ABSTRACTS

KEYNOTES

Aging, disease and the necessity of death

Maël Lemoine (Professor of Philosophy and co-leader of the Conceptual Biology and Medicine group at ImmunoConcept, Bordeaux University)
09:15 BST, Thu 9 May

An ancient and influential dogma of medical practice that can be called 'galenic essentialism' has it that death by aging is natural while death by disease is accidental. This dogma has determined the boundaries of medical practice and philosophical *consolatio* for centuries, and is still very influential in the contemporary science of aging. Yet, it has proven problematic in the face of collected evidence. In this talk, I propose to replace galenic essentialism by the NUMAN causes of death hypothesis—according to which there are non-universal, multiple and necessitating causes of death in a given population. This model fits much better with epidemiological data, but it leads to the paradoxical consequence that death cannot be deemed necessary for most human beings, although it is almost certain to occur in a limited interval of time. This view has also consequences for debates about project to "treat" aging.

Within reason? Ensuring public health matters in coming decades

Sandro Galea (Robert A. Knox professor and dean at the Boston University School of Public Health)
15:15 BST, Thu 9 May

Public health is emerging from perhaps its most important test in a hundred years in the COVID-19 pandemic. In many ways the pandemic was public health's finest moments. Literally millions of lives were saved because of rapid action on vaccination, testing, the fundamentals of public health prevention. And yet, the world is doubting public health more than ever. Why? I argue that this moment requires a careful examination of how public health thinks and operates to the end of renewing who we are and what we do.

Reflections on Moral Hazard and the Nature of Medicine

Sarah Wieten (Assistant Professor of Philosophy at Durham University)
09:15 BST, Fri 10 May

There has been relatively little philosophical work on the concept of "moral hazard," though the term is often used in debates about policy interventions in economics, epidemiology, and other health related sciences, with effects that impact medicine. Accounts of moral hazard vary in their thickness and claims, and make different assumptions about what morality must be. I discuss a few of these accounts, without settling on a preferred account. I argue that the concept of moral hazard is missing a mirrored pair concept, and that this vacancy pushes towards continued medicalization. I attempt to articulate a concept that might fill this vacancy.

Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk

Validation of Major Depression Diagnostic Criteria for Community Studies: Psychiatric Epidemiology's Original Sin

Jerome Wakefield (University Professor with multidisciplinary appointments at New York University)
15:15 BST, Fri 10 May

The introduction in DSM-III (1980) of operationalized symptom-based diagnostic criteria for clinical evaluation of mental disorders made possible the construction of survey instruments that, on the basis of respondents' reports of symptoms, purportedly could yield valid psychiatric diagnoses of individuals algorithmically, without the need for expert psychiatric evaluation. This dramatically reduced the cost of community surveys, and the discipline of psychiatric epidemiology applied to community samples has flourished since. It has also yielded rates of some mental disorders that are so substantial as to be both alarming and puzzling. This talk will offer a microanalysis of the history and conceptual choices made in the construction and validation of diagnostic criteria for major depressive disorder for DSM clinical diagnosis. It will then focus on the process by which these criteria were repurposed for use in community epidemiological survey instruments. I will argue that conceptual and methodological lapses in revalidating clinical criteria for the context of community studies has led psychiatric epidemiology to fail in its primary goal of measuring the "true prevalence" of major depression in the community. This argument, I will suggest, can be generalized to some other disorder categories, but I will also allude to some subdomains of psychiatric epidemiology that are trying to do better. Finally, I will present the results of some of my own empirical studies using large psychiatric epidemiological data sets that support a skeptical conclusion as to the validity of current major depression criteria used in epidemiological surveys.

SUBMITTED PAPERS

On the Dangers of Scientific Ageism — Or, Why Scientists Shouldn't Classify Ageing as a Disease

Al-Juhany, Ahmed (University of Calgary)

Ageing is the primary risk factor for many life-threatening conditions in the economically rich world. It is the main predisposing factor for cancer, cardiovascular diseases, and neurodegeneration (Niccoli & Partridge 2012). As researchers unravel ways of manipulating the ageing process — of possibly slowing it down or even reversing it — many philosophers and scientists are calling for ageing itself to be classified as a disease (e.g. de Grey & Ray 2007; Bulterijs et al. 2013; Gems 2015; De Winter 2015; Caplan 2017). Such a classification, they argue, would be an accurate description of a clearly harmful and dysfunctional process.

In this article I argue that scientists should not classify ageing as a disease. The disease classification, I claim, artificially reduces the complex process of ageing to its most harmful and dysfunctional aspects. I draw on Kukla's (2022) work to show that, owing to medical researchers' influence, their reductionist classification of ageing as a disease would risk fostering dangerous, ageist attitudes among members of the general public: it could shape older adults' perception of themselves in ways that lead to them to experience negative health outcomes (e.g. Wurm et al. 2013) and it could lead to their prejudicial stereotyping by others in ways that disadvantage them socially (e.g. Dennis & Thomas

2007). I show this risk to be unnecessary. If scientists are to uphold a plausible, minimal benchmark for moral responsibility — that they do not inflict harm unnecessarily (Douglas 2009) — they should not endorse the disease classification.

Clarifying the Muddle: Towards a Comprehensive Taxonomy of Cogni:ve Biases in MedicineAmoretti, M. Cristina (University of Genoa, Department of Antiquities, Philosophy, and History)
Lalumera, Elisabetta (University of Bologna, Department for Life Quality Studies)

Cognitive biases are commonly defined as deviations from logical reasoning, negatvely affecting judgment and decision-making, and are characterized as predictable, universal, tenacious, and unconscious. Over a hundred such biases have been identified in medicine (Blumenthal-Barby and Krieger 2015; Hoffman 2023). While traditionally considered epistemically detrimental, as they lead to misdiagnosis and corrupt research, some recent perspectives argue for potential epistemic advantages. For instance, prototypical reasoning can offer quick and automatic inferences from limited knowledge, particularly crucial in emergency medical situations (AmoreQ et al. 2017). Still, when discussing whether cognitive biases have a negative or positive epistemic role in medicine, they are typically treated as an indistinct muddle. Challenging the prevailing idea that *all* cognitive biases are detrimental in medical research and practice, this paper aims to establish a preliminary taxonomy of cognitive biases in medicine. It distinguishes (1) biases as suboptimal strategies leading to correct outcomes in specific contexts, (2) those systematically resulting in incorrect outcomes but proving pragmatically useful, and (3) biases leading to consistently incorrect outcomes without pragmatic benefits. The discussion then extends to the epistemic and ethical dimensions of cognitive biases, aiming to establish a general guideline for addressing potential conflicts. Finally, it will be assessed whether the proposed taxonomy can be applied to algorithmic biases in medical AI.

References

AmoreQ et al. 2017, The Benefits of Prototypes: The Case of Medical Concepts. *Re%, Saperi e Linguaggi*
Blumenthal-Barby and Krieger 2015, Cognitive Biases and Heuristics in Medical Decision Making: A Critical Review Using a Systematic Search Strategy. *Med Decis Making*
Hoffman 2023, Biases in Bioethics: A Narrative Review. *BMC Med Ethics*

Epistemic rights and the problem of overdiagnosis
Arruda, Renata (Federal University of Goiás, Department of Philosophy)

The practices of medicine pose some important challenges to philosophy. Overdiagnosis, broadly understood as the excessive use of tests, has been subject to a recent philosophical investigation. A central problem concerns the main characterization of overdiagnosis as based on a counterfactual reasoning, which, due to its own nature, it is open to criticisms about how to make it more meaningful from a factual perspective. On the other hand, knowledge, as the subject matter of philosophy and whose search is its main aim, is downplayed in the particular domain of medicine, in which we are able to understand that knowing is undesirable in some circumstances. That seems quite incompatible also concerning the aims of science. How could we reconcile the scientific and epistemological purposes of medicine with both the human dimension of avoiding doing harm in the search of knowledge and at the same time not neglecting subjects that do need a detailed diagnosis?

Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk

In this talk I will present a general perspective on the topic and I will explore some contributions to the current debate, especially considering the subjects wronged in their rights to know about their own health condition.

AI, Triage, and the Logic of Red Flag Symptoms

Autzen, Bengt (University College Cork, Department of Philosophy)

Artificial intelligence (AI) has made its presence felt in medicine due to various applications. Besides its use in diagnosis, AI has been employed in supporting triage decisions. The Babylon Triage and Diagnostic System (BTDS) is an online symptom checker with applications in diagnosis and medical triage that has attracted attention among medical professionals and health policy makers in the UK (Fraser et al., 2018). BTDS is based on a Probabilistic Graphical Model, which models the prior probabilities of diseases and the conditional dependencies between diseases, symptoms and risk factors via a directed acyclic graph (Baker et al., 2020). The triage function of BTDS is based on an extension of the Probabilistic Graphical Model with a utility model. The triage decision that is recommended is the one that minimises the expected harm to the patient, while also penalising overtriaging. The utility model is augmented with a set of rules that dictate a specific triage action where a particular combi- nation of symptoms (so-called "red-flag" symptoms) are present. In this paper I will examine the logic of red-flag symptoms in Bayesian medical decision making. Prima facie the role of red flags is peculiar. Their use indicates that not all uncertainty and utilities relevant to the triage problem have been taken into account in the Bayesian decision model, or so I will argue. I will then explore whether the use of red flags in a Bayesian decision model can be (re-)interpreted as an attempt to bridge the gap between the preferences of an individual patient and health professionals.

References

Fraser, H, Coiera, E. and D. Wong (2018) "Safety of patient-facing digital symptom checkers." *The Lancet* 392: 2263-2264

Baker, A., Perov Y., Middleton, K., Baxter, J., Mullarkey, D., Sangar, D., Butt, M., DoRosario, A., and S. Johri (2020) "A Comparison of Artificial Intelligence and Human Doctors for the Purpose of Triage and Diagnosis." *Frontiers in Artificial Intelligence* 30: 543405

Justifying reasons in medicine: is there room for ML?

Blasimme, Alessandro (ETH Zurich, Department of Health Sciences and Technology)
Buchholz, Oliver (ETH Zurich, Department of Health Sciences and Technology)

Machine learning (ML) is increasingly used in the medical context. It is unclear, however, whether the frequently noted opacity of ML is compatible with sound medical practice. Some argue that opacity is at odds with the very nature of medicine; others, that it makes it difficult or even dangerous to employ ML systems in medicine; yet others disagree by arguing that opacity does not (crucially) distort the benefits arising from the use of ML. We aim to advance this debate by focusing on the concept of justifying reasons: Starting from the premise that any medical act ought to be justified, we examine whether opaque ML can lead to justified medical acts. First, we propose an account of justified medical acts. The account emphasizes the importance of simultaneously considering theoretical reasons such as, most importantly, justified beliefs, and practical reasons such as an act's fit to given values or needs. We argue that only taken together, theoretical and practical reasons can lend

justification to medical acts. Second, we carve out whether and to what extent ML can establish the theoretical and practical reasons spelled out in our account, thereby leading to justified medical acts. We argue that, indeed, ML can establish the reasons required for justification – provided that certain criteria are met. On the theoretical side, ML models should, for instance, track the causal structure of the underlying phenomenon: there should also be clinical evidence for the system's reliability and robustness. On the practical side, the use of ML systems should be in line with values such as patient autonomy and contribute to equitably meeting patients' medical needs.

Epistemic Contributors to Misogyny in Medicine
Borgerson, Kirstin (Dalhousie University, Department of Philosophy)

Misogyny is commonplace in medicine today. It is evident in highly publicized cases of sexual abuse of female patients by male physicians, personal horror stories of obstetric violence, and in all-too-frequent cases of coerced sterilization during childbirth. But misogyny in medicine extends beyond these more recognizable, and more extreme, cases, manifesting also as routine disbelief of patient testimony, somaticizing ('it's all in your head'), and even gaslighting patients who seek attention, sympathy, or care from physicians, particularly when no explanation for their symptoms or effective treatment exists. In this paper I take a closer look at the relationship between our state of knowledge and the presence of misogyny in medicine. This is an especially fruitful angle to explore given that many of the more-subtle forms of misogyny are understood in the literature to be forms of epistemic injustice. I suggest that widespread evidential uncertainty, particularly when it is unacknowledged, contributes to misogyny in medicine. The less we know about a condition or set of symptoms, the greater the gap between evidence and action. That gap is easily bridged by values at hand, particularly sexist and other oppressive values. Misogyny in medicine is exacerbated if open discussion of values is thought to be unnecessary or unimportant as part of the clinical encounter, as it might be in an era of evidence-based medicine. This analysis can help us to understand part of the story about how and why misogyny persists in medicine, even when health care practitioners explicitly disavow sexist ideology.

Justifying New Uses of Non-diagnostic Psychiatric Constructs: The Case of Insight
Braverman, Derek W. (Washington University in St Louis, Department of Philosophy)

The psychiatric construct of insight is standardly evaluated on three dimensions: awareness that one has a mental illness, awareness that one's symptoms are pathological, and treatment adherence. So characterized, insight is now used in areas outside its initial scope of psychosis, including as an object of general psychiatric research and as a factor whose absence licenses involuntary hospitalization. I argue there is insufficient justification for continuing these two uses, and I draw out some broader lessons for assessing and refining psychiatric constructs. To ascertain whether the uses are justified, I propose a minimal justificatory standard specific to each: there should be some benefit to studying insight's three dimensions together rather than separately, and insight assessments should provide non-redundant information pertinent to involuntary hospitalization. I then canvas the reasons adduced in favor of each use, including insight's relevance to decision-making capacity and correlations between insight and patient outcomes. Ultimately, I contend that none of the putative justifications

meets the minimal standard for continuing each use. Furthermore, I explain how cultural variation presents an additional justificatory challenge.

I conclude with two general points. Noting how justificatory standards may vary dramatically across different uses of a single non-diagnostic construct, I suggest this issue deserves greater attention; compare, for example, the emphasis on validating diagnostic constructs. Second, I submit that contemporary psychiatry's theory-avoidance is a key factor permitting insight's unjustified uses. Against this approach, I highlight research that distinguishes clinical insight from cognitive insight and separates insight in psychosis from insight in obsessive-compulsive disorder.

Who can trust in medicine?

Bueter, Anke (Aarhus University, Department of Philosophy and History of Ideas)

Many people distrust conventional medicine, psychiatrists, or public health measures such as vaccination programs. Such distrust often seems irrational, and sometimes it is. However, at other times distrust in medicine can be warranted, even though it puts the distrusting person at a disadvantage. Such cases constitute "epistemic trust injustices" (ETIs), a concept introduced by Heidi Grasswick. Adding to the literature on epistemic injustice regarding the transmission of knowledge, Grasswick focuses on how the ability to receive knowledge may also be compromised.

ETIs occur when

1) B provides an epistemic good x that is relevant to A
2) A has good reasons to distrust B's competence or sincerity
3) A's reasons to distrust B stem from a history of oppression.

ETIs create a dilemma in situations where people can only access an epistemic good via trusting experts: Either A needs to dispense their warranted distrust, or they lose out on the epistemic good. There is thus no way for A to rationally adhere the epistemic good.

I will, firstly, argue that ETIs apply to psychiatric patients, who commonly suffer from discrimination and testimonial or hermeneutical injustices in medical contexts. These experiences provide good reasons for distrust. Secondly, I will make the systematic point that if the epistemic good in question is knowledge, ETIs result not only in a dilemma but make it impossible for A to acquire x. This is because knowledge requires justification, which is incompatible with believing something on the basis of dispensing one's good reasons.

On the grounds for calling addiction a disease

Burdman, Federico (Universidad Alberto Hurtado, Department of Philosophy)

Though addiction is widely considered to be a disease, many have recently voiced criticism against the view of addiction as a disease of the brain, and others have cast doubt on whether it is aptly seen as a disease at all (Field et al., 2019; Heather, 2013, 2017; Heyman, 2009; Levy, 2013; Lewis, 2015, 2017; Pickard, 2022; Ross, 2020; for an early exposition of the view, see Fingarette, 1988).

In this paper, I examine the reasons for and against viewing addiction as a disease. I consider whether addiction satisfies two of the most popular criteria for inclusion—dysfunction and harmful consequences—, looking at the issue from the perspective of both strong and minimal models of disease. In my view, some ways of arguing for the disease claim are more plausible than others. I argue that we currently have no decisive reason to think of addiction as involving brain dysfunction. At the same time, I argue that impaired behavioral control is at least strongly suggestive of dysfunction— provided we assume that addiction involves impaired control and allow for personal-level dysfunction-talk in the absence of a precise etiological story. I argue, moreover, that legitimate objections to some of the claims made by proponents of the brain disease model leave ample room for the possibility of defending other versions of the disease view.

The putative ineffability of illness: A case of hermeneutical injustice?
Carel, Havi (University of Bristol, Department of Philosophy)

It is often presupposed that illness experiences are either deeply ineffable or contain elements that are incommunicable. Possible reasons for this claim are that illness experiences are too difficult or traumatic to be articulated coherently; that they are outside the familiar spectrum of embodied experience to be sharable; or that they isolate the ill person in a way that renders communication about illness impossible.

If these claims are true, one could argue they amount to a kind of hermeneutical predicament (but not an injustice): a situation in which dominant interpretative resources do not acknowledge and cannot contain experiences that constitute a radical departure from the dominant view. This results in (1) an inability to understand one's own experiences and (2) an inability to share them.

In this paper I examine these claims and offer thoughts on their plausibility and desirability. I suggest ways in which this ineffability can be construed, then claim that it is possible to develop new conceptual resources to understand wildly divergent embodied experiences, of the sort illness brings (rejecting claim (1). But this does not guarantee that such resources will be widely shareable. However, articulation of these experiences within groups of ill persons is already a significant step, even if the experiences are not sharable more widely.

Although it is possible to make the case for the ineffability of illness experiences, accepting both (1) and (2) runs the risk of hindering the subjectivity, agency and interests of ill persons. I also suggest we do not need to accept the stronger claim, that this ineffability amounts to a hermeneutical injustice, but that a lesser moral harm, namely, hermeneutical predicament, is more accurate.

Classification and Values Across Medical Settings
Chavez, Aaron (University of California Davis, Department of Philosophy)

The idea of connecting values and medicine is not a new one and scholars across disciplines have made proposals that serve to examine the normative implications of this relationship. The medical humanities, for example, have long sought to examine how humanism fits within the realm of past and current medicine. And while much of this has directly and indirectly influenced discussions on values in philosophy, it remains unclear just how deeply rooted these are in the epistemology and subsequent

methodology of medicine as a field. The aim of the current project is to explore how values shape classification and classificatory practices across three settings in medicine: the pre-clinical or basic research setting, the clinical setting, and the epidemiological or public health setting. I demonstrate how values shape the various forms of classification unique to each of the three settings and how this, in turn, affects practice and the material outcomes associated with it. Within the context of basic research, values tend to shape the objects or processes of interest themselves—often overlapping with traditionally metaphysical issues (e.g. issues concerning kinds), yet directly bear on the development of methodology. In the clinical setting, values feature in the construction of diagnostic categories, as well as in the application of such categories during patient-physician interactions. At the level of public health, or in an epidemiological setting, values help to shape the parameters of the various disease models developed to record mortality rates, infectiousness, and other associated factors by affecting the basic starting assumptions with which the present research is concerned.

Pregnant Women as Vectors of Fetal and Financial Risk? Shifting Concepts in the Pregnancy Labels at the FDA
ChoGlueck, Christopher (CLASS Department, New Mexico Tech)

In philosophy of medicine, the discussion of pregnancy concepts has been largely marginal, limited to indirect debates over medicalizing pregnancy and managing it like a "disease." This paper provides a critical, historically informed analysis of different concepts of pregnancy in regulatory science to better understand how medical epistemology has been shaped by values related to fetal health, maternal responsibility, and women's agency. Focused on the US Food and Drug Administration (FDA), I conduct an in-depth case study on the creation and revision of the Pregnancy sub-section of the Physician Labels for prescribers, especially the defunct category system (A-B-C-D-X) for counseling on fetal risks like birth defects when using drugs while gestating and breast-feeding. Based on my interviews with FDA staff, this paper argues that the Thalidomide Tragedy of 1961 embedded fetal-centric values into FDA policies, rooted in maternalism, thus motivating the creation of the pregnancy categories and later stymying their replacement until 2014. The FDA came to conceptualize pregnant women as vectors of risk to fetuses; in turn, drug companies saw pregnancy as a vector of financial risk during their clinical trials, resulting in a systematic ignorance about drugs' effectiveness, safety, and dosing during gestation, labor, and post-partum. In contrast to the Risk-Vector Model, the revised labels exemplify a more contemporary concept of pregnancy rooted in discord and the lived complexity of maternal-fetal health. This newer Ambivalence-Conflict Model rejects the romantic view of maternal devotion and sacrifice but still retains special scrutiny of pregnant bodies and hyper-management of fetal risk.

Silence as epistemic agency in bipolar
Degerman, Dan (University of Bristol, Department of Philosophy)

Silence is often taken to signify a loss or impairment of epistemic agency in the literature on epistemic injustice and illness. Focusing on bipolar disorder, this paper argues that certain forms of silence support epistemic agency. Many people with bipolar struggle with racing thoughts, a powerful urge to speak, and having difficulty stopping. These are well-recognized symptoms of mania and hypomania. If unchecked, they can undermine epistemic agency in several ways. They can make it harder for the

individual to communicate knowledge by leading them to speak incoherently or at inopportune times. They can also make it harder for the individual listen and thus obtain knowledge from others because they are distracted or speak over their interlocutors. Those two tendencies can in turn undermine the individual's credibility in the eyes of others.

In light of this, the individual's ability to perform certain kinds of withholding silence can support their epistemic agency in two ways. Firstly, it can decrease or even prevent the damage that the symptoms of bipolar may cause to the individual's epistemic agency. Secondly, it can constitute an exercise of epistemic agency by withholding beliefs that the individual has good reason to doubt and which could mislead others.

Drawing on first-person account of people with bipolar disorder, this paper articulates three kinds of withholding silence – two that can support epistemic agency and one type that doesn't – and it contends that recognizing the positive epistemic functions of silence is crucial to addressing epistemic injustice in healthcare and beyond.

Explanation Laundering
DiMarco, Marina (Bouvé College of Health Sciences, Department of Philosophy and Religion)

Given increasing recognition of the relationships between inequality and health, scientists such as Thomas McDade and Kathleen Mullan Harris have expressed optimism about integrating social and biological explanations to understand how social causes produce health outcomes. Though these projects may aim to promote health equity, critical scholars Dorothy Roberts and Natali Valdez have each shown that social causes often "disappear" from integrated biosocial explanations. They argue that the results maintain a status quo which targets individual responsibility and interventions for health. Since social causes are often explicitly acknowledged in these research projects, this disappearance is puzzling.

I diagnose this as a phenomenon I call explanation laundering, where an instance of explanatory integration can mislead us in virtue of the inclusion of causal detail. I characterize explanation laundering by adapting Alan Rubel, Clinton Castro, and Adam Pham's concept of agency laundering, a phenomenon where agents obscure their moral responsibility for an outcome by mixing their own actions with other causes of an outcome or a decision. Explanation laundering occurs when an agent obfuscates causal responsibility in a way that undermines an explanation's adequacy for purpose. I sketch a few ways explanation laundering might happen in the health sciences, including by way of failures of proportionality (as theorized by Jim Woodward), phenomenon choice (as theorized by Sean Valles), and the logic of research questions (as theorized by Lisa Lloyd). The notion of explanation laundering can help us understand how social causes might disappear from explanations that nonetheless include them.

Epistemically Transformative Medical Procedures and Informed Consent
Dutta, Rajeev (University of California Irvine, School of Medicine)

I argue that true informed consent is impossible to obtain for certain medical procedures in which epistemic transformation occurs. In other words, cases in which undergoing a procedure itself

provides new information, that is, phenomenal knowledge (what I call "knowledge-what-it's-like"), true informed consent for that procedure cannot be attained from an understanding of facts about the procedure ("knowledge-that") alone. If epistemically transformative medical procedures indeed undermine informed consent as I argue they do, I suggest that there are important implications for the decision-making of patients considering these procedures (e.g., chemotherapy, invasive surgeries, and cochlear implants). Rather than solely communicating biological, clinical, and epidemiological facts about a procedure, clinicians should supplement pre-procedure counseling with previous patient testimonials or even virtual/augmented reality to (albeit partially) compensate for the "knowledge-what-it's-like" that is absent prior to undergoing epistemically transformative medical procedures Though these interventions will not fully convey what it is like to undergo the procedure, they address the traditionally under-explored experiential aspect of medical treatment in medical decision-making.

Learning from ignorance in medicine: Should we let go of the concept of opacity of artificial intelligence?

Ferry-Danini, Juliette (Université de Namur)

The concepts of opacity and transparency of artificial intelligence have been coined with the presupposition that opacity in AI is something to avoid and conversely transparency is a goal to achieve in the field (Jobin, Ienca, and Vayena 2019). Some ethical frameworks for computer science have been explicitly modelled after biomedical ethics (for instance, The Menlo Report 2012). Transparency has also been scrutinised by philosophers of science, with the idea that transparency is crucially important for scientific knowledge and understanding (respectively Creel 2020; Sullivan 2020). The issue, of course, is that, the concept has taken a multitude of meanings (Burrell 2016). The concept even takes different meanings within distinct subdisciplines (Bibal and Frénay 2016). The aim of this talk will be twofold: first to attempt to draw a map of the different meanings transparency and opacity have taken so far, whether in the epistemological or ethical literature. This attempt at mapping the concept is unfortunately leading to an inflation of meanings. The second goal of this talk will be to consider the effects of this semantic instability: is it potentially harmful? I will attempt to answer these questions working on the premise that philosophy of AI can learn from the philosophy of medicine (see for instance Véliz 2019). I conclude by considering whether it would be preferable to do without the concepts of opacity and transparency. One concept to put forward instead, following a strong tradition in the philosophy and history of medicine is that of ignorance – it seems sufficiently versatile while doing away with the semantic ambiguity.

References

Bibal, A., & Frénay, B. (2016). Interpretability of Machine Learning Models and Representations: An Introduction. *24th European Symposium on Artificial Neural Networks, Computational Intelligence and Machine Learning: Proceedings*. ESANN 2016, Bruges, Belgium.

Burrell, J. (2016). How the machine 'thinks': Understanding opacity in machine learning algorithms. Big Data & Society, 3(1). https://journals.sagepub.com/doi/full/10.1177/2053951715622512

Creel, K. A. (2020). Transparency in Complex Computational Systems. *Philosophy of Science*, 87(4), 568–589. https://doi.org/10.1086/709729

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. Nature Machine Intelligence, 1(9), 389–399. https://doi.org/10.1038/s42256-019-0088-2

Sullivan, E. (2020). Understanding from Machine Learning Models. *The British Journal for the Philosophy of Science*, 000–000. https://doi.org/10.1093/bjps/axz035

U.S. Department of Homeland Security & Science and Technology Directorate, Cyber Security Division. (2012). *The Menlo Report: Ethical Principles Guiding Information and Communication Technology Research*.

Véliz, C. (2019). Three things digital ethics can learn from medical ethics. *Nature Electronics*.

On Conceptualisations in Alcohol Research and Policy

Francis, Bennet (University of Twente)
Saana Jukola (University of Twente)

Given widespread mortality, morbidity and suffering related to alcohol consumption, research-based measures to intervene on problematic alcohol use are needed. Yet there exist many operationalisations of problematic alcohol use in empirical research, implying a multiplicity of potentially competing conceptualisations of this phenomenon as an object of study. This gives rise to the question concerning the role and legitimacy of different conceptualizations. In this paper, we first deploy Longino's (2002) account of "local epistemologies" to analyse the epistemic landscape of alcohol research. We identify three frameworks investigating problematic alcohol use – medical, social scientific, and public health – before mapping the dominant conceptualisations at work within them. Broadly speaking, approaches within the medical framework conceptualise problematic alcohol use as an inherent condition of individuals, social scientific approaches conceptualise it as a behaviour whose problematic status is dependent on social relationships, and public health approaches conceptualise it as consumption which exceeds a threshold defined at a population level. We then argue that the differences between conceptualizations informing empirical research give rise to tension in practical decision-making. This is because, depending on the conceptualization, different individuals, groups, or populations are taken to suffer from problematic alcohol use. Moreover, given that approaches explain the etiology of problems differently, depending on which approach is used for generating evidence, contrasting policy measures can be supported. For example, the medical framework's conceptualization of alcohol problems as an individual-level diagnosis biomedicalises problematic alcohol use, foreclosing consideration of policies that pursue population-level intervention, such as higher taxation.

Diagnosing "Diagnosis" Through Health-Tracking Wearable Technologies

Yael Friedman (University of Oslo, Department of Philosophy, Classics, History of Art and Ideas)

In this article, I argue that health-tracking wearable technologies disturb the ongoing division of labor when it comes to diagnosis by different actors in the medical realm and serve as a double-edged sword in the hands of patients. As the epistemic hinge that guides decision-making, diagnosis is a central concept in medicine that requires more philosophical attention. In this article I unfold and discuss, first, who conducts the diagnosis, i.e., by whom are diagnoses made and enacted, and

second, how the diagnosis is made and performed, i.e., what aspects of knowledge and practice are involved in the process of diagnosis. I show that while the diagnoses of disease (biomedical), illness (phenomenological), and sickness (social) allow different actors to be responsible for different aspects of health, the intervention of wearables in the division of labor in the medical realm leads to multi-diagnosis of disease. This change in the conception of diagnosis can lead to the empowerment and liberation of the patient in some contexts but can also harm them and create more epistemic injustice in others. I suggest seeing the effect of wearables on the division of labor in the medical realm as one example in which the incorporation of AI technologies transforms medicine and medical concepts.

Demarcating Scientific Medicine
Fuller, Jonathan (University of Pittsburgh, Department of History and Philosophy of Science)

Decades ago, a defining problem for the philosophy of medicine was whether orthodox western medicine was a science and, if so, what made it science. Meanwhile, philosophers of science debated the borders of science and pseudoscience. The demarcation problem in philosophy of science has been revived. Scientific medicine's demarcation problem – what distinguishes scientific varieties of medicine from pseudoscientific ones – now needs renewed attention in an age of medical pseudoscience and medical science denialism.

'Scientific medicine' is also an actor's category, used by historical framers of orthodox medicine in the nineteenth century to distinguish their science-based practice from alternatives. In this presentation, I argue that what made orthodox clinical medicine scientific in the nineteenth and twentieth centuries was its integration with academic sciences. Around the turn of the twentieth century, the favored sciences were laboratory sciences – hence the historian's category of 'laboratory medicine'. Today, they are predominantly epidemiological sciences, thus I call scientific medicine today 'epidemiological medicine'. What unites these models of scientific medicine is that whether inferring etiology or effectiveness, their sciences rely on like comparisons to make causal inferences. Classical homeopathy, a paradigm pseudoscientific medicine, has persisted throughout this same period. A 'like comparison criterion' can be used to demarcate scientific from pseudoscientific medicine – and orthodox medicine from homeopathy – throughout their histories. However, this requires attending to changing ideas about what constitutes a 'like comparison'. While nineteenth century scientific medicine understood 'likeness' as observed causal similarity, epidemiological medicine understands it as freedom from study bias.

Externalist Medicine and Externalist Biology
Glackin, Shane (Department of Sociology, Philosophy, and Anthropology)

The rise of externalism in the philosophy of mind - the notion that much of our cognitive functions are performed outside the confines of the brain or body - gave rise in turn to externalist psychiatry; the notion that *failures* of cognitive or other psychological function might similarly be externally situated. More recently this has lead to the perhaps more surprising view that somatic health and disease, too, might in some cases be best understood as constitutively dependent on factors external to the healthy or diseased organism.

Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk

In this talk, I begin by briefly introducing and reviewing the grounds for such a position. I then argue that, far from being as radically novel as it appears, it is in fact implicitly reflected already in medical practice, particularly in the sometimes-marginalised medical sub-disciplines of immunology, public health, and occupational therapy; that marginalisation, in turn, stems from an uncritical internalist bias. Explicit acknowledgement of externalism, I suggest, may lead to better understanding of these disciplines, and a more central role in modern medicine.

I go on to argue that the more interactionist and population-minded externalist approach to biomedicine represents a useful and important practical application of a more general trend in biological theory, namely the growing rejection of individualistic and reductionistic thinking. Recognising this connection bolsters the scientific credibility of externalist medicine and psychiatry, as well as suggesting new ways of understanding the shifts already underway in biological theory.

Depression and hermeneutical injustice

Kidd, Ian James (University of Nottingham, Department of Philosophy)

The concept of an epistemic injustice has become popular to describe the epistemic predicament of persons with psychiatric conditions. It is widely-held that epistemic injustices are common in the lives of persons with those conditions, whose sources are defects in social practices and structures, which should be identified and ameliorated.

While there is some truth to those claims, I urge caution about the extent to which current conceptions of hermeneutical injustice actually are helpful in describing the hermeneutic and interpersonal predicament of persons with psychiatric conditions. Specifically, I challenge the assumption that hermeneutical injustices are wholly caused by contingent defects in hermeneutical resources, and the corollary that, with enough work, those defects could be overcome. Using phenomenological psychopathology, I argue that, even if all the contingent hermeneutical defects were corrected, severe hermeneutical problems remain.

Focusing on depression, I argue the concept of socially-sustained hermeneutical injustices (a) fails to capture the structural differences between the experiential worlds of the depressed and those of other people and (b) fails to articulate the depths of the predicament of depressed persons. Features of that predicament include (a) the fact their experiential world is radically different from that of other people, due to (b) their inability to experience certain kinds of possibility, which (c) are still accessible to other people who (d) continue to tacitly, obliviously presuppose that sense of belonging to a shared world.

I conclude that the epistemic predicament of persons diagnosed with depression involves a combination of phenomenological, interpersonal, and contextual obstacles.

The Scope of Functional Disorder: The Inferential View of Symptom Perception and its Implications for Psychiatry

Laukaityte, Urte (University of California Berkeley, Department of Philosophy)

Functional disorder has proved to be an especially puzzling clinical condition. Various terms have been used to slice up the landscape of this class of phenomena in somewhat different ways, including 'psychosomatic', 'psychogenic', 'non-organic', 'medically unexplained', etc. Here, 'functional' will

refer to often debilitating symptoms, which occur in the absence of physiological disease or damage. A leading account of how this is possible puts forward an inferential view of symptom perception, which, as such, is hence susceptible to mismatch (Van den Bergh et al., 2017). Namely, although the connection between underlying disease processes and patient experience is close enough for the most part, the inferential theory accommodates the two diverging in certain contexts—in extreme cases yielding functional disorder.

I will argue that in light of the inferential cognitive model, the scope of functional disorder may be broader than currently assumed. In particular, I will address how the understanding of symptom perception as categorical decision-making may also apply to conditions already deemed to be psychiatric (or mental) rather than medical (or somatic). The psychiatry-adjacent phenomenon of mass psychogenic illness, as the name implies, has been closely connected with the notion of functional disorder and, similarly, culture-bound syndromes have been put forward as examples of culturally mediated expressions of distress reliant on comparable cognitive processes. However, I would like to go further by reconceptualising and precisifying the possibility of functional psychiatric disorder as a theoretical construct, which, I suggest, would impact the debates surrounding the concept of mental illness more broadly.

Reference

Van den Bergh, O., Witthöft, M., Petersen, S., Brown, R. J. 2017. "Symptoms and the body: Taking the inferential leap." *Neuroscience & Biobehavioral Reviews*, 185-203.

Striking a Balance in Reproductive Genetic Counseling: A Call for Directive Testing and Non-Directive Selection
Le Blevennec, Marie K. (Boston University, Department of Philosophy)

As the use of reproductive technologies becomes more widespread and affordable, and new tests are developed to screen for an increasing number of disability traits, the importance of re-examining the current non-direct approach taken by genetic counselors towards the patients they advise in the reproductive context grows. This is especially so as the non-directive standard gas come under attack by various philosophers who contend that genetic counselors should actively direct patients towards specific choices. Some have challenged the desirability of the non-directive approach by suggesting that the non-directive approach fails to address issues of ableism in the reproductive decision-making; if people are left to make their own reproductive decisions, they will likely make ableist choices, so genetic counselors should encourage patients to make non-ableist choices. Others have criticized the non-directive approach because prospective parents may make suboptimal reproductive choices that would fail to maximize the potential well-being of their future children so genetic counselors should encourage patients to pursue liberal eugenic selection of the "best" potential offspring. In this presentation, I argue that the most plausible account of how genetic counselors should treat their patients in the reproductive context is not a monolithic, one-size-fits-all approach. Instead, I contend that in reproductive contexts, genetic counselors should be directive about some things but not others. Specifically, genetic counselors should actively encourage their patients to pursue testing and screening for disability traits, but should refrain from being directive in any way about selection against some trait or condition.

Patient Preference Predictors: Evidence and Decision-Making

Makins, Nicholas (University of Leeds, School of Philosophy, Religion, and Science)

An AI-based "patient preference predictor" (PPP) is a proposed method for guiding healthcare decisions on behalf of patients who lack relevant decision-making capacity. The proposal is to use correlations between sociodemographic data and people's known treatment preferences to construct a model that predicts the unknown preferences of a particular patient. Proponents claim that a PPP would ameliorate existing problems with surrogate decision-making. Others, meanwhile, have presented a number of practical and theoretical challenges to this proposal. In this paper, I highlight a distinction that has been mostly overlooked so far in the literature on PPPs: that between algorithmic prediction and algorithmic decisions. I argue that much of the disagreement about PPPs stems from this oversight. This means that many of the points raised in opposition to PPPs are only problematic for their use as the sole determinant of a choice, and in fact support their use as one source of evidence concerning patient preferences. This view coheres with a core idea of the evidence-based medicine movement: that clinicians should integrate the best available evidence and information about patient values in order to make decisions. I conclude by highlighting two further upshots of the core argument in this paper. Firstly, the proposed view raises a significant novel challenge, concerning how clinicians ought to make decisions when they have a probability distribution over their patient's possible preferences. Secondly, the distinction between evidential and decision-making roles of AI in healthcare provides a model for addressing a range of related debates.

African Principlism: Crafting an Essential Ethical Framework for Integrating African Traditional Medicine in Bioethics and Public Health

Maqutu, Linda (University of Johannesburg, Centre for Philosophy of Epidemiology, Medicine, and Public Health)

The World Health Organization reports that a significant 80% of Africans turn to African Traditional Medicine to address health concerns, with a substantial portion adopting a combined approach integrating both African Traditional Medicine and Conventional medicine (Mothibe and Sibanda 2018, 3). This dual approach often involves consulting traditional healers before seeking assistance from medical practitioners, rooted in cultural beliefs and socio-economic factors influenced by historical barriers to quality healthcare during the apartheid era, which persist in many South African communities (Mothibe and Sibanda 2018, 3).

The considerable demand for this integrated healthcare approach emphasises the need for collaboration between mainstream (conventional) medicine and African Traditional Medicine. Advocating for seamless integration requires an ethical framework capable of guiding traditional healthcare practitioners without marginalising their practice or relying solely on frameworks designed for conventional medicine. Notably, the realm of Bioethics lacks provisions for a comprehensive and inclusive ethical framework accommodating the still prevalent African Traditional Medicine and its practitioners, particularly in the Southern African context.

This paper argues for an ethical framework specifically tailored to African Traditional Medicine, rejecting dismissive views of it as superstitious or lacking merit in inpatient treatment, and challenging the notion of conventional "Western" medicine as inherently superior. The proposed ethical

framework, African Principlism, serves as a decision-making framework for healthcare professionals in Southern Africa, considering the unique cultural and historical context of the region. Grounded in the values of Ubuntu, contextual relational autonomy, and social consciousness, African Principlism provides a more relevant and appropriate framework for the combined healthcare approach primarily adopted in Southern Africa compared to existing Western-based frameworks.

This ethical framework comprises three integral principles: Medical Ubuntuism, Contextual Relational Autonomy, and Social Consciousness, as applied to African Traditional Medicine. Recognizing its significance not only in Southern African public health but also in broader bioethical discussions, this framework addresses a crucial aspect of public health necessity.

Rethinking Health through a Salutogenic Perspective: Challenges to Face the Current Health and Climate Crises
Menatti, Laura (KLI, Konrad Lorenz Institute for Evolution and Cognition Research)

Medical research increasingly emphasizes addressing healthcare and ethical issues related to climate change. Frameworks such as the Onehealth approach align with this imperative, highlighting the crucial role of the environment. However, in philosophical and medical discussions surrounding the health-environment coupling, exploration into the notion of health and its epistemic foundations, requires further investigation.

This paper addresses this gap by reframing the concept of health within the current health and climate crises through the lens of the salutogenic approach. Originating from Aaron Antonovsky, a medical sociologist, salutogenesis is a theory focused on promoting health measures rather than merely preventing risk factors. The term itself, derived from the Latin words "salus" (health) and "genesis" (production, generation), conveys the idea of being a 'carrier of health.' The salutogenic account and its related framework have evolved over the years, with ongoing development and refinement in medicine, public health and health promotion.

This paper aims to achieve two key objectives: firstly, analyzing the concept of salutogenesis by placing it within the historical landscape of medicine and health promotion; secondly, applying this approach to contemporary challenges. To understand the intricate interplay between health and the environment, the paper indeed introduces the concept of salutogenic environments.

The synergy between salutogenesis and salutogenic environments holds the potential to provide a new health framework that comprehensively addresses the current health and climate crises. This, in turn, offers implications for the development of contemporary public health strategies.

Big data, AI and the changing concept of disease
Meunier, Robert (Max Planck Institute for the History of Science, Biomedical Sciences Research Group)

Whether the outlook is naturalistic or normative, more often than not, the concept of disease is discussed in terms of conceptual analysis, rather than in terms of the specific practices that make the concept meaningful in various contexts. Philosophy of medicine has not always integrated insights from the philosophy of science in practice. This relative lack of engagement with practices has often

16

foreclosed an engagement with the concept of disease as distributed (i.e., different concepts of disease are used in different contexts) and changing (i.e., changes in other aspects of medicine, such as policy shifts or technological novelties, affect the way disease is conceptualized).

I will focus on the changes brought about by big data and AI in biomedical research. Big data here refers mainly to high-throughput molecular 'omics' data, but increasingly data from digital patient records or wearable sensors are integrated as well. AI, esp. machine learning, in this context is used to integrate the vastly heterogeneous data types arising in such research. In the first part, I will sketch the specificities of recent data-intensive research and emphasize differences to earlier molecular biomedicine. In a second part, I will analyze how big data practices have changed the way disease is conceptualized in certain fields of research and clinical practice, focusing on three aspects: New connections between previously distinct disease entities, the fragmentation of disease entities, and the notion of pre-disease, i.e. disease that can be detected long before it manifests in clinical symptoms.

Reviewing Philosophical Resources for Understanding Future Pandemics
Mojela, Tebogo (University of Johannesburg, Centre for Philosophy of Epidemiology, Medicine, and Public Health)

Medical nihilism is the view that we ought to have little to no confidence in contemporary medicine because it almost always does not bring about cure (Stegenga, 2018). Jacob Stegenga is the most prominent advocate of medical nihilism, and the arguments I forward in this paper will be underpinned by this nihilistic view. I apply this specifically to covid-19 vaccination mandates. I make the point that those who manage pandemics should not lose sight of salient principles in bioethics and related fields. Furthermore, I discuss the following principles, beneficence, informed and moral consent, political authority, and paternalism. I further argue for Person-centered Healthcare (PCH) as a more morally accountable medical approach. This essay offers prescriptive philosophical nuances for understanding pandemics through reviewing philosophical resources, which are bounded by facts and values. I argue looking primarily at the Republic of South Africa although most sentiments might be relevant to other countries.

Developing ML Classifiers for Image-Based Diagnosis of Functional Neurological Disorder: Challenges and Implications
Muhr, Paula (University of Zurich, Institute for Implementation Science in Healthcare)

Functional neurological disorder (FND) is the current medical designation for an elusive illness historically known as hysteria. With its range of heterogeneous co-occurring neurological symptoms (e.g., seizures, blindness, and paralysis), FND is challenging to diagnose clinically. Since the 2000s, this disorder has become the subject of systematic neuroimaging research that uses methods such as functional magnetic resonance imaging (fMRI) to link FND symptoms to brain dysfunction. Both task-based fMRI studies, in which patients are exposed to experimental stimuli, and resting-state studies, in which patients lie in a scanner doing nothing, have delivered fragmentary insights into FND's potential neural mechanisms. Recently, three pioneering studies were published that trained and tested machine learning (ML) classifiers on resting-state fMRI data to differentiate FND patients from healthy controls. The aim was both to identify potential biomarkers for future clinical application on

individual patients and to uncover aberrant neural patterns that have so far escaped the more traditional data analyses. In the medical context, the studies' findings were discussed in terms of the standard accuracy metrics. However, what has been missing so far and what my talk aims to address are the broader implications that the research on diagnostic ML classifiers for FND might have if successful. What would it mean for patients if the diagnosis shifted from clinical examination to ML-based analysis of fMRI data? What are the potential benefits but also pitfalls of such a shift? What are the epistemic limitations of the currently developed ML models, especially regarding their future clinical applicability?

What diseases are related to aging?

Okholm, Simon (University of Bordeaux, Immunoconcept)

Today, age-related diseases are the major source of illness, premature death, and healthcare expenditure. Yet, which diseases are part of the extension of 'age-related disease' remains a contentious issue among (Le Couteur and Thillainadesan 2022; Strandberg and Kivimäki 2022), and this provides an invitation for philosophy of medicine to clarify why. By means of a conceptual analysis of recent proposals coming from the aging sciences, I elaborate on 3 approaches for how to classify diseases as related to aging, based on criteria related to the epidemiology of aging, the biology of aging, and evolutionary theory of aging. I also investigate the extent of concordance in terms classifying the same extension of diseases, and I find that some diseases are concordantly related to aging, like Alzheimer's disease, whereas most others show discordance in which one or several criteria disagree(s) as to whether a disease is related to aging. Following this, I conclude that the 3 approaches are conceptually independent, and that this helps to explain why it sometimes is difficult to agree on what diseases are related to aging.

References

Le Couteur, David G., and Janani Thillainadesan. 2022. "What Is an Aging-Related Disease? An Epidemiological Perspective." Edited by Rafael de Cabo. *The Journals of Gerontology: Series A* 77 (11): 2168–74. https://doi.org/10.1093/gerona/glac039

Strandberg, Timo E, and Mika Kivimäki. 2022. "Comment on: 'What Is Aging-Related Disease? An Epidemiological Perspective' by Le Couteur and Thillainadesan." *The Journals of Gerontology: Series A* 77 (11): 2175–76. https://doi.org/DOI: 10.1093/gerona/glac072

Addressing the Autism Mental Health Crisis: The Potential of Phenomenology in Neurodiversity-affirming Clinical Practices

Pantazakos, Themis (American College of Greece, Psychology and Philosophy)

The neurodiversity movement has introduced a new era for autism research. Yet, the neurodiversity paradigm and the autism clinic remain largely unconnected. With the present work, we aim to contribute to filling this lacuna by putting forward phenomenology as a foundation for developing neurodiversity-affirming clinical interventions for autism.

In the first part of this paper, we highlight that autistic people face a severe mental health crisis. We argue that approaches focused on reducing autistic 'symptoms' are unlikely to solve the problem, as autistic mental health is positively correlated with autism acceptance and perceived quality of support

provided, not necessarily with lack of 'symptomatologic severity'. Therefore, the development and dissemination of neurodiversity-affirming clinical interventions is key for addressing the autism mental health crisis. However, therapists and researchers exploring such neurodiversity-affirming practices are faced with two significant challenges. First, they lack concrete methodological principles regarding the incorporation of neurodiversity into clinical work. Second, they need to find ways to acknowledge rightful calls to respect the 'autistic self' within the clinic, while also challenging certain beliefs and behaviors of autistic clients in a manner that is sine qua non for therapy, irrespective of neurotype. In the second part of the paper, we introduce phenomenological psychology as a potential resource for engaging with these challenges in neurodiversity-affirming approaches to psychotherapy. In this vein, we put forward specific directions for adapting cognitive behavioral and interpersonal psychotherapy for autism.

Mechanisms, Activities, and Biopsychosocial Causation

Popa, Elena (Jagiellonian University, Interdisciplinary Centre for Ethics)

This paper aims to develop the ontology of mechanistic causation within the biopsychosocial model of health. Bolton & Gillett's (2019) defence of this model emphasizes causality and the need to move beyond physicalism. Yet, ontic questions about mechanistic causation (entities and activities; interactions between mechanisms) are to be developed. The challenge is explaining how entities and activities from different spheres come together. I will investigate this through a top-down and bottom-up model of neuro-endocrime-immune pathways in irritable bowel syndrome (IBS) (Stasi et al. 2012) and considering mechanistic property clusters (Kendler et al. 2011) including social and psychological phenomena. I will investigate the activity account (Machamer 2004; Bogen 2005) applied to causality in biomedical contexts. Features of activities depend on the scientific domain where they operate. Using the example of IBS, several mechanisms are involved in connection to exteroceptive stress (top-down) and interoceptive stress (bottom-up) (fig. 1). The activities in this model are neuronal, biological, or chemical. A broader model, taking into account stress and its uncontrollability may also consider activities involving psychological and social states, such as dynamics between demands and responses. This can be a more complex mechanistic property cluster, but different mechanisms may be underlain by different types of activities (e.g., psychological and neuronal). Thus, a remaining puzzle is whether activities neatly overlap with corresponding mechanisms, or whether activities of social or psychological nature can be traced in mechanisms such as the top-down and bottom-up model of IBS beyond their neural manifestations.

Should addressing racial inequality be prioritised over cost-effectiveness in uk child health policy?

Qureshi, Zeshan (University of Cambridge, Department of History and Philosophy of Science)

In the United Kingdom (UK), child health outcomes are worse in children from ethnic minorities than in White children (1). This paper will focus on the moral tension between the competing goals of efficiency and justice in healthcare interventions.

Prioritising healthcare interventions in the National Health Service (NHS) is heavily based on cost-effectiveness, which is one form of passive justice (2). Thomas Pogge defines passive justice as when moral attention is focused purely on those experiencing the outcome of an intervention (4). Passive

models do not make considerations for the mechanisms of injustice. In contrast, Pogge describes active justice using relational factors, exploring what leads to a healthcare need. He argues that if an institution contributes to healthcare inequality, it has an increased moral responsibility to remedy it. Relating this to health, it follows that the moral reason is greater for an individual to mitigate the consequences of a medical disorder if it is a direct result of their actions. Thus, if the government is contributing to child racial health inequality, healthcare systems should prioritise addressing this over other aspects of health that are not so directly the state's fault.

If state actions lead to worsening child health for ethnic minorities, the moral responsibility to address those health needs is greater than to address equivalent needs of white children. This may be justifiable even if inefficient. Pogge describes six different ways where state action may be associated with "nutrient V" deficiency in the population. They become less unjust as they proceed from 1 to 6 with an associated lower level of state responsibility. In this paper I show how, if we agree with Pogge's outline, these concepts can help categorise and prioritise the causes of child health racial inequality by severity.

References

1. Qureshi Z, Richards A, Kingdon CC, et al Ethnicity, child health and paediatric services. *Archives of Disease in Childhood*. 27 June 2022. doi: 10.1136/archdischild-2021-323599
2. Care Quality Commission. Delivering cost effective care in the NHS [Internet]. *Newcastle, UK: Care Quality Commission*; 2015. Available from: https://www.cqc.org.uk/sites/default/files/20151028_delivering_cost_effective_care_in_the_NHS.pdf
3. McCabe C, Claxton K, Culyer AJ. The NICE Cost-Effectiveness Threshold: What it is and What that Means. *PharmacoEconomics*. 2008;26(9):733–44.
4. Pogge, Thomas. Chapter 7: Relational Conceptions of Justice: Responsibility for Health. In: *Public health, ethics, and equity*. 1st ed. Oxford: Oxford University Press; 2006. p. 135–61.

A Realist Conception of Diseases

Raburn, Ilana (Kings College London, Philosophy and Medicine)

I address the metaphysical question of what diseases are. I defend a realist argument for diseases as Kinds following Millikan (Millikan, 1998, Millikan, 1999) and Godman (Godman et al., 2020) such that diseases are super-explanatory Kinds determined by etiology.

The instances of any given disease are the individuals who have that disease. The similarities found in the individuals with the same disease can be explained by the etiology of the disease. Asthma causes shortness of breath and wheeze because of the characteristic airway inflammation. The etiology explains the shared signs and symptoms of asthma. This is an intrinsic property of the disease–on my conception individual diseases are 'Intrinsic Kinds'. This is akin to the atomic constitution of chemical elements explaining the melting point and density of each sample.

It is then a bigger task to argue that all diseases together form a Kind; that disease is itself a super-explanatory property. Rather than looking for a similarity between all the individuals with any disease, I suggest that there are shared determinables between all diseases. That is, the same set of questions

can be asked of each disease: What is the course? What is the treatment? What is the prognosis? Questions that could not be asked of non-diseases. Thus, even if there is not a determinate property shared by all individuals with a disease, there are determinable properties shared by the diseases.

References

Godman, M., Mallozzi, A., & Papineau, D. (2020). Essential properties are super-explanatory: Taming metaphysical modality. *Journal of the American Philosophical Association*, 6(3), 316–334.

Millikan, R. G. (1998). A common structure for concepts of individuals, stuffs, and real kinds: More mama, more milk, and more mouse. *Behavioral and Brain Sciences*, 21(1), 55–65.

Millikan, R. G. (1999). Historical kinds and the" special sciences". *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition*, 95(1/2), 45–65.

Medicine, Artificial Intelligence, Discrimination, & Disability
Riddle, Christopher A. (Utica University, Department of Philosophy)

In what follows, I intend to demonstrate that AI poses the risk of perpetuating the already existent ableist attitudes in both medicine and society that cause significant harm against people with disabilities.

In §1, I highlight the predominant ways in which people with disabilities experience discrimination or ableism. Given the preponderance of negative attitudes about the abilities of people with disabilities as well as the value of their lives, it seems that AI is bound to replicate these perspectives with reference to the medical care of the disabled.

In §2, I propose an analogy to highlight the manner in which bias and negative attitudes against people with disabilities will invariably be integrated into AI.

Finally, in §3, I consider three ways in which AI in medicine might cause significant harm to people with disabilities. §3.1 examines triaging protocols and highlights how the promotion of beneficence and avoidance of maleficence, or benefit to the patient and avoidance of doing harm to the patient, might result in people with disabilities being deprioritized because of a perceived lack of benefit to a life often thought to not be worth living. §3.2 continues this discussion through highlighting the allocating of scarce resources. Ultimately, I suggest that an ableist AI may very well allocate scarce resources away from people with disabilities to compound, rather than rectify, injustice or disadvantage. Finally, §3.3 explores the medical decision-making process for courses of treatment more generally. It is argued that people with disabilities will not have the opportunity to make autonomous decisions pertaining to their own care.

References

Chakraborty, Nilanjan, Yogesh Mishra, Ripon Bhattacharya, and Bhupal Bhattacharya. 2023. "Artificial Intelligence: The Road Ahead for the Accessibility of Persons with Disability." *Materials Today: Proceedings* 80 (3): 3757–61.

Geslevich, Packin Nizan. 2021. "Disability Discrimination Using Artificial Intelligence Systems and Social Scoring: Can We Disable Digital Bias?" *Journal of International and Comparative Law* 8 (2): 487–512.

Marks, Mason. 2020. "Algorithmic Disability Discrimination." In *Disability, Health, Law and Bioethics*, edited by I. Glenn Cohen, Carmel Shachar, Anita Silvers, and Michael Ashley Stein, 242–54. New York: Cambridge University Press.

Smith, Peter, and Laura Smith. 2020. "Artificial Intelligence and Disability: Too Much Promise, yet Too Little Substance?" *AI and Ethics* 1 (1): 81–86.

Can Populations be Healthy?

Savić, Lovro (University of Oxford, Nuffield Department of Population Health)

Methodological Collectivism is the view that properties such as 'healthy' and 'diseased' can be meaningfully ascribed to populations and that these properties are properly understood *without* reference to the health properties of individuals that make up these populations. According to *Methodological Collectivism*, these properties are applicable to populations as collectives and are fully explicable in terms of social 'markers of healthy populations', such as well-functioning social functions and institutions. On this view, then, our talk about 'healthy populations' rests on literal, rather than merely metaphorical property ascription (Smart, 2022).

The most recent defence of *Methodological Collectivism* about population health has been formulated by Benjamin Smart (2022). Smarts' argument rests on two related claims. First, it rests on the example of colony collapse disorder (CCD), in which bee colonies are regarded as diseased without any reference to the pathological conditions of individual bees. And second, it rests on the claim that CCD is explainable in terms of Boorse's biostatistical theory of health (Boorse, 1977, 1997).

In this presentation, my goal is to challenge Smart's argument and to show that his version of *Methodological Collectivism* about population health is implausible. First, I will argue that Smarts' reference to CCD rests on either the *fallacy of expertise*, or conceptually and empirically questionable assumptions. And second, I will argue that even *if* we accept that CCD can be explained with the reference to Boorse's biostatistical theory of health, this does not mean that properties such as 'healthy' and 'diseased' can be meaningfully ascribed to *human* populations in terms of specifically social functions and institutions. This is because there are no robustly uniform social functions across societies, formulating social reference classes is either impossible or value-laden, and some social functions are adaptive.

Classification Systems as Models: A Case Study on the Role of Medical Classification Systems in Clinical Reasoning

Scott-Fordsmand, Helene (University of Cambridge, Department of History and Philosophy of Science)

Medical classification systems often present themselves as natural taxonomies: as a set of accurate descriptions of distinct medical conditions in the world. We tend to think then that a diagnosis or a classificatory categorisation is true or false for a case, and that it is a problem for a classification system if it does not allow us to decide whether one or the other category is – to the best of our knowledge – the true case description. If different specialists classify the same case in different ways,

we take that to be a problem, or, when different classification systems describe a medical condition in different ways, we think that one must in principle be more accurate than the other (even if we don't know which one). We see this, for example, in debates between the DSM and the RDoC classification system for psychiatry.

However, looking at a case study of shoulder fracture classification, I show how even in a seemingly 'easy', material-physical specialisation like orthopaedic surgery, doctors readily acknowledge that classification systems are 'made up' and in everyday clinical cases, they do not worry particularly about getting the classification strictly right. Instead, they highlight how classification systems aid inferences and decision-making, and guide attention. I argue that this suggests we should think about classification systems as models rather than as (aiming at) accurate description. I draw on recent literature from philosophy of science to show how we can do so, and end by noting two important upshots of this view.

The Value of "Research" in Osteopathic vs Allopathic Medical Education: A conceptual analysis

Shapiro, Devora (Ohio University – College of Medicine, Department of Social Medicine)

Like science more generally, medical research is heavily influenced by the values and interests of institutions, funding organizations, and the contingent features of the complex, temporally and socially situated environment in which it functions. A striking example of this can be seen in the changing role of medical research in medical education following the introduction of "evidence-based medicine" (EBM). Many questions and concerns regarding the uncritical acceptance of EBM in standard practice have been acknowledged and addressed elsewhere. Less attention, however, has been devoted to evaluating the potentially disparate role and impact EBM has had on the two established schools of medicine in the US: the more familiar, "MD" degree-granting, allopathic medicine, on the one hand, and the less ubiquitous, "DO" degree-granting, osteopathic medical practice, on the other.

The underlying values and theoretical approach to medical practice and patients that these schools employ diverges considerably, and there is a notable difference in the participation and production of medical student research in each of these schools of medicine. From the perspective of an EBM-oriented approach to medical practice, this disparity might be viewed as concerning, and potentially could be construed as a deficiency in DO training and/or physicians. However, to conclude this would suppose that research is not just valuable – but necessary – in medical education. I leave as an open question, however, whether this value is good.

Making room for trust: against 'explainable' medical AI

Sherling, Henrik Røed (University of Cambridge, Faculty of Philosophy)
Chin-Yee, Benjamin (, University of Cambridge, Department of History and Philosophy of Science; Western University, Division of Hematology)

Can we trust medical AI? A common answer is that we can trust AI only if it is explainable. Lack of explainability, or 'essential epistemic opacity', it is argued, undermines trust. This worry motivates attempts to render medical AI 'explainable'—to enable understanding of how an algorithm arrives at

its output to justify reliance. In this paper, we argue that this question is malposed, and the response it engenders misguided.

We reject two common assumptions. First, we reject that AI is epistemically opaque in a way relevant to medical practice. Instead, we argue that teleological explanations, which refer to what an AI was designed to do in a given training context, combined with evidence of reliability and similarity of context, are often sufficient to justify reliance. We illustrate this by analogy with other 'black box' medical interventions. Second, we reject the assumed link between explainability and trust, which sees explainability as key to establishing trust. We argue instead that, though explainability supports justified reliance, it is orthogonal to trust: when one is justified in relying, questions of trust do not arise.

By rejecting this second assumption, our account makes room for trust where trust is needed. Trusting AI in medicine means trusting the researchers and practitioners responsible for validating and implementing such tools. Trust is required for the cooperative processes of research, regulation, and critical appraisal that allow for reliable use of AI in practice, no different than other medical interventions. There is no novel problem of trust in medical AI.

Methodological progress in epidemiology? A case study of the historical development of case-control study

Shimizu, Ukyo (Kyoto University, Research Fellow of Japan Society for the Promotion of Science)

An integral part of modern epidemiology literature is dedicated to and often claims various forms of methodological improvement. Consequently, one might naturally construe the historical change in epidemiological methods as indicative of progress in epidemiology. However, current literature on the theories of scientific progress within the philosophy of science does not allocate sufficient attention to scientific methods, so that no influential accounts of scientific progress seem to fit with the methodological development in epidemiology. Two discernible directions come to the fore. On the one hand, philosophers of science perhaps may potentially conceive a novel theory which regards methodological improvement itself as constitutive of scientific progress. On the other hand, the scarcity of focus on the methods in the philosophical studies of scientific progress might be legitimate, as methodological development per se may not necessarily imply scientific progress. Which is the right way forward? My stance leans towards a nuanced middle ground. I shall proffer a preliminary analysis delineating methodological progress in epidemiology through a case study of the historical transformation of a basic method in epidemiology, namely, case-control study. A seminal paper by Cornfield (1951) provided an influential characterization of case-control study, highlighting distinctions between case-control study and cohort study. While this characterization gained widespread acceptance, subsequent works by Miettinen (1976) and other modern epidemiologists prompted a refined understanding of case-control study, which appeals to some similarities to cohort study. I will suggest that the historical development of case-control study is a very nuanced "progress" in epidemiology.

The Goal of Public Health

Smart, Benjamin (University of Johannesburg, Centre for Philosophy of Epidemiology, Medicine, and Public Health)
Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk

Little can be achieved in the domain of public health without first identifying its goals. During the 2020 COVID-19 pandemic, the phrase 'following the science' was regularly used by politicians from both the global north and global south in order to justify their prima facie draconian public health interventions (Stevens, 2020). But applied sciences like public health do not operate in a vacuum. Whereas an epidemiologist might be able to explain and/or describe the distribution and determinants of disease, for example, this alone has no implications on policy-making. Before public health policy is established, policy-makers must first agree on the goals of public health interventions. Once these goals have been identified, one can use the sciences (very broadly construed, to include social sciences such as economics, politics, anthropology, sociology and psychology, as well as medicine and epidemiology) to make reasonable predictions regarding how these goals can best be achieved.

This paper considers what the goal(s) of public health should be, examines and critiques existing views in the literature, and concludes that the overarching goal should be to maximise the population's capacities. Any public health policy maker with this goal in mind must pay as much attention to the capacities public health interventions sacrifice, as it does to those they promote.

Economies of Assurance: The Benefits and Unintended Consequences of Reducing Low-Value Care

Spalletta, Olivia (University of Copenhagen, Section for History and Philosophy of Science)
Green, Sara (University of Copenhagen, Section for Health Services Research)

Low-value care (LVC) is increasingly the focus of debates on how to reduce medical overactivity while maintaining quality. General practice is often considered central for reducing LVC, for instance by avoiding testing and imaging that are unlikely to have clinical relevance or may lead to overdiagnosis and overtreatment. Yet, LVC is difficult to define and measure, as current definitions include both quantifiable outcome measures and qualitative patient experiences. This paper further unpacks this challenge by exploring how Danish GPs handle the difficult task of distinguishing between concerns that require medical attention and those to leave untreated. Based on qualitative interviews and observations, we argue that some LVC is central to the relational work of GPs. We show how GPs deploy tactics including blood tests and medications to manage uncertainty, build trust with patients, and dissuade them from medical escalation. Thus, attempts to quantify and reduce LVC may compromise GPs' capacity to serve as trusted gatekeepers. We clarify this point through what we call economies of assurance: the interplay between patients' worries and the affective attention, collaborative monitoring, and testing GP use to assure patients they are receiving appropriate care. This analytical framework adds critical context to uptake of consumer medicine technologies, such as genetic tests or wearables. These technologies capitalize on (and co-produce) desires for reassurance, while relying on healthcare systems to absorb triage, diagnosis, and care. Our analysis highlights the need to account for social and societal factors in defining what LVC is and how it could be reduced.

The Thin End of the Wedge: The Moral Puzzle of Anorexia Nervosa
Tarasenko-Struc, Aleksy

The practice of force-feeding dangerously malnourished patients with anorexia nervosa (AN) raises a puzzle for clinical ethics. Force-feeding AN patients sometimes seems justified to save their lives and

to help them recover from a debilitating pathological condition. Yet clinical ethics seems committed to a robust anti-paternalism principle, on which it's normally wrong to force treatment on decisionally capacitated patients for their own good. And some AN patients do retain decisional capacity by the standard criteria. But then it should be just as wrong to force-feed these patients as it would be to forcibly administer blood products to a Jehovah's Witness.

I argue that three proposed solutions to the moral puzzle of AN have serious problems. The practice of force-feeding AN patients generally is, therefore, without a sound moral justification.

On the first proposal, AN patients lack decisional capacity, either by the standard four-abilities model or by novel criteria. Some versions of this proposal founder, I argue, due to the existence of patients who highly value their AN and make it the basis of their identity, while other versions overgeneralize, implausibly expanding our conception of which patients lack decisional capacity.

On the second proposal, AN patients retain decisional capacity, yet force-feeding is a hard/strong paternalistic intervention that's justified given the exceptional nature of their condition—e.g., because the patient's death is avoidable and her condition reversible. The problem is that these factors aren't exceptional: they are present in other clinical contexts. So, this view seems—implausibly—to justify far too much paternalism, permitting (e.g.) the force-feeding of conscientious hunger strikers and forced blood transfusion for Jehovah's Witnesses.

On the third proposal, by contrast, force-feeding is justified soft/weak paternalism, because AN patients refuse nutrition on the basis of factual delusions about body size/shape or perhaps under the influence of a compulsion. Yet AN patients who highly value their AN aren't compulsive, and not all AN patients are subject to the delusions in question. This proposal—like the first proposal—provides, at best, a justification for force-feeding in limited circumstances.

Measurement and instrument development in the human sciences

Thalos, Mariam (University of Tennessee Knoxville, Department of Philosophy)

Practitioners of the human sciences (including psychology, education, sociology, medicine)—no less than those in the physical, chemical and biological sciences—treat evidence as an independent and objective corpus, and importantly "prior to" theory, or at any rate independent of it. Philosophers of science, by contrast, have become increasingly wary of late about the role of theory both in theory-testing and in measurement contexts, and hence have problematized the notion of evidence as prior or independent. The case studies used by these philosophers to build their case against the independence of measurement have largely been drawn from physical science (specifically from the history of physics and thermodynamics); for it seems there is an implicit understanding—not restricted to these philosophers—that the choice of examples from the physical science represent the most difficult for their case. It has been felt, in other words, that there is an easier case to be made against the notion of independent evidence if one looks instead at examples from the human sciences. But it is by no means so.

The present essay aims to bolster a foundationalist position on (at least some cases of) measurement, in opposition to the present orthodoxy, arguing in favor of a strong distinction between theory and evidence—and the logical priority of the status of the latter in relation to the former. If the case against

the distinction is best made by restricting attention to the physical sciences, then surely the case in favor of the distinction is best made by restricting attention to the so-called "softer" human sciences, where it has been supposed that observation of human characteristics by humans is inevitably more theory-laden.

We begin here by endorsing the distinction (appearing first in Thalos 2023) between the empirical certification of the (measurability of) a quantity on a specified scale, and the epistemic warrant due to an assignment of a specific magnitude (from that scale) to that quantity on a specific occasion. Thalos (2023) sets forth an account of the certification of a measurable quantity, independent of any substantive (i.e. not purely mathematical) theory in which that quantity features—but importantly not independent of the precepts of the mathematical Theory of Measurement (ToM). The examples utilized by Thalos (2023) for purposes of making that case are drawn from the physical sciences. Perhaps it will be thought that these examples are cherry-picked, and in any case that focus on them renders the argument for independence easier to make. The aim of the present essay is to formulate the argument in terms of examples from the social sciences, specifically utilizing the Rasch model of measurement, and thereby to show that the case is no more difficult to make in connection with certain contexts in the social sciences.

The journey here portends important morals for methodology in the philosophy of science. Researchers steeped in case studies in history science, and especially history of physical science, are quick to overgeneralize. And this overgeneralization can close research off from philosophical morals on the same question that might emerge from elsewhere in the history of science.

Artificial Intelligence and Medicine: African Philosophical Perspectives and Regional Agency

Edmund Terem Ugar (University of Johannesburg, Centre for Philosophy of Epidemiology, Medicine, and Public Health)

The development of machine learning technologies (MLTs) has allowed artificial intelligence (AI) to play a significant role in medicine and, increasingly, in public health. Image recognition, in particular, has become extremely effective, and clinicians increasingly rely on MLTs for clinical diagnosis and prognosis of medical conditions. These remarks, however, apply primarily to Europe, the US, China, and other technologically developed nations. Africa is yet to leverage the potential applications of MLTs. Sub-Saharan African countries are currently disadvantaged economically and infrastructure-wise. The above disadvantages have led to the lack of regional agency in the development, training, and deployment of the above MLTs for their healthcare sector. In this paper, I investigate medical, epidemiological, and public health uses of MLTs from African philosophical perspectives, using African moral theories and other relevant African philosophical tools to achieve the following primary objectives: first, to provide conceptual grounding for the development of medical AI for an African context, which is commonly either neglected or treated as a mere recipient of technology, knowledge, and medical expertise sourced elsewhere; second, to identify ways that African philosophical resources can influence global policies on the development and use of medical AI, especially to mitigate ethical issues such as algorithmic bias, while asserting its regional agency; third, to provide conceptual and methodological insights that are not visible from conceptual frameworks in which

Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk

such concepts and methods have usually been developed and which they have never been accessible from a position of historical dominance.

What Makes a Good Doctor?
Echeweodor, Franklyn Ugochukwu (University of Johannesburg, Centre for Philosophy of Epidemiology, Medicine, and Public Health)

What makes a good doctor? Modern medicine has been occupied with the controversial discourse of what it means to be a good doctor, thus creating a long-standing debate among theorists. This long-standing debate is echoed in the two chief approaches to medicine that have emerged in the literature: the evidence-based medicine approach (EBM) and patient-centred care approach (PCC). Each of these approaches claims to provide an answer to the question of what it means to be a good clinician through this clinical practice guideline. I investigate the views of the EBM and the PCC approach to answer the question "what makes a good doctor." I show that neither the guidelines of EBM nor PCC approach adequately account for what it means to be a good doctor. The basis for my claim is that, neither EBM nor PCC (independently) provide adequate justification for clinical judgement. By clinical judgement, I mean the closest integration of scientific and moral reasoning and judgement in clinical practice. I show how such integration of scientific and moral reasoning and judgement is actualized through Aristotle's virtue ethics. I submit that a satisfactory answer to the question "what makes a good doctor" can be achieved only through the practice guidelines that results from the integration of the EBM and PCC approach guided by Aristotle's virtue ethics.

Should Autonomous Surgical Robots be regarded as Surgeons?
Paschal, Ukpaka (University of Johannesburg, Centre for Philosophy of Epidemiology, Medicine, and Public Health)

Robotic surgery is frequently related to less invasive surgical procedure, which involves operations carried out through small incisions (Metcalfe, 2023). An example of such a robot is the Da Vinci system, which has a camera arm and mechanical arms with surgical tools attached and is part of the most prevalent clinical robotic surgical system. The human surgeon manages the high-definition, enlarged 3D image of the surgical components while sitting at a computer console beside the operating table.

However, there is a chance that a completely autonomous surgical robotic system will be created, given the exponential speed of technological advancement (Saeidi et al., 2022). When its regulatory and legal challenges are adequately resolved, autonomous surgical robots will be a demanding field that is now creating much interest in research labs and has a bright future. Improvements in patient care and outcomes may result from the system's performance being superior to that of human surgeons.

Why the debate about how to ascribe legal liability in the case of accidents and harm continues to develop, this article takes a different approach to the discussion regarding autonomous surgical robots. I explore whether surgical robots should be regarded as surgeons because they can operate as full surgeons. I understand that creativity has a place in various contexts and discovery spans a wide spectrum (Gauderer, 2009), the healthcare sector requires it to solve issues with quality and safety

(Kennel and Lowndes, 2022). According to Warr, Henriksen, and Mishra (2018), creativity is a fundamental aspect of humankind that enables our brains to function at their peak capacity, which is essential for survival. Accordingly, I argue that surgical robots are not creative enough to be regarded as surgeons for more than following the procedures, surgery requires much creativity as well. Second, I develop and sustain an argument that holds that due to surgical robot's incapacity to be paid or rewarded for surgical process, they should not be regarded as surgeons.

References

Gauderer, M.W.L. (2009). Creativity and the surgeon. *Journal of Pediatric Surgery*, 44(1), pp.13–20. doi:https://doi.org/10.1016/j.jpedsurg.2008.10.006.

Kennel, V. and Lowndes, B.R. (2023). *Creativity in health care*. Elsevier eBooks, pp.343–360. https://doi.org/10.1016/b978-0-323-91841-1.00021-x

Mayo Clinic (2022). Robotic surgery - *Mayo Clinic*. [online] www.mayoclinic.org. Available at: https://www.mayoclinic.org/tests-procedures/robotic-surgery/about/pac-20394974#:~:text=Surgeons%20who%20use%20the%20robotic%20system%20find%20that

Metcalfe, C. (2023). Robot surgeons provide many benefits, but how autonomous should they be? *The Observer*. [online] 18 Jun. Available at: https://www.theguardian.com/science/2023/jun/18/robot-surgeons-provide-many-benefits-but-how-autonomous-should-they-be.

Saeidi, H., Opfermann, J.D., Kam, M., Wei, S., Leonard, S., Hsieh, M.H., Kang, J.U. and Krieger, A. (2022). Autonomous robotic laparoscopic surgery for intestinal anastomosis. *Science Robotics*, 7(62). https://doi.org/10.1126/scirobotics.abj2908

Warr, M., Henriksen, D. and Mishra, P. (2018). Creativity and Flow in Surgery, Music, and Cooking: An Interview with Neuroscientist Charles Limb. *TechTrends*, 62(2), pp.137–142. https://doi.org/10.1007/s11528-018-0251-3

What is pneumonia?

Venus, Cameron (Royal Melbourne Hospital, Department of Medicine)

Jamrozik, Euszebius (Royal Melbourne Hospital, Department of Medicine; Oxford University, Ethox and Wellcome Centre for Ethics and Humanities; Monash University, Monash Bioethics Centre)

Pneumonia is one of the most commonly diagnosed and treated conditions in clinical medicine. Definitions of pneumonia often include reference to some combination of clinical findings, chest X-ray or other radiological changes, and microbiological test results. However, despite progress in diagnostic technologies, clinical concepts of pneumonia often remain ambiguous and poorly correlated with the diverse causes of this heterogeneous condition. For example, it is often difficult for clinicians to distinguish between viral and bacterial pneumonia, or between the paradigm case of "typical" bacterial pneumonia (i.e., lobar pneumonia caused by Streptococcus pneumoniae) and "atypical" pneumonia. In this paper, we trace the historical development of concepts of pneumonia alongside innovations in diagnostic technologies and analyse the implications of persistent conceptual challenges. We argue that although clinicians' heuristics for diagnosing pneumonia appear to function relatively well in practice, this apparent success conceals ambiguities with considerable consequences for clinical practice, particularly relating to misdiagnosis and overtreatment. We conclude by exploring how similar issues arise in diagnosis of other conditions.

Ethical Risks of AI-Driven Precision Psychiatry

Vesterinen, Tuomas (University of Stanford, Graduate School of Education)

Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk

The development of artificial intelligence seems to promise a means to overcome the empirical validity problem related to the existing classifications of psychiatric disorders, thereby paving the way for more precise diagnostics, treatments, and predictions. I argue, however, that there is a risk that AI based techniques and approaches in precision psychiatry leave the validity problem unanswered and may generate novel ethical challenges. I begin by arguing that although AI systems can potentially support the discovery of more fine-grained statistical patterns, this does not necessary lead to uncovering underlying pathogenic causal mechanisms. The reasons is that precision psychiatry is currently committed to an imporished biocentric conception of psychopathology: Not enough attention has been paid to social and experiental factors. I then argue, nevertheless, that simply integrating social and experiental factors into AI systems, as have been suggested, can generate ethical responsibility gaps due to the normative and interactive nature of psychopathology. I distinguish between direct responsibility gaps, which include accountability questions concerning consequences of "black box" AI based diagnostic and treatment choices, and indirect responsibility gaps, which include questions over accountability for unintended larger societal consequences. While the former includes questions over the right for treatment, the latter involve questions over feedback effects of AI systems modifying or reinforcing the targeted psychiatric problems. Finally, I suggest that the design and implementation of AI in psychiatry should adopt a value-sensitive approach that explicitly reflects the social and interactive nature of psychopathology as well as acknowledges the epistemic and ethical risks involved.

To regulate, to endure: tolerance(s) in immunology

Zach, Martin (Czech Academy of Sciences, Department of Analytic Philosophy)

The immune system plays a major in how the body deals with insults. Other than attempting to eliminate the insult, the body can tolerate it. Carefully disentangling tolerance has therapeutical significance for infectious, autoimmune, and other diseases, yet full conceptual understanding is lacking. While crucial in immunology, the term tolerance is ambiguous. First, it refers to immunological tolerance (IT), i.e. "self"-tolerance and tolerance of "non-self", which has attracted significant attention from philosophers of immunology (e.g., Tauber 1994; Pradeu 2012; Swiatczak 2013; Schneider 2021b). Second, tolerance denotes the capacity to endure or to bear, which is captured by the notion of disease tolerance (DT), the ability to withstand the negative effects of an insult without having a direct effect on the insult (Martins et al. 2019). DT has yet to receive full and systematic attention from philosophers (so far only noted in, e.g., Chiu (2017) and Tauber (2017)). Likewise, the immunological community has struggled to fully embrace DT due to (i) the conceptual and terminological difficulties related to "tolerance" (Schneider 2021a), and (ii) the researchers working on disease tolerance oftentimes paying only a lip service to the distinction between IT and DT (see Medzhitov et al. 2012, p. 936; Soares et al. 2014; McCarville and Ayres 2018, p. 88). To make the conceptual distinction between IT and DT more precise, this paper will draw on what Medzhitov (2021) called "counter-inflammatory signals", as opposed to "anti-inflammatory signals", and it will be argued that the former is characteristic of DT while the latter of IT.

References

Chiu L, Bazin T, Truchetet ME, et al (2017) Protective microbiota: From localized to long-reaching co-immunity. *Front Immunol* 8:1. https://doi.org/10.3389/fimmu.2017.01678

Martins R, Carlos AR, Braza F, et al (2019) Disease Tolerance as an Inherent Component of Immunity. *Annu Rev Immunol* 37:405–437. https://doi.org/10.1146/ANNUREV-IMMUNOL-042718-041739

McCarville JL, Ayres JS (2018) Disease tolerance: concept and mechanisms. *Curr Opin Immunol* 50:88–93. https://doi.org/10.1016/J.COI.2017.12.003

Medzhitov R (2021) The spectrum of inflammatory responses. *Science* 374:1070–1075. https://doi.org/10.1126/SCIENCE.ABI5200

Medzhitov R, Schneider DS, Soares MP (2012) Disease tolerance as a defense strategy. Science 335:936–941. https://doi.org/10.1126/science.1214935

Pradeu T (2012) *The Limits of the Self: Immunology and Biological Identity*. Oxford University Press, Oxford

Schneider DS (2021a) Immunology's intolerance of disease tolerance. *Nat Rev Immunol* 21:624–625. https://doi.org/10.1038/s41577-021-00619-7

Schneider T (2021b) The holobiont self: understanding immunity in context. *Hist Philos Life Sci* 43:1–23. https://doi.org/10.1007/S40656-021-00454-Y

Soares MP, Gozzelino R, Weis S (2014) Tissue damage control in disease tolerance. *Trends Immunol* 35:483–494. https://doi.org/10.1016/J.IT.2014.08.001

Swiatczak B (2013) Immune Balance: The Development of the Idea and Its Applications. *J Hist Biol* 47:411–442. https://doi.org/10.1007/S10739-013-9370-Z

Tauber AI (1994) *The Immune Self: Theory or Metaphor?* Cambridge University Press, Cambridge

Tauber AI (2017) *Immunity: The evolution of an idea.* Oxford University Press, New York

Register: https://www.eventbrite.com/e/11th-international-philosophy-of-medicine-roundtable-2024-tickets-884865094317
Programme: https://philosepi.files.wordpress.com/2024/05/programme-draft-2.pdf
Contact: cpemph@durham.ac.uk