

## ON ELSELIJN KINGMA'S *WHAT IS IT TO BE HEALTHY?*

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### A NOTE ON BEING HEALTHY

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In a recent issue of *Analysis*, Elselijn Kingma [2007] made an interesting attempt to undermine Christopher Boorse's Biostatistical Theory (BST) of health (Boorse [1977], [1997]). According to Kingma's paraphrase of Boorse's theory, 'health is normal species functioning, which is the *statistically typical* contribution of all the organism's parts and processes to the organism's overall goals of survival and reproduction' (Kingma [2007] p. 128). A group with respect to which the contribution in question is statistically typical is dubbed the *reference class*. BST then specifies the following relevant reference classes: age, sex and race (Boorse [1977] p. 555). This is the crucial point of Boorse's account, since introducing 'wrong' reference classes (e.g., those comprising heavy drinkers and diabetics) or dispensing with them altogether (i.e., assuming that healthy functions are statistically typical species-wide *simpliciter*), would produce very counterintuitive results, not at all consonant with the present-day conception of medicine.

The heart of Kingma's critique concerns the alleged inadequacy of the way in which Boorse defines appropriate reference classes: that is, as natural classes of organisms of uniform functional design (*ibidem*, p. 562). She discusses all three pivotal elements of the above definition (natural, uniform and design), before concluding that none of them succeeds in demarcating healthy from diseased features. Hence, the argument goes, contrary to the claims of Boorse, BST cannot be a value-free account of health, since counting only his preferred reference classes as appropriate is a value-laden choice.

I wish to argue that it might be possible to restore BST's value-free character by changing the definition of an appropriate reference class. Let us define it as a natural class of organisms sharing features whose contribution to their overall prospects for survival and/or reproduction<sup>1</sup> is non-negative, where prospects for

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<sup>1</sup> I take it that the concepts of survival and reproduction are fully objective and value-free, survival meaning continued existence or life and reproduction meaning the biological process whereby new individual organisms come into being.

survival and/or reproduction are to be understood as statistically typical for the entire species.

Now, let us describe each key aspect of the above proposal in more detail.

The 'natural' element is important so that we can exclude reference classes comprising, e.g., Gulag slaves or the kamikaze – even though their prospects for survival are clearly decreased, this is only indirectly associated with medical reasons, as opposed to being directly associated with man-made, extra-medical institutions. 'Non-negativity' is to be understood as a counterfactual assessment of whether the presence of any given feature would not decrease its bearer's prospects for survival and/or reproduction, or, conversely, whether its absence would not increase them (some of the examples mentioned by Kingma, such as heavy drinking, Down's syndrome and sickle-cell anaemia clearly fail this criterion). Finally, the insistence on defining prospects for survival and reproduction on a species-relative statistical basis is to ensure that, e.g., a person with average life expectancy and a moderately effective immunological system is not considered diseased in comparison with a person with an exceptionally long life expectancy and an unusually powerful immunological system. This caveat, coupled with the non-negativity criterion, additionally ensures that only those below the statistical average, and not those above it, count as diseased.

Let us now see how such a modified BST (M-BST) handles the reference classes suggested by Boorse, as well as various counterexamples mentioned by Kingma. Sex, age and race are natural and neutral with regard to one's prospects for survival and reproduction, so they meet all the qualifying criteria. One could protest by saying that there exist racial persecutions, and that elderly people have smaller survival and reproductive capacity than younger people, so neither race nor age meets the non-negativity criterion. But such objections are off the mark. Racial persecution is an extra-medical phenomenon, tied to man-made evaluations and conventions, and age per se is not a source of disease – a 50-year-old can be healthier than a 30-year-old, and we should carefully distinguish the (correct) observation that old age is usually associated with the weakening of the organism from the (mistaken) conclusion that the mere passage of time is a cause of weakness, and that the older the organism, the weaker it must be.

Conversely, Kingma's examples of heavy drinking, diabetes, Down's syndrome, Huntington's disease, sickle-cell anaemia, short-sightedness and homosexuality all fail the non-negativity criterion, provided that we apply it on a species-wide scale. In other words, even though a heavy drinker's prospects for survival are not worse than those of other heavy drinkers, they are, *ceteris paribus*,

worse than those of the non-heavy-drinking majority of humankind. The same goes, e.g., for a homosexual's prospects for reproduction.

Thus, since both naturalness and non-negativity (as checked against the species-wide statistical yardstick) of any given characteristic can be established solely on the basis of empirical facts (those pertaining to the survival and/or reproduction prospects of a given class of organisms), M-BST allows for fixing appropriate reference classes in a value-free way. This, in turn, paves the way for a fully value-free account of health.

## References

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- Kingma [2007] – E. Kingman, *What is it to be healthy?*, „Analysis” (67) 2007, p. 128–133.