Penultimate version.

Please reference the published version here:
https://jme.bmj.com/content/early/2024/05/15/jme-2024-109922

No, Pregnancy is Not a Disease

Abstract (248 words): Anna Smajdor and Joona Räsänen argue that we have good reason to classify pregnancy as a disease. They discuss five accounts of disease and argue that each account either implies that pregnancy is a disease or, if it does not, it faces problems. This strategy allows Smajdor and Räsänen to avoid articulating their own account of disease. Consequently, they cannot establish that pregnancy *is* a disease, only that plausible accounts of disease suggest this. Some readers will dismiss Smajdor and Räsänen's claims as counterintuitive. By analogy, if a mathematical proof concludes '2+2=5', readers will know—without investigation—that an error occurred. Rather than dismiss Smajdor and Räsänen's work, however, the easiest way to undermine their argument is to describe at least one plausible account of disease that (i) excludes pregnancy and (ii) avoids the problems they raise for it. This is our strategy. We focus on dysfunction accounts of disease. After outlining Smajdor and Räsänen's main arguments against dysfunction accounts, we explain why pregnancy is not a disease on these accounts. Next, we defend dysfunction accounts against the three problems that Smajdor and Räsänen raise. If successful, then contra Smajdor and Räsänen, at least one plausible account of disease does not imply that pregnancy is a disease. We suspect that defenders of other accounts can respond similarly. Yet, we note that insofar as dysfunction accounts align with the commonsense intuition that pregnancy is not a disease, this, all else being equal, seems like a point in their favour.

Problems for Dysfunction Accounts of Disease

When arguing that we should consider pregnancy a disease, Smajdor and Räsänen consider five accounts of disease.[1][1] This includes 'dysfunction' accounts. Regarding dysfunction accounts of disease, the authors claim 'dysfunction'—understood as 'something that deviates from the way an organism is supposed to be'—'is a necessary aspect of what we view as disease.'[1][2] Pregnancy does not involve any dysfunction in this sense. Pregnant individuals do not deviate from how they are 'supposed to be.' Hence, pregnancy is not a disease. If dysfunction accounts do not imply that pregnancy is a disease, then Smajdor and Räsänen must argue they face some 'insurmountable problems.'[1] The authors raise three interrelated problems for dysfunction accounts: the 'elitist', 'knowledge', and 'is/ought' problems, respectively.

[1] These are Rachel Cooper's account, relativistic accounts, and accounts that rely on the language of 'dysfunction', 'normal species function', and 'biostatistical' factors, respectively.
[2] This provides one necessary condition for disease. 'Harm' may be another necessary condition (as we note below).

First, the elitist problem. If something can be dysfunctional, then it has a 'proper' function. Yet, some pregnant individuals regard pregnancy as a horrible, negative experience. The dysfunction account seemingly implies that this assessment is incorrect. As Smajdor and Räsänen argue, this judgement—that pregnancy involves functioning well—occurs 'at a far removed level from the lived experience of the sufferer' and so, dysfunctional accounts are 'fundamentally elitist.'[1]

Second, the knowledge problem. Smajdor and Räsänen write, 'the question of what constitutes good functioning is not obviously one that we can divine simply from observing the behaviour of an organism, or studying biology.'[1] If dysfunction accounts require that we know how organisms *should* function, then how can we discover this information? We can study how organisms *do* function, but this does not reveal how they *should* function.

Third, the 'is/ought' problem. Dysfunction accounts supposedly derive an 'ought' from an 'is' in that 'the expert observes the phenomena in question, theorises and then makes his pronouncement as to how the organism should behave.'[1] Yet 'this leap from the descriptive to the normative is enormously problematic.'[1] Worse, the concept of proper functioning may depend on belief in a 'designer.'[1] But 'most educated people' (purportedly) know that 'we are not the product of a loving, careful intelligent designer.'[1] So, whether dysfunction accounts are grounded in teleology—which requires leaping from 'is' claims to 'ought' claims—or theism, the metaethical bases of dysfunction accounts face serious problems.

These problems are interrelated. The is/ought problem says we cannot infer how organisms should function from information about how they do function. If so, then the knowledge problem arises: how *can* we know anything about how organisms should function? Thus, the is/ought problem is a 'more basic' concern than the knowledge problem.[1]

Defending Dysfunction Accounts of Disease

In defence of dysfunction accounts, we must first distinguish between the function of an organism and the function of its organs. That organs have a proper function—hearts pump blood, kidneys produce urine, etc.—does not mean that *organisms* have a proper function. Nor does the fact that organs have a proper function imply that human organisms should act in certain ways. For example, that reproductive organs have a proper function does not imply humans 'should have children.'[1] Rather, how an organ 'should function' is linked to the *kind* of thing it is. Hearts and kidneys, for instance, are different *kinds* of organs; each contributes to an organism's survival in distinct ways. Reproductive organs, in turn, enable an organism to reproduce. So, when Smajdor and Räsänen take 'dysfunction' to refer to 'something that deviates from the way an organism is supposed to be,' this is a mistake.[1] Instead, 'dysfunction' involves 'the failure of some *part* of the organism to be capable of performing

its biological function' (emphasis added).[2][3] How an *organism* 'is supposed to be' is another matter entirely.

Pregnancy does not involve the dysfunction of any reproductive organ. Some pregnancies can *become* dysfunctional. Ectopic pregnancies, for example, involve embryos embedding somewhere other than where they 'should.' Anembryonic pregnancies include cases in which genetic anomalies arrest the development of embryos. In the former case, it is not pregnancy but the location of implantation that generates dysfunction in the reproductive process. In the latter case, dysfunction occurs within the embryo itself. Pregnancy is not implicated in either case. So, even if pregnancy can become dysfunctional, pregnancy—in and of itself—does not involve dysfunction. Hence, pregnancy is not a disease.

Addressing The 'Elitist' Problem

Saying, 'nothing is dysfunctional about pregnancy' says nothing about 'the experience' of pregnant individuals.[1] If pregnancy is judged to be dreadful, dysfunction accounts say nothing to the contrary. Wakefield's dysfunction account is instructive here. For Wakefield, both 'dysfunction' and 'harm' are necessary conditions for disease.[2] One can grant that pregnancy is judged by some individuals to be harmful (and so, one necessary condition of 'disease' is met) while maintaining that no dysfunction of organs occurs. So, pregnancy is not a disease, since *all* necessary conditions are not met. Critically, by granting that pregnancy can be experienced as harmful, there is no need to deny the 'lived experiences' of pregnant women. Claiming that reproductive organs have a proper function is no more 'elitist' than claiming that hearts have a proper function. If someone laments that their heart pumps blood, that is their prerogative, but it does not imply that their heart is malfunctioning.

Objectors could argue that all distinctions between organs (e.g., between kidneys, hearts, etc.) are subjective. If so, then no organs have a proper function; organs simply *do things* without rhyme or reason. This would leave medicine in a state of confusion. Medical science is predicated upon the idea that there are distinct organs within the human body and that healthy organs perform their characteristic anatomical and physiological functions well. Dismantling the basis of medical science is a high cost for establishing the claim that pregnancy is a disease.

Addressing The 'Knowledge' Problem

Next, how can we know what the proper function of an organ is? For vital organs, the answer seems clear.[4] If vital organs fail to operate in certain ways, this usually leads to a cascade of events that result in an organism's death. We learn which function(s) sustain organisms' lives by observing that they tend to die when their organs function in *uncharacteristic* ways. The

[3] We use Wakefield's account of 'dysfunction' to clarify this point, since Smajdor and Räsänen attribute their mistaken notion of 'dysfunction' to Wakefield.

[4] Vital organs are essential for the continued survival of an individual organism. For instance, whilst someone cannot live without a heart (or something else that artificially replaces its function) they can live without their uterus.

proper function of the heart, then, may be as simple as contributing to the organism's survival by circulating oxygenated blood to tissues and organs. This is just what hearts *should* do, otherwise survival will be negatively affected.

What about reproductive organs? If someone's reproductive organs do not function in certain ways, then sexual reproduction will not occur. What makes reproductive organs *reproductive* organs is that they enable the species to reproduce. Failing to function in certain ways means failing to accomplish that result. How can we discover the 'proper function' of reproductive organs? We observe that when reproductive organs function in certain ways, reproduction typically occurs. When they function otherwise, reproduction does not occur. This is enough to distinguish proper function from dysfunction, as the end of reproductive organs is to enable reproduction.[5] Discovering that reproductive organs must function in certain ways to ensure reproduction is no more difficult than discovering that vital organs must function in certain ways to ensure survival.

Addressing The 'Is/Ought' Problem

Regarding the 'is/ought' problem, dysfunction accounts allegedly describe how things are: different organs do different things. Next, they infer how organs *should* (or 'ought to') function. For example: the heart pumps blood, so it *should* pump blood. This leap from 'is' to 'ought,' Smajdor and Räsänen claim, is 'enormously problematic.'[1] Not so.

First, concerns about the is/ought distinction usually state we cannot infer a *moral* 'ought' from 'is' statements. That is, from descriptive statements—like 'there is poverty in the world'—we cannot infer moral statements (like 'we should reduce poverty'). The sense of 'should' (or 'ought') relevant to dysfunction accounts is non-moral, however. To illustrate, consider the statement, 'my car should not be leaking oil.' I do not mean my car is morally wicked. Rather, some part of it is defective.

With organs, the reasoning works like this. Hearts pump blood around the body and this is how they contribute to survival. To ensure survival, hearts should continue functioning like this. Defective hearts are not morally bad organs. People with defective organs are not morally bad people. Moreover, to say a reproductive organ is 'dysfunctional'—functioning in a way that inhibits or precludes reproduction—makes no claims about someone's character or reproductive choices. Function and dysfunction are non-moral here. And none of this requires positing theism. Proper function is rooted in the kind of thing an organ is. As Wakefield puts it, dysfunction is 'the failure of a person's internal mechanisms to perform their functions as designed by nature' in a way that 'impinges harmfully on the person's well-being.'[3] 'Design' does not refer to some deity's plans, but is grounded in the results of evolutionary forces. As

[5] More carefully, reproductive organs enable reproduction *over the course of an organism's lifespan*. That infants cannot reproduce does not imply that their reproductive organs are dysfunctional; proper function and dysfunction are often indexed to stages of an organism's natural lifespan.

argued above, denying that particular organs have developed to function in particular ways would wreak havoc on medical science.

Second, calling the is/ought distinction 'enormously problematic' is an exaggeration. Inferring 'ought' statements from 'is' statements—even regarding the moral sense of 'ought'—is commonplace in bioethical discussions. Consider, 'it would be unjust to give … vital organs to those who have lived longer.'[4] From this, we may infer that giving vital organs on this basis should be avoided. The practice *is* unjust (as a matter of fact), and so, we *should not* do it. One could object that by calling something 'unjust,' we build evaluative content into the 'facts' of this case.[6] Whether this is correct depends on whether some things truly are just (or unjust), independent of subjective evaluations. We think that some states of affairs *really are* unjust (given the distribution of goods, rights violations, etc.). If so, then learning something *is* unjust implies we *ought not* do it. If readers disagree, other candidates abound. Hofmann argues that learning facts about disease will inform how we should act: 'when a person has a condition that falls under the concept of disease, we have a moral impetus to help.'[5] Learning facts about a witness tells us whether we should believe his testimony. Learning that someone has a history of embezzlement provides reason to think she ought not be trusted with finances. And so on. For more, see Searle.[6] If the is/ought distinction is as rigid as Smajdor and Räsänen claim, then major problems follow not only for dysfunction accounts of disease, but for ethical deliberation and inquiry generally.

Conclusion

Smajdor and Räsänen argue that plausible accounts of disease imply that pregnancy is a disease. We argued that dysfunction accounts of disease both imply that pregnancy is not a disease and avoid problems raised by Smajdor and Räsänen. This alone undermines their argument. And, although it goes beyond the scope of this response, we suspect that defenders of other accounts of disease can undermine their argument similarly.

[6] We are grateful to an anonymous reviewer for pressing this point.

References

[1] Smajdor A, Räsänen J. 2024. Is pregnancy a disease? A normative approach. *J Med Ethics* [online first]. URL = https://doi.org/10.1136/jme-2023-109651

[2] Wakefield JC. 2014. The biostatistical theory versus the harmful dysfunction analysis, part 1: is part-dysfunction a sufficient condition for medical disorder? *J Med Philos* 39(6): 648-82.

[3] Wakefield JC. 1992. The concept of a mental disorder. On the boundary between biological facts and social values. *Am Psychol* 47(3): 373-88.

[4] Räsänen J. 2020. Age change in healthcare settings: a reply to Lippert-Rasmussen and Petersen. *J Med Ethics* 46(9): 636-7.

[5] Hofmann B. 2022. Acknowledging and addressing the many ethical aspects of disease. *Patient Educ Couns* 105(5):1201-8.

[6] Searle J. 1964. How to derive an 'ought' from 'is.' *Phil Review* 73(1): 43-58.