Author's response to reviews

Title: Disease proportions attributable to environment: a gloss on two recent papers

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Author's response to reviews: see over
Dear Philippe,

please find enclosed the revised version of our commentary paper on proportions of diseases attributable to environmental exposures. We reply in the following to each comment formulated by the four referees:

1. referee no.1. His remarks emphasize some key points we present in our commentary. He appears to have more reservations than ourselves on the value of estimating population attributable proportions and expresses some regret that we have not gone farther in this direction by digging deeper in the methodological and basic philosophical aspects dealing with “causation”.

To retain some of the flair of his remarks: (a) we have modified the title of our commentary (to read “Disease proportions attributable to environment: a gloss on two recent papers”) to stress from the outset that this is not a full-fledged methodological paper or chapter but a commentary; (b) in the Introduction: we have added “even when a causal link is well established between an exposure and an effect (both accurately defined....) to stress the difference between exposure and cause, a concern to the reviewer; for the same reason we have reiterated in the same way the distinction in the “Abstract” and in the “Conclusion” sections. Having done this and being however aware that “exposure macro-variables” like the global climatic change can pose special problems in the ascertainment of causality we have inserted a “caveat” towards the end of the “Conclusion” section (“causality criteria for etc.”)

Concerning the remark on effects due simultaneously to multiple interacting causal factors we think we have clearly addressed it, within the space limits of a commentary, in the last paragraph of the section “Methodological issues”

2. referee no.2. No remarks.

3. referee no.3. She asks for clarification about our calculations: we have done this in the sentence in brackets in lines 11 and ff. of the second paragraph of section “Comparing like with like”. To take care of her remark that it would be interesting to put attributable fractions in a policy perspective we have added in the section “Which environment?” lines 6 and ff. the sentence “In a health policy context the choice may reflect not only scientific considerations but also, or even more, the priority placed on different preventive perspectives and approaches”. To take care of her remark that attributable proportions do not tell anything about present preventability but they may assist in directing efforts to find new preventive tools (which may thus change preventability in future) we have added a sentence in the “Conclusion”, last paragraph: “This impact represents only one element in deciding where to concentrate public health actions and/or research on preventive tools”.

4. referee no.4. We realized from the outset that the section “Comparing like with like” takes a substantial proportion of the text. Shortening it would however demand not to explain in detail the elementary but not so obvious calculations we have made to show that the alleged overestimation of the proportion of cancers due to environment by Prüss-Üstün and Corvalan is based on a misreading of the cited sources by Boffetta et
al. We think that the detailed explanation is essential, lest our critique of the Boffetta et al. paper is voided of much substance.

To take into account the suggestion that a full paragraph should be devoted to potential biases leading to underestimation of risk we have modified the second paragraph of the section “Methodological issues” creating a new paragraph (third paragraph in the present version of the section) which describes a previously mentioned as well as a new source of underestimation bias.

The English has been revised at several places.

We hope this revised version is acceptable for publication. With best regards

Rodolfo Saracci
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