscientific and the moral restoration of order.[6] He writes:

> What I am suggesting is that medicine is deeply implicated in our contemporary image of what constitutes the suffering from which we and others hope to be delivered and our culture's vision of the means of redemption. In a civilization deeply committed to biological individualism […] the maintenance of human life and the reduction of physical suffering have become paramount. (1994a, p. 86)

Accordingly, the ontological depth perception of medical practitioners that construes patients as more or less transparent collections of physiological parameters is ultimately in the service of salvation. By shedding

[5] Any successful theory of communication, according to Luhmann, needs to account for the fact that intersubjective understanding is routinely achieved despite its basic improbability given the singular backgrounds of each communicator. He attributes this circumstance to the widespread use of domain-contingent *symbolically generalized media of interchange* such as money for the domain of economics, truth for the domain of science, and love for the domain of intimate relationships each of which giving rise to operationally-closed, symbolically mediated worlds (Luhmann, 2018; Mueller, 2012, p. 272f).

[6] Kleinman gives the following assessment in *The illness narratives: suffering, healing & the human condition*: "Taking on a medical or scientific perspective, however, doesn't help us to deal with the problem of suffering: in contemporary biomedicine and the other helping professions there is no teleological perspective on illness that can address the components of suffering relating to problems of bafflement, order and evil, which appear to be intrinsic to the human condition" (1988, p. 28).

clinical presentations of all that is inessential for the alleviation of suffering, a type of person emerges that is always ready to be acted upon to preserve life at all costs. This positivistic reduction of person to a set of observable facts, according to Good, is radically misunderstood if it is itself reduced to a process of dehumanization that elides the soteriological imperative of clinical medicine: "Sickness, death and finitude are found in the corpse, in the human body. And salvation, or at least some partial representation of it, is present in the technical efficacy of medicine" (1994a, p. 86).

If we follow Good's analysis, there is an essential normativity to medical practice that binds together the imperative for the restoration of moral order and the technoscientific gaze. The conceptual schemes that collide in the clinical encounter and frequently turn out to be irreconcilable thus do not differ in the sense that one affirms and one denies the moral implications of personhood but in the formative principles of their symbolic networks. Understanding the divide between biomedical and lay conceptions of the body requires more than comparing independent interpretations of a shared naturalistic object but a thoroughgoing appraisal of the complex enactments that bring forth the body in its cultural specificity, or as Good puts it:

> Interpretation of a single concept or lexical item thus involves comparisons of conceptual systems, the practices that enact and reproduce that system, and the 'objects' produced by these activities, rather than a search for symbolic elements that map onto the same material referent. (1994b, p. 108)

The biomedical body constructed piecemeal through the technical operations comprising medical training is a fundamentally different one than the lived body of the patient. If we believe Good, it is nonetheless mischaracterized in lacking substantive personhood, as the soteriological agenda of medicine is itself a function of the preservation of human autonomy. It is easy to see that the framework of untranslatable symbolic forms might refine our understanding of the conceptual tensions in medical communication. But Good's analysis remains committed to the notion of a self-contained metaphysical framework that physicians procure as a whole from their professional training. As will be shown, there is a tension not only between the conceptual schemes of patient and practitioner but between the descriptive nature of scientific postulates and the basic normativity of personhood that generates internal conflicts within medicine. The unique

amalgamation of these two domains that is characteristic of medical practice evokes a second analytic framework, the synoptic philosophy of Wilfrid Sellars that likewise attempts a reconciliation of two conflicting worldviews - one posing as the domain of normativity and discourse, the other as that of explanation and description.

Sellars' Two Images

In "Philosophy and the Scientific Image of Man", Sellars lays out the steps involved in the pursuit of knowing one's way around among "things in the broadest possible sense of the term" (1991b, p. 1).[7] According to Sellars, a fundamental difficulty awaits the philosopher in her endeavor of apprehending a world variously partitioned by the representational practices of philosophy and the scientific disciplines. Not a single, variegated picture of the world emerges from her investigation but two, both of which claim ontological authority (1991b, p. 4f). Sellars distinguishes between the *manifest image* and the *scientific image* as two complete but ostensibly incompatible accounts of the world.[8] This distinction underlies some of the most contentious issues in philosophy since the age of enlightenment.[9] In particular, the question as to the significance of the distinctively human qualities of sense, reason, and intention that seem to have lost their place in a world of microphysical particles is borne out in the clash of the images. This fundamental tension maps neatly onto the ontological commitments Good ascribes to medical practice where the normative category of the person must be reconstituted from physiological entities that are in essence impersonal.

The first perspective Sellars enrolls in his grand narrative is the manifest image - the image in which humanity came to encounter itself. This encounter, predicated on the capacity to represent oneself within the "logical space of reasons" - to deploy a conceptual self-representation the content of which can be

[7] The knowing Sellars appeals to here, takes on a decisively practical tinge – *knowing how* as opposed to *knowing that* (1991b, p. 1).
[8] Sellars likens his two images to Weberian ideal types (1991b, p. 5).
[9] Sellars puts forward another term, the perennial philosophy, as the philosophical project that asserts the reality of the world represented in the manifest image. On this note, varieties of metaphysical dualism are presented as a justificatory outgrowth of safeguarding the conceptual independence of the person against the ontological threat posed by the scientific image, as are the tenets of early analytic philosophy (1991b, p. 15).

intersubjectively evaluated - is crucial for Sellars' analysis (1991b, p. 6, 1991a, p. 169). Importantly, he notes, such discursive self-awareness can only have emerged as a completed conceptual framework (however unrefined in its initial expression) and thereby marks a decisive categorial shift in the development of the human species that, as we will see, has no ready equivalent in the second of Sellars' images.[10] A feature of the manifest image related to this conceptual leap is the category of the person understood as a philosophical primitive that grounds our understanding of objects in the world. In Sellars' ideal-typical account, the history of the manifest image is one of gradual de-personalization of objects that, in the beginning, all share the agency and causal efficacy characteristic of persons. When Sellars declares the person as primary object of the manifest image, he consequently means

> that it is the modification of an image in which all the objects are capable of the full range of personal activity, the modification consisting of a gradual pruning of the implications of saying with respect to what we would call an inanimate object, that it did something. (1991b, p. 12)

Another feature of the manifest image that will play an important role in distinguishing the two images is its relation to the natural sciences. Critically, the manifest image is not opposed to a scientific interpretation of the world – to the contrary, it is capable of the entire scope of correlational, inductive methods epitomized in the work of John Stuart Mill (Sellars, 1991b, p. 7). What it lacks, however, is the possibility of descriptive and explanatory access to imperceptible entities such as subatomic particles or gravitational fields prevalent in contemporary scientific theory. The only entities entailed by scientific explanations as being genuine parts of the world are the objects of direct empirical observations and the law-like generalizations that stem from inductive inference based on these objects. Sellars illustrates this point with an example from the field of chemistry. Even though we might not have discovered that litmus paper turns red when subjected to acid without hypothesizing underlying electromagnetic radiation, electromagnetic radiation itself as a component

[10] Sellars uses the notion of logical space roughly in the sense of a Wittgensteinian language game in which the social espoused rules of use determine the meaning of a term. The logical space of reasons is placed in contradistinction to what John McDowell calls the logical space of nature, the domain of empirical description and explanation (1996, p. xv). While the former operates along the lines of the "game of giving and asking for reasons" which account for human behavior in terms of sensation, reason, and intention, the latter conforms to a deterministic logic of causation (i.e., predictability "no holds barred") (Brandom, 1994, p. 16; Sellars, 1991b, p. 12).

part of our world is not implicated in the observational generalizations that spring from this discovery. What ultimately exist subsequent to the purely instrumental application of microphysical theories are perceptible objects and the natural laws under which they operate. (1991b, p. 19)

This is where the scientific image enters the scene. Although evidently indebted to the manifest image from which it derives, it ultimately seeks its replacement with a more accurate account of the fundamental constituents of our world. Recognizing a methodological dependence on the manifest image, the scientific image nevertheless claims explanatory orthodoxy as an adequate and exhaustive perspective. The veracity of this claim, however, is precisely what is denied by proponents of the manifest image for at least two reasons. First, according to the scientific image, physical objects are composed of simpler elements that do not themselves possess the properties of higher-level phenomena awaiting explanation. Echoing a popular example of Sellars', none of the microphysical constituents of a pink ice cube itself possesses the property of pinkness. Second and related to the first point, nowhere in the scientific image taken in isolation emerges the category of the person as the site of sensation, reason, and intention – states of consciousness that have lost their place in a world perceived as a causally closed system of physical particles (1991b, p. 29). The identification of the primary categories of the manifest image inarguably poses problems to scientists and philosophers alike, but most importantly, even if the scientific image could locate states of consciousness in the physical world, it would fall short of a complete reduction of a person's lifeworld in the same sense in which normative are irreducible to declarative propositions.[11] What's more, the primacy of the category of the person situates individual self-conceptions in a communal discourse from which we receive our ethical bearings:

[11] Sellars here evokes David Hume's famous dictum of the non-deducibility of the *ought* from the *is* from the treatise on human nature: "In every system of morality, which I have hitherto met with, I have always remark'd, that the author proceeds for some time in the ordinary way of reasoning, and establishes the being of a God, or makes observations concerning human affairs; when of a sudden I am surpriz'd to find, that instead of the usual copulations of propositions, is, and is not, I meet with no proposition that is not connected with an ought, or an ought not. This change is imperceptible; but is, however, of the last consequence. For as this ought, or ought not, expresses some new relation or affirmation, 'tis necessary that it shou'd be observ'd and explain'd; and at the same time that a reason shou'd be given, for what seems altogether inconceivable, how this new relation can be a deduction from others, which are entirely different from it" (Hume, 2007, p. 302; see also O'Shea, 2007, p. 62; Sellars, 1991b, p. 39).

> Thus the conceptual framework of persons is the framework in which we think of one another as sharing the community intentions which provide the ambience of principles and standards (above all, those which make meaningful discourse and rationality itself possible) within which we live our own individual lives. (1991b, p. 40)

For scientific disciplines that purport to offer a complete picture of the world, a conceptual dilemma arises: to the extent that the descriptive and explanatory repertoire of the scientific image cannot explain the emergence of personhood as a privileged stage in the developmental course of humanity, it must also fail to prescribe meaningful action - for normativity can only arise from within a completed conceptual framework formalizing the shared intentions of persons, not from the aggregation of simple, non-conceptual elements as the scientific image has us believe.[12] It should be apparent that this dilemma applies to medical science, which endorses scientific reduction while taking the normative concept of the person as its primary object.

Good has provided an analysis of personhood through the lens of medicine's formative principles. Here, the person is always already part of an actionable ontology inseparable from the pursuit to which it is subservient, the preservation of human life. Sellars has added to this picture by identifying the formidable challenge faced by medicine in explaining away the categorial difference between a person and its microconstituents. Reasoning in terms of personhood, according to Sellars, requires accounting for sensation, reason, and intention. This form of evaluation, as the focus groups will show, materializes in clinical practice in the form of what Gilbert Ryle would have treated as a *category mistake*, the normative interrogation of medicine's descriptive knowledge basis (2009, p. 6ff). From our examination of Good and Sellars' analyses, two fundamental but interrelated challenges for medicine arise, both of which can be subsumed under the following question: how does the profession go about bridging the local incommensurability of the patient's and physicians' conceptual schemes, while, at the same time, reconciling the manifest and the scientific image? In the second part of the thesis, through an interpretation of the students' responses in light of the

[12] As Sellars puts it: "The conclusion is difficult to avoid that the transition from pre-conceptual patterns of behaviour to conceptual thinking was a holistic one, a jump to a level of awareness which is irreducibly new, a jump which was the coming into being of man. […] There is a profound truth in this conception of a radical difference in level between man and his precursors. […] This difference in level appears as an irreducible discontinuity in the *manifest* image, but as, in a sense requiring careful analysis, a reducible difference in the *scientific* image" (1991b, p. 6).

theoretical framework just laid out, metaphysical commitments will take on a new significance that should help us see how these fundamental tensions are, at least momentarily, overcome.

Part 2: The Focus Groups

In June 2021, I conducted three focus group discussions with medical students from University of Chicago's Pritzker School of Medicine. The purpose of this project was to develop an account of the practical metaphysics of medicine infused by and accountable to empirical self-reflections of medical practitioners. In interviewing students rather than full-fledged physicians, I was hoping that explicit information about the subtle dynamics of medical communication (as opposed to the implicit knowledge of experienced practitioners) would be more readily accessible in subjects making initial contact with medical practice. After a brief pre-screening period, I selected 14 participants from a sample of 37 volunteers (to the extent possible) approximating the demographic composition of US medical schools with respect to gender, race or ethnic self-identification, age, and years of medical training. I enrolled 14 students in 3 groups of 4-5 in order to discuss fictitious medical cases for about one hour in each session. All groups were composed of at least two students who had received less and two students who had received more than two years of medical training. This choice was meant to encourage conceptual abstraction and theory building, since at least some judgments were to be made in the absence of extensive practical experience. In addition, mixed group composition encouraged the experienced students to make their tacit reasoning more concrete for the novice students. The study was advertised as focus group research on medical communication but not explicitly linked to the subject matter of this thesis in order not to bias responses towards premeditated arguments over spontaneous metaphysical "philosophizing".

All sessions were subdivided into two sections; the first was intended to prime the students to think more deeply about potential obstacles and sources of conflict that could emerge in medical communication with the hope to thereby increase the likelihood of tapping into fundamental conceptual differences between patient and physician. The second segment was designed to elicit spontaneous responses to the following case

vignette modeled after a fictitious case of fibromyalgia[13] described in the proposal for the diagnosis of chronic primary pain for the ICD-11 (International Classification of Disease and Related Health Problems, 11th revision):

> Mrs. Harper is a 37-year-old high school teacher. She presents with pain in multiple sites involving both hands, her upper back and shoulders, the anterolateral portion of both knees and the gluteal area. For about two months, especially her knees have been hurting more than usual irrespective of her activity level which has motivated her visit. She reports having had persistent pain for more than a year but has only now decided to seek medical care upon insistence from her partner. Mrs. Harper is unable to recall a traumatic event that could explain the onset of her condition, but she mentions that the first episode was concurrent with an intensely stressful quarrel that led to a rift with her mother. Having lost her mother's support who frequently helped her out with her two little children of 3 and 5, her work at school feels increasingly strenuous to the point of never feeling fully restored after a night's rest. The pain, she further notes, often affects her concentration, so that some of her students have begun mocking her for her occasional absent-mindedness. During the physical examination she reports pain on palpation, especially around the lateral joint line of the left knee but no restriction of movement or functional deficits and no swelling in knee or finger joints. She has maintained her weight over the last year, and neither reports rashes nor cough. She is especially concerned with the idea of others perceiving her pain as mental illness and asks: 'You are not telling me that this is all in my head, are you?'.

I had chosen this case to introduce a further element of uncertainty into the students' reasoning, as, although common features and potential mechanisms underlying the diagnosis of fibromyalgia have been proposed and empirically supported, its etiology in terms of mental or physical causation remains contested. The students were first asked to discuss the case in their capacity as medical experts and second as if directly addressing the patient depicted in the vignette. The general purpose of this segment was to tease out metaphysical commitments emergent from a conversation charged with potential metaphysical conflict. I was

[13] Compare Barke et al. (2018, p. 18).

further interested to understand to what extent students could conceptually disentangle their own position from that presented to the patient, and if a potential discrepancy between the two positions could be self-attributed to pragmatic decisions such as optimizing the expected treatment efficacy.

Following the group sessions, I transcribed and coded the content of the discussions to enable further thematic analyses. Six recurrent themes that were characteristic of the observed clinical reasoning patterns surfaced in the coding process, each of which with metaphysical implications: direct metaphysical reflections, reasoning in terms of explanation, factual correctness, patient characteristics, physician-patient interaction, and professional self-reflection. All of these aspects combined to form a complex picture of the physical and the mental that is always already inflected by pragmatic clinical considerations. In this part of the thesis, guided by the analytic framework developed in the first part, I will present this metaphysical picture as it emerges from "the game of giving and asking for reasons" as an essential component of medical communication (see Brandom, 1994, p. 16). To thicken and contextualize the description of the students' responses before delving deeper into the analysis, however, I will first characterize the three group sessions in general terms.

General Characteristics

All groups were approaching the patient's problem with utmost compassion, either expressly stating their consternation ("the part about her students making fun of her just really made me sad.") or relating to the patient's predicament on a personal level ("the experiences that you are dealing with, that would certainly make me more aware of the physical pain"). Especially the last line of the vignette, the patient's provocation: "you are not telling me this is all in my head, are you?", had an emotional impact on the students who expressed the need to control a deeply felt impulse to validate the patient's concern in order not to go against the available medical evidence:

> I'd say it's a pretty natural human response, when someone says: 'you are not telling me something, insert bad outcome, are you?'. Like, questioning you, and really seeking your validation. It's a really

> human response to be like: 'oh no, no, no!', and to smooth it over. But as physicians or as medical professionals, I think there needs to be a point when you realize that that response is not actually appropriate, and that you still need to be as objective as possible.

To provide reassurance and establish a trustful relationship with their new patient, a frequent first move was to establish the reality of the reported pain regardless of whether its source was ultimately viewed as physical or mental:

> I think, the first thing I do is let her know that – at least from my perspective – everything that she is feeling is real for her. I think that's like the biggest thing that I would do, because it's very clear from the question that she asks at the end, that affirming that what she's going through, what she's experiencing, is real, is super important to her. So I know that's the first thing I personally would do is to assure her that I one hundred percent believe everything that she's feeling is real.

Throughout the fictitious consultation, the students took great care not to lose rapport with their patient which was made especially difficult by the circumstance that her presumed beliefs about mental illness threatened to get in the way of pursuing a promising line of treatment in a psychiatric regimen. Moreover, as there was little etiological certainty, the students were afraid that, once a diagnostic decision was made that would need to be revoked at a later point, the patient might lose trust or turn recalcitrant to a change of direction. A common strategy the students applied to counter this risk was to sustain a broad differential diagnosis, sequentially ruling out non-mental causes to both accommodate the patient's solicitation for a physical cause and support their decision to suggest psychiatric interventions should the tests turn out inconclusive. With the vignette having little in the way of evidence for a well-established condition, the students acknowledged and communicated their diagnostic uncertainty to the patient with epistemic humility. Importantly, not having a clear-cut diagnosis did not mean that, as medical professionals, they could not provide means of consolation conventionally deemed outside of the purview of medicine:

> We're not sure. It could be this thing that we can't treat very well and acknowledge that that sucks, and that that's terrible, and you know, maintain a follow up relationship with that patient to, you

> know, if you can, manage symptoms or in some way acknowledge that you're not dumping a diagnosis on them and then leaving them out of the clinic. I think the most important thing is to just make them continue to feel that they can come to you for some, like, relief or hope or, or something.

Despite its significance for the profession's self-image, the diagnosis marks only an intermediate stage in the physician's relationship with the patient. There are other explanatory practices in which hope and relief are tied up with illness interpretations. One of those practices turned out to be the correction of misconceptions via metaphysical reasoning.

Metaphysical Commitments as Counterarguments

Representing a metaphysical stance that strictly separates mental and physical illness, I included the patient's provocation "you are not telling me this is all in my head, are you?" as a last line of the case vignette. By making the weight of stigmatization or disbelief implied in the question especially salient, the students were prompted to explicate their metaphysical commitments in relation to what they considered the most appropriate metaphysical scheme for the clinical encounter. This indirect approach was meant to capture what I assumed to be a flexible, pragmatic attitude towards the nature of objects in the world to the effect that patient positions could be more easily accommodated – one I would likely miss by asking the students plainly about their own beliefs. This, however, led to an additional element of conjecture in the sense that, instead of statements of the type: "All objects are physical", at the most, I could expect statements such as "The patient's problem is physical", which left open the possibility that other problems would indeed be considered irreducibly mental. Furthermore, inferences about substantive metaphysical commitments from such propositions are necessarily relative to an underlying conceptual scheme that could itself be left unexpressed. In his classical essay on ontological commitments "On what there is", W. v. O. Quine notes:

> This, I think, is characteristic of metaphysics, or at least of that part of metaphysics called ontology: one who regards a statement on this subject as true at all must regard it as trivially true. One's ontology is basic to the conceptual scheme by which he interprets all experiences, even the most

> commonplace ones. Judged within some particular conceptual scheme and how else is judgment possible? - an ontological statement goes without saying, standing in need of no separate justification at all. (1948, p. 8)

To illustrate this point, the proposition of interest "there are irreducible mental properties" is straightforwardly entailed by the proposition "this is a mental problem" if evaluated from the perspective of property dualism.[14] Under a physicalist scheme, the former proposition would not follow from the latter, as mental properties are considered reducible to physical ones. However, to rehearse Quine's assessment, basic as they are to a given conceptual scheme, entailments such as these are usually not in need of a separate justification. I will therefore apply a different strategy to isolate metaphysical positions present in the students' responses. Moving away from the static analysis of individual statements, I will identify their respective function in the ongoing conversation, that is, whether they are meant to deflate or correct the patient's presuppositions. The question accordingly becomes not 'what is the speaker's underlying deeply held belief?' but 'what kind of metaphysical argument is implicit in the speaker's statement?'.[15] Throughout the functional analysis of metaphysical arguments I will place special emphasis on their normative implications in light of Sellars' manifest and scientific images.

Naturalizing Pain

In order to diffuse the patient's concern, the students pursued various conversational and metaphysical strategies. The first variety I will examine could be understood as assimilation of mental phenomena into a neurophysiological framework. The following short dialogue could be read in this way:

[14] The position that, although there exists only a single underlying substance, the properties of mental and physical kinds are non-identifiable over and above the relationship of linguistic irreducibility.

[15] This approach could be productively complimented by a pragmatic form of inquiry that attends to the consequences of metaphysical arguments rather than their potential function in normative discourse. A project like this, however, suggests a different methodical setup (and attendant ethical considerations) that enables observations of patient-physician encounters.

> Participant 1: Well, I don't know how philosophical you want to get, but, like theoretically you can think of all pain as being in your head, because that's how we, kind of, perceive our surroundings and pain, so…
>
> Participant 2: Right, I was going to say something similar, where it's like, your nerves are telling you that there's pain, even if there isn't a physical trauma. But there is a stressor that is hypersensitizing them…

The two students seem to agree on the usefulness of a translation of phenomenological into physical descriptions to the effect of naturalizing pain and signaling its compatibility with scientific realism. Particularly striking is the term *hypersensitization* that serves to replace morally tinged with ostensibly neutral language that nonetheless retains a normative thrust (I will come back to this combination of normativity and pure description again in a later section). As philosopher of medicine Georges Canguilhem contends, despite its seemingly value-free, objective appearance, the distinction between the normal and the pathological, normo- and hypersensitivity, derives from the normativity of life itself.[16] What is considered excessive in medicine indicates a breakdown of adaptivity, an inability to instantiate new, functional norms in response to environmental pressures. Physiological constants against which pathology is established as aberrant, on the other hand, reflect a history of "unconscious but real" efforts of group adaptation. (Canguilhem, 1966, p. 170f). Interestingly, Canguilhem's invocation of medicine's essential dependence on socially negotiated norms parallels the role of community intentions that provide the "ambience of principles and standards […] within which we live our own lives" implicit in Sellars' concept of the person (Sellars, 1991b, p. 40). Adopting a neurophysiological framework is thus bound to fail in eliminating the social normativity that is part and parcel of human collectivity.

[16] "Canguilhem writes: "The scientist, from his objective point of view, wants to see the anomaly as a mere statistical divergence, ignoring the fact that the biologist's scientific interest was stimulated by the normative divergence. In short, not all anomalies are pathological but only the existence of pathological anomalies has given rise to a special science of anomalies which, because it is science, normally tends to rid the definition of anomaly of every implication of a normative idea" (1966, p. 136).

On this note, another expression in the foregoing dialogue evokes Sellarsian personhood. "Your nerves are telling you that there's pain" juxtaposes pain's biological substrate, nerve signaling, with an ontologically separated recipient. Conceptual imprecision about the role of nerves in pain processing notwithstanding[17], what is interesting in this passage is an apparent commitment to what philosopher Daniel Dennett referred to as the *Cartesian theater*, the fallacy of postulating of an ontologically independent knower beyond the neurological structures in which the known inheres (1991, p. 107f). On Dennett's account the Cartesian theater represents an illicit remnant of Cartesian dualism within physicalist thinking. His argument rests on the observation that nowhere in the nervous system can we find a central locus of processing that could serve as the equivalent of a Cartesian self. The discovery of such a self would lead to an infinite regress - since who or what is it that perceives the image there generated? If we believe Sellars, however, this scientifically unsupportable proclivity within everyday discourse to refer to a subject external to neurological processing is not so much a holdover from our philosophical heritage but an irreducible feature of the manifest image and the primacy of the person. Understood accordingly, the inconsistent neurophysiological framework deployed by the students may fail to reflect physical reality – however, it enables normative judgment in a way highly pertinent to the clinical situation at hand. The Cartesian self that is the recipient of nerve signals is also the possessor of sensation, reason, and intention by means of which feeling states and subsequent acts of volition can be evaluated and rationally accounted for.

At first glance, the neurophysiological framework seems to tick all the strategic boxes – it relocates the patient's illness to the physical world, provides a plausible causal mechanism, and leaves open the option to attack the problem from all clinical angles. One possible drawback, however, reminds us that it is not solely the site of the pain within the metaphysical scheme of the patient that is at stake. Asked for potential downsides of a neurophysiological approach, one of the students suggesting this interpretation notices: "I concede, in framing it as a neurological thing is, it's literally saying that it's something to do with her head, right? So it's directly contradicting what she wants to hear from you". It appears as if discussing the patient's

[17] At least since Ronald Melzack's Neuromatrix Theory, pain has been increasingly come to be understood as property of the entire nervous system involving higher-order cognitive processing and therefore cannot be identified with nociception alone (1999).

pain in terms of neurophysiological processing must - as long as mental states are considered epistemically deficient - fail to dispel the fundamental, stigmatizing doubt associated with physically unsubstantiated pain. As Elaine Scarry notes in *The body in pain*: "Medical Contexts like all other contexts of human experience provide instances of [an] alarming phenomenon […]: to have great pain is to have certainty; to hear that another person has pain is to have doubt" (1985, p. 7).

Scarry's remark implies a separate epistemological problem that hypostatizes a divide between public language and private sensations reminiscent of Wittgenstein's famous private language argument.[18] According to Wittgenstein, to say 'I am in pain' is functionally analogous to crying or other kinds of pain-behavior, not to describing one's mental state, as private sensations are forever bound to remain outside the language game the elements of which receive their meanings solely from their use (1958, para. 244). Just as the articulation of pain, the articulation of doubt is subject to the rules of the respective language game it enters into. It is in their interpretations of the rules by which the language game of pain is played that Scarry and Wittgenstein diverge. While Scarry infers from its intersubjective inaccessibility that pain must lead to doubt[19], for Wittgenstein, the proposition 'I am in pain' cannot be doubted any more than moans and groans can be:

> Yes: one can make the decision to say 'I believe he is in pain' instead of 'He is in pain'. But that is all. - What looks like an explanation here, or like a statement about a mental process, is in truth an exchange of one expression for another which, while we are doing philosophy, seems the more appropriate one. Just try - in a real case - to doubt someone else's fear or pain. (1958, para. 303)

Whether aware of its implications or not, by situating the patient's pain in an (in principle) intersubjectively accessible domain (nervous system as opposed to mind), the students take a distinct epistemological stance in

[18] Wittgenstein attempts to refute the possibility of an exclusively private language with a well-known thought experiment: "Suppose everyone had a box with something in it: we call it a 'beetle'. No one can look into anyone else's box, and everyone says he knows what a beetle is only by looking at his beetle. - Here it would be quite possible for everyone to have something different in his box. […] —But suppose the word 'beetle' had a use in these people's language? - If so it would not be used as the name of a thing. The thing in the box has no place in the language-game at all; not even as a something: for the box might even be empty" (Wittgenstein, 1958, para. 293).

[19] It should be remarked that Scarry's stipulation of the dubitability of pain does not rely on simple perspectivism. On her account, pain is characterized by a singular, world-destroying phenomenology that is marked by a gradual contraction of the sufferers lifeworld. Pain, accordingly, produces a profound ontological incongruence that is not associated with other subjective experiences.

the medical language game – one in which pain can indeed be - but, for the moment, is not - doubted. "The logic of looks", a frequently cited passage in Sellars' "Empiricism and the Philosophy of Mind" illustrates this point. Here, Sellars establishes the epistemic primacy of "sees" over "looks" statements. Challenging the logical empiricist tenet that epistemic claims are derived from immediately known inner episodes along the lines of "it looks to one as if there were a red object", he asserts that such propositions are conceptually posterior to "one sees a red object" and express a withdrawal of epistemic endorsement.[20] "Looks"-statements accordingly fall outside of the realm of epistemic discourse. Student contributions that validate pain experiences *qua* private episodes as intrinsically real such as the following can be interpreted in this sense:

> I think part of the initial response, at least to the patient, would be to make sure that she understands that *even if it is in her head*, it's still, like, real. She's *feeling* pain, so it's still affecting her, and it's something that should be taken seriously. (My emphasis)

At first sight, reference to the content of immediate sense experience as opposed to the represented state of affairs conveys a kind of unconditional epistemic license. For, however tenuous a given inner episode's relation to the external world is, the fact that it appears to one as if the state of affairs is such and such must be considered true independent of correspondence relations. If, however, the "privatization" of experience renounces epistemic entitlement rather than securing it, the burden of proof is again placed on external empirical confirmation (e.g., productive physical examination). Taking this epistemic aporia as a point of departure, the following sections will be concerned with how the students conceptualized their ongoing search for an object of reference to the inner episode of pain that could thereby be epistemically endorsed.

[20] Sellars writes: "Now the suggestion I wish to make is, in its simplest terms, that the statement 'X looks green to Jones' differs from 'Jones sees that x is green' in that whereas the latter both ascribes a propositional claim to Jones's experience *and endorses it*, the former ascribes a propositional claim but does not endorse it. This is the essential difference between the two, for it is clear that the two experiences may be identical *as experiences*, and yet one be properly referred to as a *seeing that* something is green, and the other *merely* as a case of something's *looking* green" (1991a, p. 145).

Ontological Mixture

In line with the findings of Ahn and colleagues concerning the causal ascriptions in mental health professionals (2013), the students frequently construed the patient's illness as representable on a spectrum from purely physical to purely mental with possible intermediate locations. In the context of the fictitious patient encounter one student offered the following response to the patient's provocation:

> I want to start off by saying: I do believe that you are in pain, and part of my job is to help you to find resolution for that pain, and to make you feel more comfortable. So I do believe you, and what you are telling me. What I don't know at this point is what is the cause of your pain. It could be anywhere on a spectrum of purely physical or purely psychological, or a mix of the two.

Delving deeper into the ontological spectrum picture, we can imagine at least two different interpretations. First, the students could share an illness conception encapsulated in a negative correlation between physical and mental causes as observed by Ahn and colleagues (2013, p. 9). Second, supported by the last phrase "or a mix of the two", they could conceive of both domains as independently contributing to the illness presentation. According to this view, medical problems can have both significant physical and mental causes. Although both orientations provide evidence for mind-body dualism, the authors note that correlational data alone does not substantiate claims about the ontological nature of the observed kind of dualism. In this vein, sharing the assessment of Miresco and Kirmayer (2006), Ahn and colleagues concede that their method fails to disambiguate substantive from explanatory forms of dualism, where the latter type reflects a gain in explanatory utility outweighing conceptual violations of the subject's true, physicalist ontology (2013, p. 2f). An interpretation of the students' responses as evidence for mere explanatory dualism is somewhat supported by the added assumption of interactions between the two domains. Representing this line of reasoning, another student maintains:

> In this scenario, this patient is kind of separating mental illness from physical illness, but oftentimes it's not necessarily the truth that the two are not linked. It's possible that increased stress could contribute to something that's underlying, and I think it would be important to make sure that she

> knows, that we would hypothetically approach it as – it could be one, it could be other, it could be something in the middle, and none of those things should be stigmatized.

Mind-body interactions as causal relations between fundamentally distinct domains are notoriously difficult to explain for adherents of metaphysical dualism. Accepting the principle of physical causal closure according to which physical effects have sufficient physical causes, mental events should be considered explanatorily superfluous and causally inert (see J. Kim, 2011, p. 197). From within a physicalist scheme in the guise of explanatory dualism, however, mind-body interactions can be conceptualized as analogous to interactions between the nervous system and its effector organs and therefore do not result in obvious justificatory quandaries. Acknowledging the risk for explanatory inconsistencies, it appears likely that situating a clinical problem on the physical end of the spectrum is metaphysically preferable when accepting the spectrum picture on methodological or explanatory grounds. Obviously, the explanatory inconsistency hypothesis is not required to account for medical practitioners' propensity to favor physical over mental causes already predicted by Good's soteriological materialism. It, however, demonstrates, once more, how metaphysical, epistemological, and ethical considerations prove inextricable in the clinic. On this note, asserting the epistemic primacy of the spectrum's physical aspect a student notes:

> I would let her know that we would run the test and do the due diligence necessary to rule everything else out first, because, you know, somatic pain, I think for me, is a last resort diagnosis. You don't want to miss a medical or, I guess I should say, a physiological etiology for the pain, by just attributing it to stressors when there may be something deeper. So I would just say that we are going to investigate all of it.

Of course, taking on the hunt for a physical cause solicited by the patient means accepting especially austere rules in an epistemological language game that, in the worst case, reinstates Scarry's fundamental doubt. This risk is already foreshadowed in the student's (instantly corrected) slippage of identifying medical with physiological etiologies. If physiology becomes coextensive with medicine proper, there always remains a set of untreatable conditions as vast as the epistemic gap between medical science and clinical practice. Recalling

Canguilhem's argument in support of an inescapable contingency of pathology on patient testimony, such a referral to a physiological norm seems untenable to the extent that that physiology has yet to accommodate illness that is epistemically prior to its posits.[21]

Embracing Holism

Concentrating on the other end of the ontological spectrum, a student framed the patient's problem as primarily mental or stress-related that, however, presents as physical symptoms:

> I guess, for me, I see it as a physical manifestation. I would treat this as overall, like, stress, but clearly there are physical implications of it. So, I wouldn't distinguish them as two separate issues - there's one main issue. And exploring the stress and then clearly, kind of, identifying the connection between the stress and the physical manifestations, I think.

I will come back to examining the concept of stress and its significance for medical accounts of patient phenomenology in a later section. For now, my main interest lies in the student's explicit rejection of treating physical symptoms separate from the patient's psychological or social conditions, a position commonly referred to as holism. Medical holism ties back at least to physician George Engel's highly influential biopsychosocial model that provides the philosophical basis for the self-image of various contemporary medical institutions such as the WHO and the American Psychiatric Association (see O'Leary, 2020, p. 3). Rooted in the insights of general systems theory, Engel's formulation of a new model of illness was directed against what he described as "the scientifically archaic principles of dualism and reductionism" that preclude

[21] In *The Pathological and the Normal,* Canguilhem gives a pithy account of the relationship between physiology as a separate discipline and the clinic: "[Physiological] constants are termed normal insofar as they designate average characteristics, which are most frequently practically observable. But they are also termed normal because they enter ideally into that normative activity called therapeutics. Physiological constants are thus normal in the statistical sense, which is a descriptive sense, and in the therapeutic sense, which is a normative sense. But the question is whether it is medicine which converts - and how? - descriptive and purely theoretical concepts into biological ideals or whether medicine, in admitting the notion of facts and constant functional coefficients from physiology would not also admit - probably unbeknownst to the physiologists - the notion of norm in the normative sense of the word. And it is a question of whether medicine, in doing this, wouldn't take back from physiology what it itself had given" (1966, p. 122f).

medical practitioners from addressing person-level concerns as a consequence of a narrow physicalist orientation (Engel, 1978, p. 175).[22]

According to Engel, health and illness are best understood as functional harmony between the elements of a hierarchically organized system reminiscent of Comte's hierarchy of the sciences in which every level of the system could serve as an entry point for disorganization. Perturbations at the level of the person, for example, could thus reverberate through the system and manifest at the tissue level. Importantly, interactions between elements and levels of the system are embedded in multidirectional causal flows that necessitate the replacement of "simple cause-and-effect explanations of linear causality with reciprocal causal models" (1978, p. 175). Reductionism understood in Engel's terms is accordingly not just the commitment to a form of undesirable metaphysical monism[23] but to the extricability of original causes:

> Thus while the reductionist thinks in terms of cause and effect, of final consequences and discrete entities, the systematist is thinking in terms of ongoing, progressive sequences of intra- and intersystemic interactions with the stability of each system being ultimately determined through multilevel feedback arrangements. (1978, p. 179)

Faced with the challenge to isolate a physical cause from a presumably highly complex disease process, a student expresses a similar sentiment:

> I think it has both a physical and a mental component, but it's not just isolated to just mental if there isn't a physical component. There are a lot of factors involved, and you can even break it down to talking about how neurons fire and, you know, she doesn't have to understand all that. But if she really needs that physical component to give her peace of mind, I would explain my understanding of

[22] Engel concisely puts the epistemological shortcomings of a biomedical as opposed to a biopsychosocial model as following: "The biomedical model can make provision neither for the person as a whole nor for data of a psychological or social nature. For the reductionism and mind-body dualism upon which the model is predicated requires that these must first be reduced to physico-chemical terms before they can have meaning" (Engel, 1981, p. 103).
[23] As O'Leary has rightly pointed out, metaphysical dualism expresses the position that monist positions must ultimately fail in providing an exhaustive account of the world which undermines attempts at metaphysical reduction. Holding that medicine is simultaneously reductionist and dualist is therefore philosophically untenable (O'Leary, 2020).

> pain is that it's something that is very multifactorial, and you can't just say that I have a bruise and that's causing me pain. And it's not just mental either.

In the student's reasoning, etiological holism mandates a blurring of categorical distinctions even if a factor is not directly implicated in the disease presentation. Even though, in principle, microphysical processes could stand in for mental events, the mental-physical distinction is insufficient to capture clinical reality. The student further expresses her reservation towards making a medical determination along metaphysical lines:

> I don't necessarily discern mental and physical in terms of how I would respond to a patient. I'm not super familiar with doing that - really going through that process. I'm more like: 'ok, what's going on in this picture? Is it something acute? Is it something…', you know, 'what are we able to do?'

The student's suspension of metaphysical judgment hints at an unacknowledged dilemma: in practice, the systems perspective that conceives of physiology and psychology as different levels of organization of a single physical substrate, based on the need to account for possible interactions between the two levels, creates a reifying momentum that threatens to reinstate metaphysical dualism.[24] What's more, medicine's dedication to due diligence manifests in an algorithmic approach to diagnosis and treatment that requires physicians to rule out etiological factors in the order of existential risks. Holistic medicine thereby practically enforces what it theoretically denies, the causal isolability of the determinants of illness. Whether or not medical holism can survive a thoroughgoing examination of its logical structure[25], its insistence on the irreducibility of higher-order, person- or community levels of organization mirrors Sellars' primacy of the manifest image. Safeguarding the category of the person has proven a recurrent theme in medical communication. This objective is beset with distinctive challenges in an area of medical thought that is arguably its most genuine reflection of the scientific image - the attribution of causes.

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[24] Retaining the role of sensation, reason, and intention in non-reductive physicalist accounts of the mind (such as the one implicit in Engel's biopsychosocial model) is faced with serious philosophical challenges even a passing exposition of which exceeds the scope of this treatment. What's more, the systems theoretical response to the conceptual tension between monism and mental-to-physical irreducibility is usually thought to require a substantive commitment to the disputed concept of downward causation (see J. Kim, 1989, p. 43ff; see Vogt et al., 2014, pp. 943, 946f).

[25] See, for example, Kim (1999).

Causes and Value Judgments

The central importance of causal reasoning for medicine is hard to overstate. Through the attribution of one or a limited number of causes, outwardly unconnected symptoms can be subsumed under a single disease category with specific implications for treatment and prognosis. Accordingly, medical diagnoses hinge on insights into the hidden pathophysiological origins of a condition's manifest presentation. Once a cause is discovered, treatment efforts can be focused to attack the disease at its root (see Jutel, 2011, p. 117; see Rosenberg, 2002, pp. 242, 246). Before turning to the students' causal reasoning as a second rich source of metaphysical negotiations, I will briefly revisit the treatment of causation in Good's and Sellars' accounts. In distinguishing between two different notions of causation, I will show how the ontological depth perception that enables medical diagnosis, despite producing causal accounts of human behavior in superficial concordance with the scientific image, ultimately resorts to a manifest understanding of causation that presupposes deliberate action.

According to Good, medicine is a transformative practice in its capacity to interpretively override existentially threatening events with procedures of routinization (1994a, p. 85). Illustrating this point, Good cites a clinical encounter that was reported to him, in which a profoundly distressed AIDS patient set to attack clinical personnel with his own blood in order to infect them with HIV was constrained and medicated to control what was considered an episode of psychotic breakdown. In a later discussion of the case among the medical team, the existential dimension of the case was glossed over and addressed only through routinizing speech acts: "There was a discussion of what could have caused a psychotic reaction, but the resident who presented it never described the details, never opened the issue of how frightening it was". (Good, 1994a, p. 85). An ingression of moral challenge into a self-contained hospital routine is met with palliative medical treatment accompanied by what could be referred to as hermeneutics of mere description. This positivistic attitude shapes moral discourse by linking up verbal disavowal and practical elimination of the human dimension of suffering - the verbal reduction of the existential to the physical disturbance is complemented by a simultaneous undoing of its physical correlate. Here, moral judgment is enacted rather than verbally expressed.

When the question as to the origin of the incomprehensible behavior of the aggressive AIDS patient can be settled in terms of "whether it was due to the steroids he was getting or whether it had something to do with HIV encephalitis", a particular type of causation is evoked that finds its equivalent in Sellars' treatment as predictability "no holds barred". Behavior is so caused if it is essentially invariable – a matter of "nature" rather than "character" (see Sellars, 1991b, p. 12f). If we believe Sellars, attributing causes to the behavior of persons, however, never entails such unconditional predictability. To the degree to which medicine subscribes to the category of the person, it assumes that what it means for a certain behavior to be caused is analogous to incite someone to "do something he otherwise would not have done" (Sellars, 1991b, p. 13). Through their placement within the logical space of reasons they share with the patient as a whole, the subpersonal processes implicated in the resident's offhand differential diagnosis are not thereby placed in a deterministic causal relationship with a person that is itself causally inert.

Medical critique is full of references to dehumanization by mereological fallacy, the conflation of the whole with its constituent parts (see Eriksen et al., 2013, p. 4; see Irvine & Spencer, 2017). When the knee in room 24 is treated for osteoarthritis not Mrs. Garcia, it is precisely the notion of the person defended by the manifest image that seems to be at stake. But, as we can learn from Sellars concept of personhood, medical diagnosis is never merely a collection of value-free pathophysiological facts but also a source of reasons for the inner states (i.e., sensation, reason, intention) of its recipient.[26] In this context, it evokes at least a minimal interpolation of deliberate choice between external stimulus and behavioral response. While Mrs. Garcia's knee pain can be causally reduced to pathophysiological processes in the sense of predictability no holds barred, it cannot be so reduced conceptually.[27] The concept of the person prescribes a way of reasoning that assumes a type of deliberation rightly evaluated in terms of community intentions. Sellars notes:

> To recognize a featherless biped or dolphin or Martian as a person requires that one think thoughts of the form, 'We (one) shall do (or abstain from doing) actions of kind A in circumstances of kind C.

[26] For a historiographical account of the normative weight of diagnoses see (Rosenberg, 2002).
[27] Montgomery makes a different distinction between types of causation (and its relation to predictability) in medicine that bears some resemblance to those described by Sellars. She distinguishes between scientific and clinical notions of causation, where the former follows a logic of simple linearity analogous to Aristotelian efficient causes and the latter one of complex multi-level interactions best understood in narrative terms (2006, p. 60).

> To think thoughts of this kind is not to classify or explain, but to rehearse an intention. (1991b, p. 40)

It seems to follow from Sellars' analysis that etiological reasoning on the micro-level does not escape evaluation in terms of normative principles when the goal is person-level explanation. But intuitively, there remains a qualitative difference between accounts of human behavior in terms of biological parameters and those directly invoking intentions or motivations. This circumstance threatens to leave the medicine of imperceptible entities with an explanatory deficit. However, as some of the students' responses will show, medical communication - in contrast to the reductive treatment of mental life depicted in the foregoing case - can span the entire space of reasons carved out by the manifest image.

Causal Reasoning in the Focus Groups

Collectively working out the most likely causes of the described case presentation, the students put forward their clinical assessments while gauging the merits of their diagnoses in mostly pragmatic terms. An assumed trade-off between psychogenic framing and patient rapport was discussed in all three groups and played a central role in the selection and order of administered tests. One student, for example, described the following procedure:

> [I would] treat it just like any other encounter even though on the differential is that it could be an underlying anxiety or depression but still ask all the question like I'm working up something that is physiological. And then maybe, if I rule out all that stuff, just from my history taking, labs and all, you know, anything crazy, I would then sort of tell her: you know, none of this is concerning to me for a physical syndrome. At this point I don't really think we need to run any additional tests, but I think that working on some stress reduction, or maybe having some more support at home you might find will help resolve the pain. So I'm going to recommend some physical therapy and, you know, if you're open to it, some emotional support from a therapist or counselor can also help with that.

In MUS under which the case depicted in the vignette presumably falls, the attribution of causes is complicated by an absence of clear findings in the physical examination that could causally account for the reported complaints. Furthermore, in the vignette, a number of factors that are likely to raise the very psychiatric concern the patient hopes to diffuse through the consultation are present. The epistemic pressure emanating from the diagnostic uncertainty against the background of the patient's wish for a non-mental cause introduces an additional moral dimension into the diagnostic act - authenticity and professional humility conflicts with the human desire to provide reassurance. But what is perhaps more important, the lack of a clear medical diagnosis can coincide with paralyzing indecision or the inability to intervene if medicine is too narrowly conceived. As one student remarks:

> It's really difficult because it's kind of getting to the edge of what medicine does, like, the… I think people define this differently and understand this differently, but in one conception of the clinic, it's just a space in which things are diagnosed and treated, and when things can no longer be diagnosed or treated the clinic doesn't really know what to do with it yet. And I think, we're still trying to figure out what that means, and so this is on the border of how medicine understands itself. And so, I think this answer will differ depending on how people define their medical practice, and their role as doctors.

The student's analysis evokes two kinds of medicine, one conceived as the technical activity of diagnosis and treatment, the other centering around care and symptom management. Within the second, extended understanding of medicine, reasoning in terms of causes appears to recede into the background. But as long as the ontological depth perception that produces causal facts about the sick person is unable to suggest a treatment regimen, attempts at "knowing how" and "knowing that" fail together. Knowledge about etiology typifies medical knowledge since it not only describes ongoing disease processes but also indicates where to intervene. It is therefore understandable when medical care for undiagnosed conditions never quite renounces the search for causes. In the following two sections, I will examine how, through the use of ambivalent but specific concepts, the students respond to metaphysical concerns simultaneously addressing their etiological, ethical, and phenomenological dimensions.

Strategic Ambivalence

As the vignette does not give clear indications of a physical substrate to the patient's complaints, there are apparent obstacles to accommodating the wish to frame her problem in purely physical terms. Accordingly, none of the students explained the patient's condition in terms of a single designable disease process while all groups acknowledged the potential involvement of a psychiatric disorder. This psychosocial aspect was variedly addressed with terms ranging from mental illness as the most unequivocally medicalized category to the seemingly domain-neutral category of environmental stress. Importantly, the involvement of a mental etiology did not entail abandoning the patient's request but often encouraged attempts to anchor the disease process in the physical world. To this end, different explanatory models were put forward. One student, for example, attempted an explanation in terms of heightened awareness:

> I might think about how stress, just like, heightens – and this is completely like a personal experience – stress heightens the awareness of my body, and where I am in space, how my body is feeling, how my limbs are. And so, if you are having repeated stressful experiences, you know, if you are fighting with your mother, classroom is mocking you, the experiences that you are dealing with, that would certainly make me more aware of the physical pain. It doesn't necessarily describe the origin, but it helps with the understanding of why it's being propagated and why it feels so all consuming.

"Heightened awareness" immediately brings to mind the normative implications of the term "hypersensitivity" discussed earlier. In the context of causal attributions, we are in a good place to make a finer metaphysical distinction from which a more complicated ethical picture emerges. This, however, will require us to visit a contemporary debate in the philosophy of mind.

In relation to what is commonly referred to as the hard problem of consciousness, the lack of a physical explanation of the phenomenal character of experience also known as *qualia*, philosopher David Chalmers distinguishes between psychological and phenomenal concepts of mind. Psychological concepts focus on the functional role mental states play in causal reasoning about behavior, that is, they serve as explananda for stimulus-response relationships that thereby become, in Sellars' terms, predictable no holds

barred. The primary aim of psychological concepts understood accordingly is to account for observable behavior in the physical world by postulating hidden neurophysiological processes that are themselves physically realizable. Even though psychological concepts are also used in contexts in which they can be taken to imply more substantive inner goings-on, they are essentially devoid of any indication of the presence of qualitative experience. Phenomenal concepts, on the other hand, denote, to adopt Nagel's famous expression, "what it is like" to experience something (1974). In Chalmers' account, only phenomenal concepts pose an unsurmountable obstacle to their assimilation into a physicalist scheme. While functional states can be exhaustively expressed in terms of neurophysiological events, the phenomenal character of, say, seeing the color pink - recalling our earlier discussion of mind-body interactions - is causally inert and therefore troubles physicalist accounts that presuppose the causal closure of physical systems. Chalmers observes that, although distinct in their metaphysical implications, in day-to-day usage, both concepts are used in tandem:

> The reason why phenomenal and psychological properties are often run together is clear: it is because the relevant properties tend to co-occur. […] Once we have this sort of co-occurrence of properties in everyday situations, it is natural that our everyday concepts will bind them together. (1996, p. 17f)

Chalmers' distinction between psychological and phenomenal concepts allows for a more differentiated interpretation of the normative implications of the term "hypersensitivity" that equally applies to the more conversational "heightened awareness". In psychological terms, "hypersensitivity" implies disproportionate responsiveness to external stimuli that is, within its normal range, basic to the survival of all life forms. Its purpose according to this picture is to establish an operational coupling of organism and environment and becomes pathological only to the extent to which it fails to serve this functional norm. In Canguilhem's words: "A living being is normal in any given environment insofar as it is the morphological and functional solution found by life as a response to the demands of the environment" (1966, p. 144). The normative potential of the psychological concept of hypersensitivity accordingly lies in its capacity to delimit adequate levels of responsiveness in relation to the species capacity for adaptation. This organism-relative norm brings Wittgenstein's famous "Lecture on Ethics" to mind in which he distinguishes between two types of value judgments. While relative value judgments, in the final analysis, reduce to the statement of facts, only absolute

judgments can be considered moral in the true sense of the word.[28] In this interpretation, psychological awareness escapes the allegation of moral sanction. Awareness understood as a phenomenal state, on the other hand, is normative in an entirely different sense that associates Sellars conceptual irreducibility of the person with the irreducibility of phenomenal character described by Chalmers.

As we recall from Sellars pink ice cube example, the color pink turned out to be conceptually irreducible as its ultimate homogeneity could not be broken up into microphysical constituents without compromising the concept of pinkness. According to Sellars, pinkness as concept emerges *sui generis* from social discourse that is, however, causally reducible to certain propensities of language users to engage in evaluable rule-following speech behavior in response to environmental stimuli. In this way, the conceptual stability of language is bound up with and derives from the normativity of social learning.[29] The concept of pain verbally expressed in the clinic is different from the sensation of pain as a nervous system response to noxious stimuli into which it can be translated by means of neurophysiological explanation. While the latter is impersonal and devoid of temporality, the former involves a history of pattern-governed behavior that projects into the future as a set of tacit rules of conduct. Made explicit by selective interrogation, these rules can be adjudicated in terms of their conformity with medical orthodoxy:

> I think, maybe it would be better to kind of talk to the patient about what their perception of mental illness is, and why they have this concern about how the other perceives it, and kind of try to, you know, deal with those preconceptions that they have coming in about mental illness. And then you can walk them through the actual medically supported view of what mental illness is and how it manifests.

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[28] Wittgenstein notes: "The word good in the relative sense simply means coming up to a certain predetermined standard. Thus when we say that this man is a good pianist we mean that he can play pieces of a certain degree of dexterity. And similarly if I say that it is *important* for me not to catch cold I mean that catching a cold produces certain describable disturbances in my life and if I say that this is the *right* road I mean that it's the right road relative to a certain goal. Used in this way these expressions don't present any difficult or deep problems. But this is not how Ethics uses them" (1965, p. 5).

[29] In "Truth and 'Correspondence"', Sellars succinctly describes the mechanism by which normativity is grounded in robust performances in a way that entails causal reducibility but conceptual irreducibility: "The espousal of a principle or standard, whatever else it involves, is characterized by a uniformity of performance. And let it be emphasized that this uniformity, though not the principle of which it is the manifestation, is describable in matter-of-factual terms" (1962, p. 48).

Accordingly, the internalized stigma detected in the patient's report by the students indicates an "incorrect" learning trajectory:

> I think, I'd also be a little concerned in deciding how to talk to her about it - why she's feeling a little defensive about the potential of this being mental illness. If the partner was the one who convinced her to go see the doctor, it's probably not coming from the partner, but has she seen a doctor and he told her it's all in her head? Has she talked to a family member who is a medical professional and just told her that it's no big deal?

Coming back to the notion of qualia, we can see how Sellars' theory accounts for the fact that the phenomenal character of experience appears irreducible - as it indeed turns out to be, evaluated on a conceptual level – while, at the same time, being firmly rooted in the physical world of stimulus and response. What Chalmers' complication, however, adds, is the distinction between the inclination to report phenomenal qualities and the content of the conscious, qualitative experience itself that could just as well be missing in the causal picture.[30] Following Sellars and Wittgenstein, we are led to conclude that there is an unbridgeable epistemic gap between the sensuous experience of the awareness of pain and its conceptual expression that makes it nonsensical to claim *knowledge* of the former.[31] According to Wittgenstein's relative-absolute distinction, talk of phenomenal qualities is talk of morality proper with all its motivational force. This is powerfully evinced by an introspective portrayal of pain from Elaine Scarry:

> It is the intense pain that destroys a person's self and world, a destruction experienced spatially as either the contraction of the universe down to the immediate vicinity of the body or as the body swelling to fill the entire universe. Intense pain is also language-destroying: as the content of one's

[30] Chalmers supports his argument by pointing out the conceivability of philosophical zombies, physically identical copies of conscious beings that, in the absence of inner experience, behave identical to real persons (2007, p. 15).
[31] This idea is most clearly expressed by Sellars in his seminal essay E*mpiricism and the philosophy of mind* (1991a). In a similar vein, Wittgenstein writes in his lecture on ethics: "I see now that these nonsensical expressions were not nonsensical because I had not found the correct expressions, but that their nonsensicality was their very essence. For all I wanted to do with them was just *to go beyond* the world and that is to say beyond significant language. […] What it says does not add to our knowledge in any sense"(1965, p. 11).

> world disintegrates, so the content of one's language disintegrates; as the self disintegrates, so that which would express and project the self is robbed of its source and its subject. (1985, p. 35)

Phenomenal descriptions of pain might not be truth-evaluable in the conventional sense, but they nonetheless serve a vital function in medical discourse. The term "heightened awareness" used to provide a causal explanation for the patient's illness speaks of a curious duality. As psychological awareness, it readily combines with a pragmatic medical ontology in the sense of Good's soteriolgical materialism. As phenomenal awareness it opens up the possibility of consolatory moral discourse exemplified in the student's proposal: "It doesn't necessarily describe the origin, but it helps with the understanding of why it's being propagated and why it feels so all consuming". It appears unlikely that domain-neutral medical terminology such as "heightened awareness" or "stress" is always deliberately used in a double sense. But acknowledging the complexity of moral discourse into which verbal expressions can enter in ambivalent ways should alert us to the difficulties involved in a communicative practice that amounts to playing two different language games at once. I will now turn back to our main analysis by examining a further approach at integrating the mental and the physical.

Physical Symptoms and Behavior

A different explanatory strategy to relocate metaphysically precarious health problems to the physical world is to invoke a chain of behavioral outputs each of which have physical consequences and the current physiological state of the patient as an endpoint. One student, for example, refers to a weakened immune system caused by stress-related loss of appetite leading to nutritional deficiency: "You can weaken your immune system, like, a chain of reactions. If you lose your appetite, if you're not eating well and then you also become nutritionally deficient – […] just a chain of consequences". A multitude of dysfunctional behavioral patterns can be linked to the patient's illness, especially when considering that only so much information can be ascertained in any given consultation. As another student puts it:

> There are also things, probably not mentioned directly in this excerpt, but the fact that in this history there are so many mentions about changes in her behavior, I can imagine, that, you know, other aspects of her life are also being impacted as well, so there are probably things like changes to maybe how she's eating, or how much exercise she's getting, or how much social interactions she's getting, I'm sure that all factors in as well, and might not be directly present in this specific written out history.

In another example, familial stress leads to rumination which further leads to a lack of sleep. Physiological alterations are then explicable in terms of a discrepancy between demands posed on the body and its current work capacity:

> It doesn't seem like she's getting a good night's sleep because everything on her mind, I think, that by itself could explain a lot of things, like, you know, just not sleeping well does a number on your body, so it's just – I think that probably is not helping at all.

Stress plays an especially important role in the explanations given by the students, as all three groups framed the patient's problem in terms related to the concept. Interestingly, just like the term awareness, stress allows for interpretations in the psychological as well as in the phenomenal sense. Similar to the former term, as psychological concept, it denotes perturbations of the organism that enforce adaptive solutions to environmental demands, whereas, as phenomenal concept, it evokes a range of person-level associations that could be subsumed under what Heidegger called *Sorge* (care / concern). For Heidegger being-in-the-world is split up without remainder into the different modes of being-in, the myriad activities in which one finds oneself existentially invested:

> The multiplicity of these is indicated by the following examples: having to do with something, producing something, attending to something and looking after it, making use of something, giving something up and letting it go, undertaking, accomplishing, evincing, interrogating, considering, discussing, determining… All these ways of Being-in have concern as their kind of Being. (1962/1962, p. 83)

What is noteworthy, Heidegger's analysis reveals a basic normativity that is involved in the allocation of care: "Leaving undone, neglecting, renouncing, taking a rest - these too are ways of concern; but these are all deficient modes, in which the possibilities of concern are kept to a 'bare minimum'" (1962/1962, p. 83). Certain modes of being-in are found intrinsically wanting by virtue of their minimal participation in *Sorge*. Predictably, the degree to which one is committed to the bustle of life is a perennial matter of self-appraisal. On the other hand, framing the activities of daily life as stress-inducing marks a mode of directedness towards the world that tells of too much or a pathological mode of investment. One is spread thin or absorbed into activities that have lost their meaning in the grand scheme of things. The phenomenal concept of stress evokes a contraction of self and world reminiscent of Scarry's account of pain in the previous section. This conceptual convergence of pain and stress as phenomenological narrowing lends plausibility to their clinical relationship. One student enumerates the environmental factors that might have given rise to the disease presentation together with their phenomenal correlates in what feels like a single breathless list:

> So, you know, she's going through, you know, some familial issues. I think, it might have been some financial – I don't remember the, all that is happening in her life – she's going through a lot, and, you know, I think I would be sure to say, many people in your situation would feel overwhelmed, would feel stress, would have difficulty concentrating at work, may even start to feel pain as a result.

In this context, the term stress exerts a homogenizing force, so that, through its interposition, feeling pain can appear as a plausible next stage in a sequence of encumbering life events. In merging internal feeling states and external events, it underlines the Heideggerian insight that *Dasein* is never free from being-in. If stress is pointing to an absorption of the self in the activities of care, it is not all too surprising that, in view of Chalmers' conceptual duality, a psychological interpretation of stress can make do without explicit reference to interiority. This identification of stress and irritant, phenomenal state and stress-inducing activity allows for a subtle form of materializing the mental. In this way, a place in medicine's pragmatic ontology is carved out for the term as taking therapeutic action translates to manipulating the stressor:

> I think, you know, in agreement with everyone else here I might also bring up the fact that whatever is going on to cause this, the stress is very likely not making any of it better, and so, addressing the stress is not just about addressing this pain but also improving your quality of life overall. Which I feel should be the focus of a visit like this, or one of the focuses - and so, I would either connect her with, you know, resources that might help her, or find out what can actually reduce the stressors in her life or help her cope with those stressors, either one of those, whatever they are amenable to, and say that, you know, we're going to look for every physiological possibility, but we are going to also address this thing that's going on in your life, and then if it turns out that, you know, none of the test results are conclusive and we can't figure out something, then addressing the stress will actually give us an answer to whether the stress is causing it or not.

Similar to the terms "hypersensitivity" and "heightened awareness", the term stress affords a twofold signification that might help mediate between lived and observed illness. What marks out the importance of stress as an explanatory tool for clinical medicine is its externalizing force that stems from an ontological investment of the patient in activities of concern. In such stressful activities, the psychological and the phenomenal converge in a way that guides therapeutic action.

Metaphysics as Ongoing Engagement

Although outwardly working towards a medical assessment, the students discussed the patient's case in its metaphysical, epistemological, and ethical dimensions. In line with Good's and Sellars' stipulations of soteriological materialism and the primacy of the person in the manifest image, their reasoning was invariably defined by a compassionate concern for the patient's psychological wellbeing rather than a search for subpersonal facts. Metaphysical considerations surfaced mainly within two aspects of the conversation, responses to the patient's expression of worry: "you are not telling me this is all in my head, are you?" and the attribution of causes to the patient's condition. In the context of the former aspect, the students emphasized the importance of addressing and correcting potentially harmful misconceptions.

The students followed different strategies to diffuse the patient's concern each of which came with unique advantages and disadvantages. I considered these strategies in light of an epistemological challenge originating in the inherent contestability of private sensations. Turning to Wittgenstein's private language argument, I described each strategy in terms of the variable rules by which the provision of causes is conducted as a language game. The first strategy which deployed a neurophysiological model of pain to naturalize the patient's mental state appeared promising but ultimately reaffirmed an epistemological orientation that relies on intersubjectively verifiable evidence to dispel doubt. The second strategy juxtaposed mental and physical illness as different locations on an etiological spectrum. By implicitly favoring physical causation and introducing an additional explanatory problem by positing interactions between the two domains, this approach fell equally short of an optimal solution. The third strategy bypassed the preceding epistemological language game either by withholding metaphysical judgement or postulating an irreducible combination of the mental and the physical. This position was challenged by medicine's ethical commitment to due diligence which mandated a sequential ruling out of causes that conflicted with the strategy's irreducibility claims.

A second aspect of the conversation in which metaphysical questions emerged was the attribution of causes. Despite its apparent significance for the discussion, the students evoked a type of medicine in which moral obligations towards the patient mandate an ongoing care relationship even in the absence of a physical substrate, thereby reasserting medicine's soteriological agenda. Examining two types of causation introduced in *Philosophy and the scientific image of man*, I characterized medical causes of behavior, despite making imperceptible entities the primary unit of analysis, as necessarily providing reasons for deliberate action. Similar to the students' responses to the patient's provocation, the discussion confirmed the centrality of determining a physical equivalent to the reported complaints that, in line with Good's soteriological materialism, afforded entry points for possible interventions. Throughout the discussion, I placed special attention on the characteristics of medical terminology in support of this goal and put forward a conceptual analysis of the terms "heightened awareness", "hypersensitivity", and "stress". Pointing towards a conceptual divergence between phenomenal and psychological uses of the terms, I contended that reasoning in

ambivalent terms simultaneously serves practical explanatory as well as normative functions. In this context, framing mental states as outcomes of behavior that could function as its sufficient cause gave further materiality to the patient's pain.

The conversational character of the focus group format encouraged the students to advance their clinical reasoning in preliminary terms and thereby emphasized the intrinsic discursivity of medical diagnoses. As they are always tied to the person as the primary unit of analysis, metaphysical beliefs that accompany diagnoses are placed in Sellars' logical space of reasons. Here, descriptive claims are always imbued with the primordial normativity of community intentions.

Sellars famously remarked in *Empiricism and the philosophy of mind*: "in the dimension of describing and explaining the world, science is the measure of all things, of what is that it is, and of what is not that it is not" (Sellars, 1991a, p. 173). But the world of medicine, which is a human world, requires more than mere description and explanation. Through medicine's inextricable link to the category of the person, the posits of the manifest image centrally determine the course of clinical reasoning. Nonetheless, the conceptual tension between the two images that must be brought into practical alignment is not easily resolved – especially not through the adoption of only one of the metaphysical schemes much of medical critique has singled out as the driver of dehumanization in medicine. Dynamic, interactional clinical reasoning as represented in the focus groups, so I hope to have shown, does not solely rely on readymade metaphysical frameworks. A practical reconciliation of the two images demands an open and continuous engagement between patient and physician through which what is true is always true by virtue of shared intentions, or as one student put it:

> In my head is a deck of cards – it's like you have the person, the patient's symptoms their social history, and their emotional response and then on top of that, you have your emotional response. And it's the job of the physician to play these cards in the right order that gets you to the truth, you know, with a capital T - to get to the goal that both you and the patient decide on.

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