

# Changing the world? Reflections on the interface between social science, epidemiology and public health

Clare Bamba

Exciting intellectual discoveries often happen on the boundaries between academic disciplines. Historically, the interface between epidemiology and social science has clearly been one of the most fruitful as it has enabled the “fusion of data with ideas”:<sup>1</sup> epidemiology has developed and refined sophisticated methods of data collection, while the diverse and fluid social sciences have offered multiple theories through which such data can be interpreted and applied. Combining epidemiological methods with social science theories has thus unleashed the potential to both describe and explain the nature of population health. The subdiscipline of social epidemiology (the study of the social distribution and social determinants of health) is probably the most prominent outcome of the interface. The combination of social science theories and epidemiological methods has resulted in a strong and widely accepted view that the most important determinants of inequalities in health are social, economic and political,<sup>2-4</sup> and that the solutions to health inequality also lie in the social, political and economic fields. This has inevitably resulted in the promotion of upstream policy interventions as the best way of improving population health and reducing health inequalities.<sup>5</sup> The interaction with social science has thereby enabled epidemiology to move beyond the proximate and embrace the study of the more macro determinants of health and disease.<sup>6</sup>

On the social science side, the increased interaction with epidemiology has largely resulted in a quantitative turn, perhaps epitomised by the emergence of the evidence-based policy movement, in which the “robust” medical model of evidence was integrated into social science enquiry.<sup>7</sup> However, although there have

been clear positive outcomes of this process in terms of how social scientists examine the social world and underpin (and test) their theories, it has not been without cost. Along with the methodological tools has come the engrained caution and purism of epidemiology. This has altered how social scientists promote their ideas, as any statement on how to tackle health inequalities or improve public health must now be underpinned by evidence or it is considered merely worthless rhetoric.

On the surface, the importance of using research evidence to underpin policy is difficult to argue with. However, the problem is that the conceptualisation of evidence is very restrictive and refers almost exclusively to experimental evidence. This self-imposed focus on the experimental and the “ideal type” of evidence has placed huge, and damaging, limitations on what it is possible to say about “what works” in terms of reducing health inequalities or improving population health. Experimental evaluations of interventions have tended to examine the effectiveness of downstream, largely pharmaceutical, medical or other individual-level interventions.<sup>8</sup> It is therefore possible to make evidence-based statements about, for example, the effects of smoking cessation services or beta-blockers on health inequalities, as there is (experimental) evidence available. In contrast, as there is a dearth of experimental evidence relating to the social determinants of health, it follows that there is very little that can be said about how more upstream interventions affect health or inequalities in health.<sup>9</sup> This so-called “evidence gap”, and the inevitable wait for experimental studies to fill it, has enabled and legitimised an excessive amount of sitting on the fence by both epidemiologists and social scientists with regard to what can be done—now—in terms of reducing health inequalities by addressing their social determinants.

This is despite the fact that there is a wealth of non-experimental evidence on the effects of interventions, as well as observational studies that, by highlighting associations, say, between social inequality and excess morbidity and mortality, implicitly suggest possible interventions, most notably income redistribution.<sup>10</sup> We are therefore in danger of throwing out the baby with the bathwater, as making recommendations for policy based on non-experimental study designs (never mind the qualitative research favoured by many social scientists) is beyond the pale for the majority of epidemiologists and, unfortunately, this now also seems to be the case for those social scientists who examine health. The “public intellectual” has been replaced by a new breed of evidence-ologists who fetishise data and are unprepared to talk beyond them.<sup>11</sup> We should use our academic freedom to agitate more clearly and less self-consciously for action on the wider determinants of health: the purpose of research is not just to describe the world but to change it. The radical public health reformers of the past (who campaigned for sanitation, free healthcare and the welfare state) did not *wait* for experimental evidence, they *acted*—on the basis that such macro-level universal interventions improved overall health, while being of most benefit to the poorest in society.

The next stage in the interface between social science and epidemiology (or in the struggle between ideas and data) is therefore to be less cautious and self-censoring, more open to the methods and approaches of the social sciences, more responsive to the urgency of the issues and, ultimately, to reaffirm the radical role of public health. Those working across both disciplines (myself included) need to be more pragmatic and more prepared to extrapolate findings and take intuitive leaps in terms of advancing action on health inequalities: in short, we must be prepared to stick our necks out and make clear statements about positive findings.<sup>12</sup> There is also a need to be less politically naïve when it comes to the policy process: it is not a simple case of evidence in and then policy out.<sup>13</sup> There is therefore a need to engage with (and, where necessary, challenge) the ideas and discourses at play in politics, policy and the public health community, and to link up with campaign groups in civil society.

An ideological vacuum is emerging in the wake of the current crisis of capitalism, and so it may well be an appropriate

**Correspondence to:** Dr C Bamba, Department of Geography, Wolfson Research Institute, Queen's Campus, Durham University, Stockton on Tees TS17 6BH, UK; [clare.bamba@durham.ac.uk](mailto:clare.bamba@durham.ac.uk)

moment to reassert the upstream social determinants agenda. Clearly, the World Health Organization (WHO) Commission on the Social Determinants of Health and the subsequent in-depth single-country reviews that have been commissioned in countries such as the UK are a timely opportunity to do this, and the political rhetoric surrounding them is promising.<sup>14</sup> There are clear signs that a more inclusive approach to the evidence base will be taken in these reviews and that therefore the recommendations will be broader.<sup>15</sup> However, it will be interesting to see to what extent the “evidence-based” recommendations of the 2010 Marmot reviews will differ from the “non-evidence-based” recommendations of the 1980 Black report.<sup>16</sup>

**Competing interests:** None.

**Provenance and peer review:** Commissioned; not externally peer reviewed.

Accepted 24 April 2009

*J Epidemiol Community Health* 2009;**63**:867–868.  
doi:10.1136/jech.2009.087221

## REFERENCES

1. **Blane D.** Personal communication, Gent, March 2009.
2. **Acheson D (chair).** *Independent inquiry into inequalities in health* (the Acheson report). London: HMSO, 1998.
3. **Health Select Committee.** *Health inequalities. third report of session 2008–09 HC286-I*. London: Stationery Office, 2009.
4. **Commission on Social Determinants of Health.** *Closing the gap in a generation: health equity through action on the social determinants of health*. Geneva: World Health Organization, 2008.
5. **Phelan J, Link B, Diez-Roux A, et al.** Fundamental causes of social inequalities in mortality: a test of theory. *J Health Soc Behav* 2004;**45**:265–85.
6. **McMichael AJ.** Prisoners of the proximate: loosening the constraints on epidemiology in an age of change. *Am J Epidemiol* 1999;**149**:887–97.
7. **Hansen H, Rieper O.** The evidence movement: the development and consequences of methodologies in review practices. *Evaluation* 2009;**15**:141–63.
8. **Stronks K, Mackenbach JP.** Evaluating the effects of policies and interventions to address inequalities in health: lessons from a Dutch program. *Eur J Public Health* 2006;**16**:346–53.
9. **Bambra C, Gibson M, Petticrew M, et al.** *Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews*. York: Public Health Research Consortium, 2008. <http://www.york.ac.uk/phrc/papers.htm> (accessed 18 March 2009).
10. **Wilkinson R.** *Unhealthy societies*. London: Routledge, 1996.
11. **Furedi F.** *Where have all the intellectuals gone? Confronting 21st century philistinism*. London: Continuum International Publishing, 2006.
12. **Barreto ML, Garcia AM, Bobak M, et al.** JECH: new editorial directions. *J Epidemiol Community Health* 2009;**61**:1–2.
13. **Kemm J.** The limitations of “evidence-based” public health. *J Eval Clin Pract* 2006;**12**:319–24.
14. **Needle C.** The relevance for Europe of the report of the commission on the social determinants of health. *Eur J Public Health* 2009;**19**:131–2.
15. **World Health Organization.** Measurement and evidence knowledge network. [http://www.who.int/social\\_determinants/resources/mekn\\_final\\_report\\_102007.pdf](http://www.who.int/social_determinants/resources/mekn_final_report_102007.pdf). 2008.
16. **Townsend P, Davidson N, eds.** *The Black report*. London: Pelican Books, 1982.