Health, Disease and Naturalism: Hausman on the Public Value of Health

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*Whether health and disease are value-free concepts is a matter of long-standing debate. This question is relevant to public health ethics because the distinction between health and disease is frequently employed to delineate the public interest or justify state involvement. This paper evaluates a recent attempt by Hausman (2015) to both defend a naturalistic (or non-evaluative) account of health and disease, and provide an account of the public value of health. Drawing on arguments by Kingma (2010, 2016) it argues that Hausman's naturalistic account of health cannot be maintained. As well as undermining the naturalist project more generally, this has two specific implications. First it undermines Hausman’s claim that functional efficiencies – unlike health states – can be ranked in a value-free manner. Second, it affects Hausman’s account of the public value of health.*

What health and disease are, and, specifically, whether they are value-free or value-laden concepts, are questions of long-standing debate (e.g. Szasz 1960; Engelhardt, 1976; Boorse, 1977).[[1]](#footnote-1) This debate is relevant to public health ethics because appeals to health and disease are frequently employed to delineate the public interest; justify state involvement; or support an account of the just distribution of health-care and other health-related interventions.[[2]](#footnote-2)

This paper introduces and contributes to this debate by evaluating a series of recent contributions by Daniel Hausman (2011, 2012, 2015). Hausman continues the naturalistic tradition of defending a non-evaluative concept of health and disease, and also outlines an account of the public value of health.

The bulk of this paper (section 1 and 2) shall argue that Hausman’s defence of naturalism fails; it cannot avoid an objection first articulated by Kingma (2010). Naturalists are unable to simultaneously accommodate the wide range of physiological variation involved in performing normal function, *and* account successfully for diseases that are the direct result of environmental factors. This not only undermines a naturalistic account health and disease, it also undermines Hausman’s claim that functional efficiencies can be ranked objectively.

The rest of the paper (section 3) focuses on why this matters. Broadly speaking, it matters to people like Daniels (1985) and others in public health debates, who hope that a naturalistic account of health and disease will lend some objective assistance to the answering of difficult social and moral questions – such as the just distribution of health care resources; the delineation of the public interest; or the justification of state interference. It also matters to those who expect naturalism about health to provide a buffer against medicalization – or any others who wish to rely on a naturalistic account of health and disease to make claims in other realms. But also, and this will be my focus, it affects the arguments that Hausman provides in the rest of his (2015) book. For in the latter part of that book, Hausman – like so many others – wishes to rely on a naturalistic distinction between health and disease to make a morally salient distinction between health-related suffering and other forms of suffering. That, I shall argue, he cannot do.

Before we turn to the arguments, however, let me emphasise the positive. As well as defending naturalism, Hausman (2015) makes two further main claims in his excellent and wide-ranging book. First, he claims that health measurements can, and do, only measure the value of health – not health itself. I agree; indeed I argue elsewhere (*anonymised,* forthcoming1) that important public reasons entail that they *ought* to do so.

Second, Hausman provides a positive account of the public value of health. This account distinguishes the *private* value of health, which is of interest to individuals, from the *public* value of health, which is of particular interest to the liberal state. The private value of health is the effect of health – or its absence – on one’s well-being and personal projects; the public value of health consists in the limits on our opportunities and the suffering imposed by departures from health. I agree with the broad terms of this approach and particularly agree that the public value of health should not be conflated with personal wellbeing (see also *anonymised*, 2013 & forthcoming2). My criticisms in this paper nothwhistanding, Hausman’s account is interesting and nuanced; his valuable contributions remain of interest even if my criticisms are correct and his defence of naturalism is unsuccessful.

**1. Situation Specificity and ‘Situation-Specific Disease’**

Hausman (2012, 2015) argues that health and disease are naturalistic or non-evaluative concepts.[[3]](#footnote-3) The driving idea behind naturalism is that judgments about health and disease, at least at the theoretical level[[4]](#footnote-4), are determined by some set of objective facts about our biology. This position is usually contrasted with normativism, which maintains that the concept of health and disease are driven primarily by our evaluations of states: whether conditions are good or bad for us.[[5]](#footnote-5) Naturalism is often considered attractive because it promises to give some objective support to the resolution of what may otherwise be difficult and deep-seated cultural or moral disagreements: such as whether homosexuality is a disease or a normal condition; whether a murderer suffering delusions is culpable or not; or what ends the liberal state should promote.

Naturalists tend to define health and disease in terms of biological functions, where health is normal biological functioning, and diseases are malfunctions or adverse departures from normal biological functioning. [[6]](#footnote-6) To give an example: my eyes are healthy if they perform their normal biological function of seeing. If they are not healthy, then this is because they fail to perform normal seeing; for example because I am short-sighted or colour-blind.

The real challenge for naturalists is to provide an account of normal biological functioningand dysfunction that is both plausible and value-free.[[7]](#footnote-7) Such accounts come in two main versions. The first is backward-looking, and defines functions in evolutionary terms: as the effect(s) of a trait for which that trait was naturally selected.[[8]](#footnote-8) The second account is forward-looking, and defines biological functions as the causal contributions by traits and subsystems to the organism’s goals: survival and/or reproduction.[[9]](#footnote-9) This paper only focuses on accounts of the second kind, of which Hausman offers a version. Such an account must be able to accommodate (1) the *situation-specificity*, and (2) the *fine-grained quantitative nature* of functions. I shall first (section 1) outline these requirements and explain why they can give rise to a problem for naturalist accounts. I will then (section 2) argue that Hausman’s specific naturalistic proposal cannot escape this problem.

*Situation-specific function*

Kingma (2010) emphasises that normal biological functionings are neither static nor unified. Instead they are dynamic, *quantitatively fine-grained* and *situation-specific*.

Being *quantitatively fine-grained* means that the normal biological functioning of a trait is often very specifically defined; a normal or healthy cardiovascular system does not merely pump blood, but it pumps blood within a very specific range of normal blood pressure, heart rate, cardiac output, stroke-volume and rhythmicity. Unhealthy cardiovascular systems, such as those containing hypertrophic hearts; suffering cardiac arrhythmias; or producing too low blood pressure, perform outside that range. (Kingma, 2010)

*Situation-specificity* means that functions may need to be performed only – or quite differently – in particular situations. Consider, for example, the normal biological functioning of the male urinary tract. Under some conditions, the male urinary tract needs to void urine but not semen. This involves releasing the sphincter muscles on the bladder and urethra, and a configuration of the prostate that closes the prostate ducts leading to the testicles and seminal vesicles.[[10]](#footnote-10) Under other conditions the urinary tract needs to void neither urine nor semen, which is done by keeping the sphincter muscles on bladder and urethra tight. In other circumstances again the male urinary tract needs to void semen but not urine, which means that the sphincter muscle on the urethra needs to be relaxed whilst the prostate closes the upper portion of the urethra, both preventing semen from entering the bladder, and urine from exiting.

It is not enough for an account of normal biological functioning to merely list the normal functions of the male urinary tract additively, as voiding urine; voiding semen; *and* voiding neither. Instead it has to specify *when* or *under what circumstances* it is the normal function to void urine, semen or neither. This because some biological dysfunctions are due to performing in the wrong context what in other situations or circumstances would be normal functions. Having a (permanently) swollen prostate, for example – including when one needs to void urine – is a dysfunction. Voiding urine when one should not be – e.g. when one is laughing – is a dysfunction. And so on.

Note that the male urinary tract is a mere example here*.* Kingma (2010) notes that very narrowly-regulated situation-specific functional requirements – the performance of which in the wrong context is a dysfunction – are the physiological norm. Examples include the mechanism of blood-clotting, which may dysfunction either by not happening when it should (haemophilia); or by happening when it shouldn’t (thrombosis). Other examples include cyclical hormonal regulation of e.g. the female reproductive system; sleep-wake cycles and other circadian rhythms; and the significant variations in cardiac performance between different situations (compare e.g. sleeping and running an Olympic final).

To summarise, a successful account of health as normal biological functioning, and of disease as biological dysfunction, must adequately account for the situation-specificity and quantitatively fine-grained nature of function; it must specify *under what conditions* and *within which range* a particular physiological configuration counts as normal functioning; and under what conditions it does not.

*Situation-specific disease*

In meeting the requirement of situation-specificity, accounts of health as normal biological functioning risk facing a problem. There are certain situations or circumstances under which it is normal for an organism to suffer what we pre-theoretically consider a disease. Kingma (2010) calls these ‘situation-specific diseases’.

To give an example: it is normal for a male urinary tract to facilitate an erection in response to certain erotic stimuli. It is also normal to do so in response to Viagra. But, equally, it is normal to enter such a state for a period far too prolonged for comfort in response to a Viagra overdose. At that point, however, we cease to think that this physiologically ‘normal’ behaviour is healthy; it is, instead, a situation-specific disease: Viagra-overdose. Kingma (2010) lists further examples of such situation-specific diseases that are normal responses to particular environmental conditions. These including the ingestion of drugs/poisons; the exposure to certain infectious agents; and to extreme environments such as heat, sun and altitude. Kingma calls these environmental conditions “harmful situations”.

The challenge for the naturalist is to give an account of biological function that is flexible enough to accommodate the situation-specificity of normal functioning – so as to account for diseases that consist in performing what would otherwise be normal function, in the wrong context – but that can avoid labelling normal physiological behaviour in “harmful situations” healthy.

Kingma (2010, 2016) argues that the influential account of disease/dysfunction developed by Christopher Boorse (1977, 1997), of which Hausman offers a modification, cannot accommodate this challenge. It is worth understanding why before turning to any possible problems for Hausman. Boorse, in short, cannot avoid this problem because he defines health/normal functioning as the *statistically typical contribution* to survival or reproduction[[11]](#footnote-11). He is therefore equally committed to deeming, say, a statistically typical low level of glucagon production by the liver in response to sugar consumption ‘normal function’, as he is to deeming a statistically typical low level of liver-functions in response to paracetamol overdosing. (Kingma, 2010; 2016) But the former is healthy; the latter a disease.

This problem cannot be avoided by appealing to reversibility of the condition; not all healthy situation-specific physiological adjustments are reversible (Kingma, 2010). Nor it can be avoided by arguing that the post-paracetamol-liver makes *no* contribution to the survival or reproduction of the organism; it does, just at a lesser level (Kingma, 2010). Nor can a useful distinction be made by claiming that the post-sugar-liver is *maximally efficient* (Hausman, 2011) whereas the post-paracetamol liver is not; for both operate at maximal efficiency, under the circumstances (Kingma, 2016). For the same reason, a distinction cannot be made between those cases where functions are supressed by other normal functions, and cases where the suppression of function is pathological (Boorse, 2014: 705- 706). Not only does this seem like a restatement of Hausman’s ‘maximal efficiency response’, which Kingma (2016) addresses, but it also seems viciously circular: we are in the business of defining when the suppression of a function is functional/normal and when it is not. This cannot be done by appealing to the normality or functionality of the suppression. Kingma (2010; 2016) also argues that the problem can’t be avoided by appealing to a distinction between ‘typical’ and ‘harmful’ environments, though Boorse (2014: 705-707) disagrees. Finally, the problem can’t be avoided, as Hausman (2011) argues and Boorse (2014: 704-5) endorses, by considering whether the organ retains its normal *disposition* to perform situation-specific function in other situations – an idea described by Boorse as ‘normal functional ability’. For, as Kingma (2016) points out, although it is true that the liver producing little glucagon after eating lots of sugar is still disposed to increase its glucagon production in response to fasting, whereas the post-paracetamol liver is not disposed to increase liver-function if placed in a situation where that is demanded, the same holds for lots of healthy situation-specific physiological (in)dispositions. The woman who has just given birth, for example, is not disposed to do lots of sit-ups, were the situation to demand it, nor is she disposed to have much bladder control; instantly start a new menstrual cycle; or, let alone, conceive a child. All these abilities will take some time to recover. Of course she would have had these dispositions *had she not* just given birth, but equally the liver would have all its normal dispositions *had it not just been poisoned with paracetamol* (Kingma, 2016)

So, Kingma (2010, 2016) argues, Boorse’s influential account of health as normal biological functioning is impaled on the horns of a dilemma. Because he employs statistics, Boorse either can’t accommodate the situation-specificity of function; or he can’t label situation-specific diseases as diseases. [[12]](#footnote-12) Kingma (2010, 2016) concludes that a value-free account of health and disease can’t be provided. Hausman, however – and in contrast to Boorse – does not offer an account of normal functioning that uses statistics. In the next section I shall examine whether Hausman succeeds in escaping the problem of situation-specific disease.

**2. Benchmark Environments and the Ranking of Functional Efficiency**

Hausman (2011, 2012, 2015) offers two reasons why he is not affected by the problem of situation-specific disease. First, he argues that the problem can be avoided, even on Boorse’s original account, by relativizing statistically typical function to restricted set of environments only: *benchmark environments*.[[13]](#footnote-13) Second, Hausman argues that this is a problem specific to the project of distinguishing health and disease – or the normal and the pathological – whereas his project is different. He professes not to care about the distinction between health and disease, but only about the ranking of functional efficiencies. This, he claims, is not affected by the problem of situation-specific disease. In this section I will evaluate, and indeed argue against, both claims.

*Benchmark Environments*

First, consider ‘Benchmark Environments’. Benchmark environments, according to Hausman (2012: 536) are “benign, common and relevant”. They are supposed to help avoid the problem of situation-specific disease because, according to Hausman, statistically typical functioning is not to be relativised to *any* situation or environment, but only to *benchmark environments.* In benchmark environments, Hausman (2012) argues, statistically typical function is healthy; in other environments it may be pathological. But this solution does not convince.

First, consider ‘common’. The idea is that frequently occurring or ‘common’ environments, such as nightfall (when we cease being able to see colour), are ones in which situation-specific normal functioning is healthy. Uncommon ones, such as a paracetamol overdose, is where situation-specific functioning may be a disease.

But now consider sperm. A human male produces around 25 billion sperm over a lifetime. The circumstance or environment of encountering a fertile human egg is thus, for a sperm, exceedingly rare. Every single disease known to humanity – and many more that are so rare they haven’t even been recognised – is many times more common than the chance that a human sperm will bond with an unfertilised human egg. But – surely – the unique causal contribution that sperm makes to survival or reproduction in such a circumstance, which is transferring its genetic material to the ovum, is a function. This example undercuts the criterion of ‘common’.[[14]](#footnote-14)

It is, however, not the only problem for ‘common’. (Kingma, 2010) Many harmful situations are – unfortunately – quite common. Think of infectious diseases, trauma and small wounds, grazes and bumps. Technically a bruise or a cut is a departure from health, but I acquire the one or the other on a near daily basis. On a larger scale, environments that cause diarrhoea, malnutrition, and so on, are far more common than we should like. The criterion ‘common’, then, is undercut in both directions.

Second, consider ‘relevant’. Relevant environments are those environments in which the trait under consideration has something to contribute to the goals of the organism. Pitch-black darkness, for example, is not a relevant environment for seeing.

One may think that the idea of relevance may avoid my earlier comment about sperm. That would indeed be the case if sperm had nothing to contribute in other, more frequent circumstances. But it is likely that it does. Regular unprotected sex before pregnancy has a protective effect against pre-ecclampsia (Marti & Herman, 1977; Klonoff-Cohen et al, 1987; Robillard et al, 1994), which disappears when the regular sexual partner does not father the pregnancy (Robillard et al. 1994). The effect has also been found for oral sex (Koelman et al. 2000), and especially when the ejaculate is being swallowed, which may also protect against recurrent spontaneous abortion (Mattar et al. 2005). Although the underlying mechanism has not yet completely been elucidated (Dekker, 2002), it seems that paternal sperm or semen contributes to successful pregnancy in some way by form of sensitising the female immune system to the father’s/foetus’s protein products, thus reducing the risk of maternal rejection of the foetus. Because pre-ecclampsia harms not just the pregnant woman, but also her fetus, a much larger proportion of sperm/semen will causally contribute to the succesful reproduction of the father by facilitating the successful gestation of his fetuses, rather than through actually fertilising an egg. Meeting a fertile egg is therefore not the *only* relevant environment for assessing the function of sperm.

Relevance also fails to rule out many other examples. Most traits have something to contribute in a range of situations. In the context of malnutrition, for example, almost all traits of the body will still maintain some degree of contribution to overall goals.

Third, consider ‘benign’. How should ‘benign’ be interpreted? It cannot mean ‘valued-by-us’ if Hausman’s claim that the resulting account of health and disease is value-free is to be sustained. So how else should we interpret it?

We might think it could be interpreted naturalistically as ‘conducive to survival or reproduction’. But, as Kingma (2010) already notes, that is unconvincing: a certain amount of exposure to pathogens, and experiencing childhood diseases *is* conducive to survival or reproduction because it primes the immune system. Putting vaccines aside for a moment, suffering such childhood diseases does mean, unequivocally, that one gets ill, but this is conducive to survival and/or reproduction nonetheless because contracting the disease at a later age may be much more detrimental to survival and/or reproduction. Exposure to the sun is also, on the whole, conducive to survival and/or reproduction but can nonetheless make us some of us temporarily ill on a regular basis, for example due to sunburn.

A final interpretation of ‘benign’ is to import a solution offered by Schwartz (2007) for a different problem: how to naturalistically specify harmful consequences. Schwartz (2007:379) proposes that ones functional output becomes pathological if its consequences “significantly diminish the ability of [the organism] to carry out an activity that is generally standard in the species and has been for a long period of time”. Similarly we might think environments fail to be benign if they diminish the ability of the organism to perform standard activity. But that is circular; for to define what standard activity and an impairment of it was, we first had to define benchmark environments. We therefore cannot define benchmark environment by appeal to standard activity or a departure thereof.[[15]](#footnote-15)

The three criteria for benchmark environments therefore do not succeed in demarcating them in such a way that the BST escapes the problem of situation-specific disease. But Hausman (2015:11) also suggests a different criterion: benchmark environments are “typical of the most common environments in which *Homo Sapiens* have lived”. Is this successful? The answer, once again, is no.

First, almost the entire environment of modern *Homo Sapiens* is *not* an environment that is typical of the most common environments in which the human species has lived. My present and developmental environments included vaccinations; a constant supply of high fat, salt, sugar and calorie-rich food; a complete absence of (seasonal) fasting or deprivation; and a very large, complex and abstract social and symbolic world. Thus there are many important things in my present and developmental environment that have not been lived with by the human species for a long time. On the other hand, there is much that has been lived with for a long time that is now absent. Does that mean that no statistically typical causal contribution to survival or reproduction made by my body parts and their processes in the context of a relative novel addition to the environment, such as traffic, computers, the constant availability of – often quite novel – foods, and even exposure to script, could define normal-species functioning or health? That seems implausible. It means a reduced ability to learn how to read is not a disease, because exposure to script was never a benchmark environment.[[16]](#footnote-16)

On the flipsde, many harmful situations will have been lived in or with by the human species for eons. These include, once again, bruises and cuts, but also – at least since agriculture increased human population densities – certain infectious diseases, as well as (seasonal) malnutrition, the effects of smokey fires, and so on. But surely these are still diseases.

So no interpretation of Hausman’s ‘benchmark environments’ proposal can avoid Kingma’s (2010) objection.

But these specific arguments aside, there is a further, more general reason that benchmark environments cannot work as a solution. We can all agree that, when I am infected with pneumonia, I have a disease – even if that is the species-typical response to exposure to a (sufficiently large dose of) pneumococcus. But when people have such a disease it is important to distinguish, on the one hand, between those – like me (I hope!) – who will get ill, but who will mount a normal immune response and will likely recover, possibly with the aid of antibiotics. On the other hand, it must distinguish those with a compromised or malfunctioning immune-system. This latter group has a further disease: the inability to mount an effective immune-response. Such a distinction is not only important; it is crucial for medicine. But we can only count the latter – malfunctioning immune-systems as a (further) disease on Hausman’s proposal if we *do* consider that our benchmark environments include infectious environments. On this proposal, however, an inclusion of infectious-disease-causing environments as benchmark environments means that the infectious diseases themselves can no longer be considered diseases; a simple distinction between benchmark and non-benchmark environments can therefore never work.

If benchmark environments are going to do the work that Hausman wants them to do – the blocking of the problem of situation-specific diseases – than we need to have a much more convincing account of them; one that avoids the problems raised above as well as those raised originally by Kingma (2010; see also Kingma 2014). An alternative is to retreat to our collective judgment that our statistically typical functional efficiency in response to a Viagra overdose is deeply harfmul, but that our statistically typical functional efficient response to an erotic stimulus is not. But that appears to sacrifice what was supposed to be a core claim upon which Boorse and Hausman wanted to deliver: that an account of health and disease in terms of biological functioning would be a value-free account of health and disease.

*Ranking Functional Efficiency.*

Even if the ‘benchmark environment’ solution doesn’t work, Hausman (2015) provides a second reason why the problem of situation-specific diseases is not damaging to him: the distinction between health and disease is not one he ultimately considers important. Instead, what Hausman is interested in is a *ranking* of functional efficiencies. In other words, what Hausman wants to be able to do to *rank*, in a value-free manner, the functional efficiency of the following legs: Usain Bolt’s; a recreational jogger’s; my own; my colleague’s who has a painful bruise on their knee; my friend’s, who has a knee-injury; my neighbour’s, who is permanently on crutches; and those belonging to my student, who is in a wheel-chair. This ranking, Hausman claims, can be done objectively, and is not affected by the problem of situation-specific disease. Where on this ranking the demarcation between the healthy and the pathological falls – e.g. whether it is between the jogger and me; me and my friend’s; or my friend’s and my neighbour’s – is of lesser relevance, he claims.

Before we assess Hausman’s claim it is worth understanding why Hausman is interested in ranking functional efficiency, rather than in distinguishing health and disease. This is not motivated by the problem of situation-specific disease. Instead Hausman’s prime interest is in the *comparative ranking* or *measurement* of health-states. That, he argues, faces an insurmountable problem: we cannot make an overall or cross-modal judgment of what it is to be *healthier than*.[[17]](#footnote-17) Compare, for example, a paper-cut; a sprained ankle; difficulty urinating due to benign hypertrophy of the prostate; not being able to walk without a stick; and a bad memory. Even if a naturalistic account of disease succeeds in labelling all of these dysfunctions, how can it put these conditions on *one* scale of more or less healthy? It can’t. All we can do, Hausman argues – and I agree – is to rank the (dis)value of these states to us, or rather the value of their impact on us. And that is what health-measurements do. But, Hausman argues, what *can* be ranked objectively is the functional efficiency of one particular trait: we can just focus on – say – urinating or walking efficiency, and rank, without appeal to values, whether one’s urinating ability or walking ability is more or less functionally efficient.

Or so Hausman claims. But that is incorrect; the ranking of even one type of functional efficiency is fatally undermined by the problem of situation-specific function. By way of illustration, attempt to provide an objective *ranking* of functional urination efficiency in the following urinary tracts, some of which are less able to urinate than in what we might think of as the ‘ideal urination scenario’:

1. A urinary system having an ordinary erection/ejaculation.

2. A urinary system having the after-effects of an erection.

3. A urinary system whose owner has not taken off his penis-ring.

4. A urinary system with benign prostate hyperplasia.

5. A urinary system following Viagra overdose.

6. A urinary system recovering from general anaesthesia.

7. A urinary system mid-birth, with the urethra compressed by the fetal head.

8. A urinary system that suffers stress incontinence during pregnancy.

9. A urinary system that suffers stress incontinence in middle age due to previous pregnancies.

10. A urinary system with a catheter in it.

11. A urinary system simply urinating.

How would one provide a simple ranking of functional urination efficiency in these urinary tracts? And how would one do so in a way that does not suffer the problem of situation-specific disease? Here is how one might start. One might naively attempt to rank the urinating functional efficiency from ‘best’ – i.e. most urine flow – to worst – i.e. no urine flow. Indeed this is what Hausman (2012) may suggest we do when he discusses ‘maximal functional efficiency’. But this proposal leads to unacceptable results. Although we would rank 11 (normal urination) on top, there is quite a lot of urine flow in 8 & 9 (stress incontinence) too. There is also more flow in 4. (benign prostate hypertrophy) than in 1 & 2 (erection, ejaculation and its after affects). But surely we don’t think that people – or their urinary system – with stress incontinence or benign prostate hyperplasia are healthier, or more functionally efficient, then people who have a perfectly ordinary erection/ejaculation?

The obvious response is to realise that the function of the urinary tract is multiple; to void urine under some circumstances – e.g. when one needs and wants to urinate – and to NOT void it under other circumstances, e.g. when one is having an erection or is both heavily pregnant and laughing. But that means we collapse straight back into the problem of situation-specific disease. For if we focus on what is statistically typical or even maximally efficient – i.e. the best the organism can physiologically manage – for particular circumstances or requirements, then 3. (penis ring); 5. (Viagra overdose) and 6. (recovering from general anaesthesia) are all entirely normal in terms of functional efficiency.

Retreating to a ranking of functional efficiency therefore cannot avoid the problem of situation-specific disease; it, too, is impaled on the horns of the following dilemma. Either it must not take account of situation-specificity, which means we arrive at wholly problematic ranking (that completely reverses depending on whether we focus on the functional efficiency ‘urinating’ or ‘holding up urine’); or we take into account situation-specificity in which case the problem of situation-specific disease must be faced head-on.

To summarise, the naturalistic accounts of health considered in this paper – both the one defended by Boorse and any of its modifications proposed by Hausman –cannot avoid the problem of situation-specific disease. This means that Hausman’s naturalist defence of a naturalist account of health and disease fails. Nor can Hausman maintain the claim that at least *functional efficiency* can be ranked in an objective manner. For functional efficiency is subject to at least some of the same problems[[18]](#footnote-18) as statistically normal functioning, and the relationship ‘more functionally efficient than’ is still subject to some of those problems, including situation-specific disease, as the ranking ‘healthier than’.

What are the implications of this?

**3. Implications**

If, as I argue here, a value-free account of health and disease cannot be provided, then this is of general interest to those, like Daniels (1985) who wish to appeal to such an account to do helpful work in the domain of public health ethics. A naturalist account is usually thought to be helpful in these domains because it is expected to provide an objective basis, that we can hence all agree on, to what would otherwise be controversial questions. These include questions about the scope of a (public) health care system, including placing a limit on ‘medicalization’; attitudes towards ‘treatment’ as opposed to ‘enhancement’ interventions; or the justification of public health measures. If we cannot appeal to a naturalist distinction between health and diseased then, it is feared, the very deep and frequently unresolvable social disagreements about values that an appeal to health and disease was meant to avoid, may have to be resolved. For example, we might have to agree directly on questions about entitlements to public assistance and public compassion, instead of being able to agree that people in ill-health definitely do, and then letting the distinction between health and disease do the further work for us.[[19]](#footnote-19)

In the remainder of this section I will focus on the specific implications for Hausman’s (2015) remarks on the ranking of health states and public value of health. The former is largely unaffected, but the latter is not. For, as an example of the above, Hausman wishes to rely on a distinction between health and disease to specify the *scope* of health care.

*Implications for the Measurement of Health-States*

One might think that Hausman’s (2015) remarks on the measurement of health are not meaningfully affected by the arguments in this paper. Hausman’s main claim is that when we measure health-states, we always rank the *value* of health states, or the value of the *impact* that these states have on us; we can’t meaningfully or objectively rank health-states themselves. But, if he is right and we are already in the business of ranking values, then should we care that we can’t give a value-free account either of the (rough) distinction between health and disease, or, as I have argued, of the ranking of functional efficiency in one domain of functioning?

Indeed, I do not think that Hausman’s claim is affected by my critical remarks. If one wants to get the details right, then it is important to note that functional efficiencies cannot be ranked objectively in one domain. My arguments are also relevant if one considers *what* are the health-relevant states that should be included on such measurements; presumably we want them to compare broken legs, paraplegia and mental disorder; but not poverty, miserably marriages or bad weather. But these are not details that affect Hausman’s overall important claim that health-measurements measure value; not health.

*Implications for the Public Value of Health*

Hausman’s remarks on the public value of health, by contrast, are not unaffected.

This is because Hausman, like so many others, relies on the distinction between health and disease to delineate *scope* when discussing the public value of health.

Hausman distinguishes between the *public* and *private* value of health. The private value of (one’s) health consists in its effect on one’s wellbeing, life-projects, and so on. The public value of health, by contrast, is twofold. First, health matters to the state because departures from health frequently limit our normal range of opportunities. Because equality of opportunity is very important for the liberal state, and the facilitation of a wide range of opportunities one of its core tasks, the tendency of departures from health to limit opportunities makes health an area of particular public interest.[[20]](#footnote-20) Second, health matters to the compassionate state because a departure from it frequently makes us suffer severely.

It is at this point that Hausman proceeds to rely on the distinction between health and disease. For although he thinks the liberal state should care about *all* suffering, public health policy should have a focus which “[narrows] what counts as a health state and [distinguishes] health-related suffering and activity limitations from other sorts of activity limitations”. Hausman thus relies on a distinction between health and disease for two, familiar, purposes. First, to delineate what count as health state (scope), and second, to distinguish health-related suffering from other suffering.

*Scope*

Restricting the *scope* of medicine or – in Hausman’s case – health policy, is the task of figuring out why depression and broken legs, but not bad marriages or irritating colleagues, are the condition that medicine appropriately focuses on. This question is often answered by claiming the former are departures from health; the latter are not (or at least they are not until they make you depressed or cause some other stress-related disease). Indeed the delineation of the scope of medicine is a frequently cited reason *why* people are interested in defining health and disease in the first place.[[21]](#footnote-21)

Since Hausman relies on health and disease to determine the scope of health policy, and thereby ‘the public value of health’, he is affected by the problems raised in this paper: he cannot rely on a *value-free* distinction between health and disease. That does not mean that he cannot employ the distinction between health and disease altogether. It only means, *pace* the arguments in this paper, that the account he has provided of this distinction does not withstand scrutiny, and that we cannot assume that the distinction is value-free. The latter, specifically, may mean having to tackle some difficult moral questions in the process of demarcating health and disease, which may even include some of the very questions that Hausman believes the distinction between health and disease would answer for him – such as which kinds of suffering and activity limitations the state should particularly concerned with.

But one might think that Hausman can in fact avoid a reliance on the distinction between health and disease. For example, he might instead attempt to rely on a ranking of the values of functional efficiencies, where only the ones that we strongly disvalue count as health states. I don’t think Hausman would be tempted by that move, however – and in either case it does not work. As he himself notes, all sorts of dislikeable states, such as being stuck in a bad marriage, can be just as miserable as, or indeed far more miserable than, diseases. This move does therefore not successfully pick out something that is recognisable as a distinction between health and disease. Yet Hausman wants to be able to pick out diseases precisely because of his claim that the liberal state is not primarily concerned with the private value of health, or the personal evaluation of one’s health state, or well-being; it is concerned with the public value of health instead.

One might also think Hausman could avoid relying on a distinction between health and disease by simply ranking that which the liberal state does care about in Hausman’s view: the degree of limitations on a (valuable) opportunity range. But once again, this does not avoid the scope worry. For Hausman is very clear in his statement that he wants to distinguish between “health-related activity limitations [and] other sorts of […] activity limitations” (Hausman, 2015: 165).

Finally one might think that the distinction is not actually substantially meaningful for Hausman. One might argue that the only reason that health policy should restrict its concern to departures from health – and focus on public health and medical procedures – is pragmatic: it allows us to usefully divide up the state’s activity in relevant areas of expertise. But whilst it is no doubt true that the state has to carve up its activity in pragmatically manageable chunks – such as ‘housing’; ‘education’; and ‘health’ – that cannot plausibly be the full answer. As Hausman notes so well, when the liberal state is interested in limitations of our opportunity ranges it is *not* equally concerned with all limitations. It is, for example, interested in the difference between a limited opportunity range due to having no legs, versus one due to merely being lazy or unmotivated; and in the difference between being merely socially incompetent or having a mental disorder. And these are exactly the sorts of distinctions for which people rely on the distinction between health and disease.

The distinction between health and disease therefore matters the moment one wants to limit the scope of concern – whether it is suffering or activity/opportunity-limitation – and consider that scope relevant for further action. Hausman does both and therefore questions about the distinction between health and disease, both how it should be drawn and whether it is value-free, remains important to his claims.

*Suffering*

A similar argument applies to Hausman’s remarks on suffering. Here, Hausman is adamant that “all suffering matters”, but he also wants to maintain that “not all suffering matters to the public value of health” (2015:165). Again Hausman is limiting the kinds of things that are relevantly of interest to the state, this time by distinguishing between suffering that is *part of* a condition – such as the pain involved in having a broken leg – and the suffering that is due *to* a condition – such as the misery due to your broken leg’s causing you to miss your sister’s wedding in Australia. How is such a distinction to be interpreted? We can predict how that may be attempted: by appeal to health and disease.

Take, for example, sadness. If you are depressed, the thought presumably goes, your existential suffering is part of the condition. But if you are sad because you lost your job; have a disease that prevents you from working; or suffered a personal loss, your existential suffering is not relevant to the public value of health (although the compassionate state maybe still ought to care about it in other ways). Similarly, if we consider anxiety due to PTSD, which Hausman presumably would treat as *part of* the condition, versus anxiety due to sitting challenging exams; losing your job; or facing a generally stressful set of life prospects, then it seems that once again a lot of the work being done for sorting out what we should care about in terms of the public value of health, is done by some general judgment of what conditions come up for evaluation as departures from health.

Once again mere ranking of the value or impact of functional efficiency is not going to be helpful here; all these anxieties can have deeply disvalued impacts and they can all limit your opportunity range. So this is another place in Hausman’s account of the public value of health where limits on scope – focussing only on health – does substantial work. And that not only means that Hausman’s account of the public value of health is affected by the criticisms raised in this paper; the conditions under consideration are also precisely those for whom the problems raised are particularly relevant: all of these conditions: PTSD – exam-anxiety, or job-loss anxiety – are not only somewhat controversial, but will come out as statistically typical under certain life circumstances.

Once again, then, Hausman relies on a key distinction – the distinction between sadness that is itself pathological, such as depression, and sadness that is not itself pathological but a reasonable response either to a pathology or to a non-pathology – that directly relies on some ideas about the distinction between health and disease. Hausman’s claims are therefore not immune to the concerns raised for accounts of health and disease.

*Conclusion*

The modifications Hausman (2012, 2015) proposes to Boorse’s naturalist account of health and disease cannot escape the ‘situation-specific disease’ objection first articulated by Kingma (2010). Nor is a ranking of functional efficiencies immune to this objection. This means that Hausman cannot rely on a value-free distinction between health and disease.

These points do *not* affect Hausman’s remarks that health measurements can only rank the value of health, but not health itself. But they do affect his account of the public value of health, because, in offering this account, Hausman relies on a distinction between health and disease to restrict the scope of health policy. Whilst the arguments in this paper don’t undermine the use of such a distinction, they do undermine a claim that Hausman adheres to: that the distinction thus relied upon is value-free.

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1. Note that *disease* here has an usual meaning; it indicates any departure from health including conditions – such as broken legs – that we recognize as a departure from health, but that we ordinarily would not call a disease. This broad usage of the term disease is common in the literature (see e.g. Boorse, 1977, 1997; Cooper, 2002; Wakefield (1992) who uses ‘disorder’ for the same.) [↑](#footnote-ref-1)
2. See e.g. Daniels (1985). [↑](#footnote-ref-2)
3. Other main defenders of naturalism are Ananth (2008), Boorse (1977, 1997), Garson & Piccinini (2014), Kass (1975), Kendell (1975), Scadding (1988, 1990), Schramme (2007) & Szasz (1960). [↑](#footnote-ref-3)
4. Most naturalists, including Boorse, distinguish a theoretical and practical concept of health and disease. The theoretical concepts are value-free, but any practical application is filtered through social value. For example, voluntary temporary or permanent infertility due to hormonal contraceptives or a vasectomy might theoretically be a biological malfunction/disease; but they are not on a practical application of this concept. [↑](#footnote-ref-4)
5. Prominent defenders of normativism include Agich (1983), Clouser, Culver & Gert (1981), Cooper (2002), Engelhardt (1976), Fulford (1989), Goossens (1980), Hare (1986), Margolis (1976), Kopelman (1975), Nordenfelt (1987, 2001, 2007a, 2007b), Reznek (1987) & Whitbeck (1978). [↑](#footnote-ref-5)
6. Wakefield (1992, 1995) offers an account in terms of *harmful* dysfunction*.* [↑](#footnote-ref-6)
7. There are in fact multiple ways of characterizing naturalism (Kingma, 2014). If naturalism is *merely* the claim that health is normal biological functioning, then naturalists need not defend value-freedom, and the arguments discussed in this paper are all arguments within naturalism: about how to specify normal biological functioning. But many naturalists, including Boorse and Hausman, specifically commit to the further claim that their accounts of health and disease are *value-free.* Indeed they consider this the main virtue of naturalism. For this reason this paper adopts an understanding of naturalism that entails a commitment to both claims. I thank an anonymous reviewer for pressing me on this distinction. [↑](#footnote-ref-7)
8. Neander (1991, 1995); Wakefield (1992, 1995). See Murphy & Woolfolk (2000a, 2000b) and Kingma (2013) for a critique. [↑](#footnote-ref-8)
9. Cummins (1975); Boorse (1976, 2002). [↑](#footnote-ref-9)
10. This is necessary to prevent reflux of urine into the seminal vessels. [↑](#footnote-ref-10)
11. In the interest of expediency, this is a simplification. Boorse (2014: 684) provides the following, updated definition of his (1977) account: “1. the *reference class* is a natural class of organisms of uniform functional design; specifically, an age group of a sex of a species. 2. A *normal function* of a part or process within members of the reference class is a statistically typical contribution by it to their individual survival [or] reproduction. 3. *Health* in a member of the reference class is *normal functional ability*: the readiness of each internal part to perform all its normal functions on typical occasions with at least typical efficiency. 4. A *disease* [later, *pathological condition*] is a type of internal state which impairs health, *i.e.*, reduces one or more functional abilities below typical efficiency”. Kingma’s original (2010, 2016) arguments engage this more detailed version. [↑](#footnote-ref-11)
12. Boorse (2014) clarifies that his account should indeed have been interpreted along the dynamic and situation-specific lines that Kingma (2010) sketches out. (“Kingma is right (2010, 249) that the BST uses dispositions to function, situation-specificity of function, and quantitative as well as qualitative normality. I was explicit about all three elements, though she adds useful terminology” (Boorse, 2014: 685). This means, if Kingma’s (2010) subsequent set-up of the dilemma is correct, that Boorse is probably impaled on the second, rather than the first, horn of the dilemma. [↑](#footnote-ref-12)
13. Hausman’s ‘benchmark environments response’ is a modification of the ‘typical environment’ response initially offered by Boorse (1997) and countered by Kingma (2010, 2016). In this paper I focus on Hausman’s (2011, 2012) version, but see Boorse (2014: 705-707) for alternative ways of developing the response. [↑](#footnote-ref-13)
14. See Millikan (1993) and Melander (1997) for objections to Boorse couched in a similar worry: many biological entities have a ‘proper’ function that is statistically rare because most tokens of that entity will never perform it. Think not just of sperm but also seeds, fruits, tadpoles, and so on. Most of these die or wither away without contributing to survival and/or reproduction at all. Boorse (2002: 92) responds that this is not a problem as long as the rare function is the *only* function performed by these items. His response is under threat by my remarks on sperm on the next page. [↑](#footnote-ref-14)
15. See Kingma (2014) for a more detailed version of this argument. [↑](#footnote-ref-15)
16. See also Kingma (2013). [↑](#footnote-ref-16)
17. Schroeder (2013) is to be credited with focusing our attention on the ‘healthier than’ relation. [↑](#footnote-ref-17)
18. Though it may avoid some too – such as the problem that health and pathology cannot be distinguished by frequency (Schwartz 2007). [↑](#footnote-ref-18)
19. Though in (REDACTED) I argue that a partially value-laden account can in fact play a useful role here, and may even be *more* capable of underpinning social policy than a naturalist account. [↑](#footnote-ref-19)
20. Daniels (1985) makes a similar argument. [↑](#footnote-ref-20)
21. See e.g. Cooper (2002); Cooper & Megone (2007). [↑](#footnote-ref-21)