The need for a conceptual understanding of the macro and meso commercial determinants of health inequalities

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We welcome the comments from Diderichsen et al on our review in which they helpfully argue that thinking about commercial determinants of health (CDOH) should be expanded beyond its current focus of attention. They are right to point to the role of the commercial influences in other sectors, and their examples of education and social care are well chosen. We certainly agree the interaction between commercial and political driving forces is critical and needs to be made more visible. This is something we and others have called for (1), and something a recent review on the definitions of CDOH identified as an important element of a broader definition (2).

We take the opportunity here to expand on why we think this greater visibility is crucial and overdue. In particular, we want to describe how a particular focus on harmful product manufacturers, as a subsection within commercial actors, is worthy of inclusion as a meso-level influence (3). This is an area in which clear policy lever points, evidence, and public opinion combine, and has the potential for significant public health benefits. There are implications for decision-making on participation in public private partnerships, in policy deliberations, in research collaborations, and in communicating directly to the public on health harms. This is not to diminish from the need to address longer term, cumulative effects such as privatisation, corporatization, and deregulation (which the authors note, and

on which we agree). Collectively, science should indeed bear witness to these forces, and thereby build understanding and capacity for action.

One key reason for considering both commercial determinants in general, and unhealthy commodity industries in particular, is that commercial actors with a clear conflict of interest in population health actively seek to exploit ambiguities arising both from their invisibility as problem producers, and the lack of presence of commercial determinants in existing social determinants of health (SDOH) models. This exploitation started early on in the discussion of SDOH. Internal tobacco industry documents show that the industry used the evidence on social influences on lung cancer to help deny the evidence that smoking is the single most important independent risk factor for this condition (4). This is known as the 'alternate causation' tactic.

It is still in use across other industries. In alcohol industry narratives for example, health differentials by socioeconomic status are frequently used to emphasise how complex the association is between alcohol and health; so complex, in fact, that it is difficult to confidently attribute health harms to alcohol. This statement from the Portman Group (an alcohol industry corporate social responsibility body) was issued in response to the publication of Public Health England Statistics in 2016 showing a significant increase in UK alcohol-related hospital admissions, with the highest number of admissions due to cardiovascular disease. Here, the Chair of the Portman Group used such arguments to dispute whether one can really attribute hospital admissions to the role of alcohol in the aetiology of cardiovascular disease (CVD):

> *"The picture is far more complex and more encouraging than the headlines suggest…CVD is a complex condition and related to a variety of risk factors beyond lifestyle including hypertension, obesity, diabetes, ethnicity and family history. The PHE figures also tell us that those over 65 in the lowest socio-economic decile are 35% more likely to be admitted for an alcohol-related condition, than those in the highest. These insights highlight the significant challenges in diagnosing ill-health among an ageing population, and the complex interaction between lifestyle, inequality and getting older."*(5)

Similarly, this next example from the International Alliance for Responsible Drinking, regarding alcohol and cancer, explicitly draws on SDOH:

> *"Social determinants are a key potential confounder when it comes to assessing the impact of drinking on cancer risk, and pose a particular challenge when addressing those living in poverty and marginalized populations."*(6)

Yet we know that alcohol consumption is an independent risk factor for cancer, with increasing risk at higher levels. We also know that a significant proportion of revenue from alcohol is accrued from heavier drinking (7), and that alcohol harms fall disproportionately on those with less resources, the so-called alcohol harm paradox (8), Internal industry documents have revealed how the alcohol industry explicitly targets advertising with the goals of increasing that consumption further to "*the heavy drinking loyalists of tomorrow*", keen to replace those who are "*dying off, whiskey tumbler in hand*" (9). The similarities with what is known about tobacco companies are again striking.

Very many other examples from other industries could be given here, but our key point is that the absence of these actors from SDOH models and in the papers that present them, unfortunately facilitates the denial of their role as powerful, motivated entities that exacerbate inequalities through seeking to increase or maintain harmful consumption patterns in vulnerable groups. It also allows them to deflect policymakers away from effective policies which would restrict their actions, placing responsibility instead on the state and on existing inequalities, even as business models exacerbate the health harms further, making the problems seem more intractable. This tactic is also manifest in the argument made by many harmful industries that any attempts to restrict the sales of harmful commodities are 'regressive' and harm the poorest the most (10).

It is likely that empowering individuals and communities to facilitate health improvement will require a concomitant management of the direct and proximal influences of such conflicted entities, as well as of their indirect influences. It seems hard to imagine a viable framework for addressing climate change, for example, that does not directly incorporate, and offer guidance on the influence of the fossil fuel industry.

Similarly, SDOH models which do not explicitly include major commercial influences can otherwise be misused, because they suffer from an important omission bias. We argue that the absence of explicit and appropriately prominent inclusion of CDOH in such models may inadvertently provide a form of epistemic "cover" for harmful product industries, weakening consideration of key intervention points in reducing health inequalities.

It is both important to acknowledge the macro-level effects of corporate power more widely, and also identify more meso-level examples of acute harm, perpetuated by specific industry

sectors, for which evidence, policy options and public opinion coalesce. Such a macro/meso combination is indeed the next step in the nascent field of the commercial determinants of health (3). We agree that how this may be done, and how to best include political influences and their intersections with commercial actors in such frameworks, with examples that help inform possible approaches, is certainly a matter for wider discussion, as Diderichsen et al clearly show.

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