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McCartney, G. and Hanlon, P. and Romanes, F. (2008) Climate change and rising energy costs will change everything: A new mindset and action plan for 21st Century public health. *Public Health* 122(7):pp. 658-663.

<http://eprints.gla.ac.uk/4446/>

Deposited on: 17 June 2008

# Climate change and rising energy costs will change everything: A new mindset and action plan for 21st Century public health

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Received 5 March 2007; received in revised form 19 February 2008; accepted 28 March 2008

## KEYWORDS

Peak oil;  
Climate change;  
Economic growth;  
Obesity;  
Inequality;  
Well-being

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**Summary** Western governments currently prioritize economic growth and the pursuit of profit above alternative goals of sustainability, health and equality. Climate change and rising energy costs are challenging this consensus. The realization of the transformation required to meet these challenges has provoked denial and conflict, but could lead to a more positive response which leads to a health dividend; enhanced well-being, less overconsumption and greater equality. This paper argues that public health can make its best contribution by adopting a new mindset, discourse, methodology and set of tasks.

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## New and unsolved problems

The first two articles in this series have argued that public health professionals in the Western world face new challenges and unsolved problems from the 20th Century (Table 1). It has been argued that these problems arise as a consequence of the prioritization of economic growth as the central purpose of society. It is contended that climate

change and rising energy costs will lead to profound changes in industrialized economies. This will bring many threats but there is also the prospect of a health dividend (less obesity, greater well-being, less inequality) arising from successful change.

It is now argued that to realize this dividend and avoid the worst consequences of an unsustainable future, three stages of change are required: (i) a realistic but optimistic mindset; (ii) a new public health discourse; and (iii) the use of an appropriate methodology which will define a new set of public health tasks (Fig. 1).

The threats to health posed from climate change and peak oil can be considered as being of a

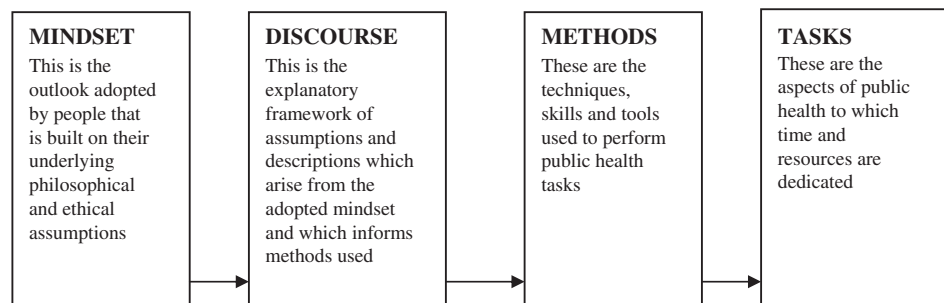
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**Table 1** Contemporary and future challenges to public health.

Future challenges and unsolved problems	Effects
Peak oil	Rising energy costs and a rapid, unplanned reversal of some aspects of globalization and consequent economic and social upheaval resulting from increasing scarcity of crude oil
Climate change	Changing weather patterns impacting directly on health and indirectly through effects on the global economy, worldwide migration and population displacement
Overconsumption/addictions	Increasing burden of disease due to obesity, alcohol and drugs
Increasing inequalities	Growing gaps between the best and worse off in society, both in terms of opportunities and outcomes such as life expectancy
Well-being	Static or falling levels of life satisfaction amongst the population



**Figure 1** The mindset, discourse and methods of public health.

different order to all contemporary challenges to health. Furthermore, the crisis point at which the impact of these changes will be virtually impossible to reverse is fast approaching. Therefore, the time for action is now, and the response must be sufficient to meet these challenges.

### Mindsets that drive actions

All societies are informed by a set of philosophical and ethical assumptions which create a mindset that, although powerful, is often neither acknowledged nor explicit. How the future unfolds will be determined by the mindset adopted by societies to the sustainability challenge. Three future scenarios are proposed below which can be envisaged depending upon the mindset adopted by society.

#### Scenario 1. Cornucopian and optimistic mindset

With adherence to this mindset, governments will continue with a philosophy that deems economic growth to be the first priority of society. There is cornucopian faith in the ability of science and

technology to solve the problems associated with rising energy costs and climate change, and for individual and community actions to deal with obesity, declining well-being and inequalities. Alternatively, this mindset may engender adaptation to, rather than confrontation of, these problems (e.g. wider airline seats). It is argued that this will result in climate change,<sup>1,2</sup> energy shortages and a reversal of globalization leading to an economic slump.<sup>3,4</sup> Societal systems will experience pressure as international migration accelerates, inequalities increase and the social environment is tested by economic disaster.<sup>5</sup> Population health will deteriorate through massive and lasting social and economic upheaval similar to that witnessed in the former Soviet Union during the 1990s.<sup>6</sup>

#### Scenario 2. Cornucopian and pessimistic mindset

This scenario is like the first except that, here, governments across the world are willing to intervene militarily outside their own borders to protect themselves from international migration,

energy shortages and the effects of climate change. In addition, they demonstrate willingness to use economic strength to defend their own interests (such as is the case with the Common Agricultural Policy).<sup>7</sup> In essence, there is a judgement that scarcity is ahead but no hope of a 'whole-world' solution. This approach is exemplified by the advocates of the 'Project for a New American Century'.<sup>8</sup> It is argued that this would not protect the home population effectively against worldwide economic problems, although some of the effects may be tempered. It provides no new opportunities to deal with rising inequalities, obesity or declining well-being. It may also generate international conflict, and cultural and ideological division.<sup>9,10</sup> Global population health would deteriorate even more significantly than in the first mindset. It is less clear whether governments that adopt these interventionist policies will even succeed in protecting their own populations because all economies are now so interdependent.

### Scenario 3. Realist and optimistic mindset

This mindset is based on a different set of values. It emphasizes the rights of all global citizens while seeking a sustainable solution to the current and future ecological challenges. It advocates an immediate change in approach consisting of a 90% cut in carbon dioxide emissions,<sup>11</sup> a rapid movement to independence from fossil fuels and a reprioritization of society towards well-being, health and equity instead of the priorities of economic growth and profit. This challenges two currently popular assumptions. First, that climate change cannot be averted, and second, that even if it can be averted, there is no point in any one country taking more radical action unless all agree to do so. It would reduce many of the problems of peak oil, but the impact of an international economic slump could not be avoided. Although economic growth, as traditionally measured, will suffer, other priorities such as inequalities, over-consumption and well-being may improve. The same spirit that inspired the British population to accept rationing during the Second World War could be harnessed to yield the health dividend.

Most of the leaders of the Western world would describe themselves as being part of the first mindset (cornucopian and optimistic), but there is abundant evidence from recent international military forays that displays a clear adherence to the second (cornucopian and pessimistic) mindset for a number of nations (including Russia, the USA and

the UK).<sup>12</sup> These nations are too optimistic about the scale of the threat and the capacity of science and technology to deal with its attendant problems.<sup>13</sup> For many, it is assumed that the market will provide the incentives for solutions not yet imagined, hence their optimism. However, it is argued that simply responding to current market signals will not engender a sufficient response, quickly enough, to avoid the coming crisis.

The current mindset of the UK and other countries does not rule out a change in the future. What might bring about change? Will it only occur reluctantly in response to a series of adverse events, or could increasing agency amongst the population deliver change before a crisis point is reached?

### Public health and its role in championing a new mindset

There is a long tradition within public health of championing economic and social change where there is clear potential impact on the health of the population. This can be traced from the demands for sanitation made by Edwin Chadwick,<sup>14</sup> through the physicians who used their influence to combat the use of nuclear weapons,<sup>15</sup> to studies of excess mortality associated with the latest Iraq war.<sup>16</sup> If there is a role for public health professionals in facing new, 21st Century challenges, it stems from a desire to prevent adverse health consequences resulting from adherence to cornucopian mindsets.

### Public health discourses and the need for a new synthesis

For public health to find its appropriate role, it must first examine its current discourses. By discourse, we mean a set of assumptions and descriptions which flow from philosophical mindsets and inform methods (Table 2).<sup>17</sup>

These discourses are, and will remain, useful for the analysis of how public health might approach a set of problems. Each will need to be applied to the new situation. However, the new discourse will need to achieve 'contraction and convergence'.<sup>18</sup> This is the phrase used to describe the process by which rich countries must reduce (contract) their carbon use to achieve sustainability, and the world moves towards a more equitable (convergent) level of consumption. Conventional economic growth must therefore cease to become the central purpose of the world's economies. To achieve this,

**Table 2** Current public health discourses relating to health inequalities (adapted from Carlisle, 2001).<sup>17</sup>

Discourse	Redistributionist discourse	Social integrationist discourse	Moral underclass discourse
Source of problem	Concentration of resources in higher socio-economic groups	Social polarization of socio-economic groups	Lower socio-economic groups
Explanatory level	Social structure	Interaction between individual and social structure	Individual experience and action
Causal mechanisms	Inequitable social distribution of resources	Relative inequality and social stress in disadvantaged groups	Narrow resource margins
Solution	Relieve poverty by redistributing resources	Reduce gap and increase social integration	Help poor people develop coping strategies
Action level	Socio-economic policy	Community	Individual

action will be required at the level of the globe, nation state, region, community and individual.

None of the three discourses in Table 2 will deliver contraction and convergence. The redistributionist discourse could deliver this but not if it involves a ‘levelling up’ of the entire population’s consumption to that of the wealthiest. Contraction and convergence will help the poor but the aggregate level of consumption (at least of material goods in Western countries) will decrease radically. We have yet to imagine what true equity will look like in this version of the future, although Timothy Garton Ash challenged his readers to do so:

*‘The genius of contemporary capitalism is not simply that it gives consumers what they want but that it makes them want what it has to give. It’s that core logic of ever-expanding desires that is unsustainable on a global scale. But are we prepared to abandon it? We may be happy to insulate our lofts, recycle our newspapers and cycle to work, but are we ready to settle for less so that others can have more? Am I? Are you?’<sup>19</sup>*

The social integrationist discourse expects too much of communities, while the moral underclass discourse places too large a burden on individuals. The redistributionist discourse places the emphasis on structural change to a degree that can be disempowering to communities and individuals. The new discourse needs to integrate action from the global to the individual.

## The need for new methods for public health

Most readers will be public health professionals. What differences will this change in mindset and discourse make to the methods we employ and the tasks we undertake? As citizens, we will share in society’s

response.<sup>20</sup> As public health professionals, we need a science and art of public health that will add our distinctive contribution to the overall endeavour.

The public health challenge remains that of preventing disease and promoting health. We need to work out how to prevent harm that may flow from climate change and rising oil costs. Equally, we need to find the health dividend that could be realized in terms of reduced obesity, improved well-being and greater equity. The methodology required is also familiar in that it involves defining the problem, description of the data, analysis, formulation of solutions followed by dissemination, implementation and evaluation. The problem is that our repertoire of methods may not be sufficient for these new challenges. To understand the problem requires a synthesis of several fields of expertise including analysis of ‘futures’, scenario planning,<sup>21</sup> eco-epidemiology<sup>22</sup> and a radical synthesis of philosophy, ethics, cultural studies, politics and economics with more familiar public health sciences. Solutions are, and will be, generated by innovators and positive deviants.<sup>23</sup> Our job will be to capture their ideas and enhance them through an iterative cycle of learning, implementation and improvement as we feel our way towards solutions that may be hard to imagine today. As these opportunities for learning provide evidence about how harm can be avoided and benefits realized, the challenge for advocacy will be the creation of policy and a dissemination of knowledge to a wider population.

This vision illustrates how the public health community will need to combine its traditional methodological strengths with new methods. Above all, we will need a greater level of synthesis in our analysis, and flexible forms of learning in our experimentation. In short, we need greater methodological vision and ambition than is currently the norm. Public health needs to think more expansively by moving our sphere of concern to a wider

set of problems, focus further upstream and be fearless in our actions.<sup>24</sup>

An example might be the use of a major regeneration project to create a carbon-neutral community to evaluate the impact on well-being, the diseases of overconsumption and equity.<sup>25</sup> Another might be the introduction of sustainability or the achievement of the health dividend into the prioritization framework for health authority expenditure.

## Tasks

It was argued above that the headings under which tasks can be defined are familiar. However, as examples under each heading are explored, it becomes evident how novel and challenging this new agenda will be.

### Defining the problem

This series of articles is an example of how the problem needs to be defined. However, the approach is broad brush and requires much more detailed definition. For example, the potential health impact of climate change in a country like the UK needs to be defined in detail.<sup>26</sup> Much work to date has concentrated on physical or biological vectors of change, such as flooding. The problem needs to be defined in economic, social and cultural terms in order to analyse these vectors effectively.

### A description of the data

The challenge here is breadth and relevance. Data need to be gathered that would enable the pathways between global threats to sustainability and their health outcomes to be charted. A further difficulty is the need to anticipate changes and create public health interventions that flow from the precautionary principle. There is already a perspective that provides data on broad health outcomes and a wide spectrum of health determinants. To these, data from disciplines like economics and ecology need to be added. Some of the data needed are not available, and there is an urgent need to define and commission data collection to meet requirements. By 'data', we also mean information on the values, attitudes, norms and behaviours that shape the population's response to sustainability.<sup>27</sup>

### Analysis

Upon the foundation of more traditional analytical techniques, there is a need to build activities that

are characterized by synthesis and creativity. 'Synthesis' is meant in the sense that disciplines and perspectives need to be brought together in a new way to create fresh public health thinking. Creativity refers to expanding methods of analysis to include activities like learning journeys, identification of positive deviance, use of the creative imagination<sup>28</sup> and civic conversations.<sup>29</sup>

### Formulation of solutions

The formulation of good ideas is what will flow from this form of analysis. The public health mindset, discourse and methodology will change the rules that determine which ideas are chosen to be developed into pilot projects, programmes and policies.<sup>30</sup>

### Dissemination

The task of dissemination needs to address the problem that politicians have only been as bold as they judge the public will allow them to be on the sustainability agenda. Therefore, it is argued that the public health analysis and proposed solutions need to be communicated simultaneously to policy makers and the general public.

### Implementation and evaluation

Solutions that genuinely make a continuing contribution to sustainability from the public health community will arise from iterative cycles of implementation, evaluation and refinement.

## Conclusion

At this point in the argument, the authors can imagine some of the responses being felt by readers. The approach advocated here is not without risk to public health professionals. These include alienation from the mainstream through adoption of new ideas which challenge vested interests,<sup>31</sup> working without a conventional evidence base leading to accusations of 'quackery' and unpopularity with those in power. This may threaten the security of the public health profession, raising questions about its independence, professionalism and funding.

Public health professionals should take comfort from the historical unpopularity of some of the most famous and retrospectively acknowledged public health pioneers. Change will not arise through further tinkering with public policy, nor through the initiative of the private sector. We

exist in an amoral environment at present that systematically produces individualism, hyperconsumption and the pursuit of profit and economic growth over social and environmental goals.

Public health should play its part in an urgent societal response, and can make its best contribution by adopting a new mindset, discourse, methodology and set of tasks.

### Ethical approval

None sought.

### Funding

None declared.

### Competing interests

GMCC is a member of the Scottish Socialist Party.

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