

Health Risks and the People Who Bear Them

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Abstract Public health requires the allocation of scarce resources, both for policies of prevention and cure. Hence the topic of 'priority setting' in health policy has become of increasing importance, with a common assumption that health benefits- perhaps in the form of QALYs - should be maximised. Proposed policies which do not achieve this end are thereby criticised as wasteful or even irrational. However the assumption that health policy should deliver only health benefits can be questioned. This paper explores two types of issue: first, risk and the role it plays in individual lives; and second the causal connection between health and other desirable states of individuals and societies.

In deciding whether to go ahead with a new vaccination programme, or a health campaign, deciding what sort of medical research to fund, or whether to allow government funded doctors to prescribe a particular drug, what should be taken into account? Obviously some idea of cost-effectiveness is necessary, but effectiveness at what? What should go into the calculation beside the financial cost of the programme? Clearly there is a need to consider health outcomes, but how exactly?

If the point of health care is to achieve health, then it may seem obvious that the point of public health measures is to aim at the policy which has the greatest chance of delivering the greatest benefit, for any given sum of money. This is the policy of aiming to achieve the greatest expected health benefits in the economist's sense of an expectation, where policies are judged by their possible outcomes, weighted by probability. Hence it might seem quite clear that if we have a choice between two measures that would cost the same, then we ought to choose the one that does better in achieving expected health benefits.

(For a view of this type see Eddy, discussed in Emanuel 2002 p. 230) The point of this paper is to explore reasons why this may come into question. I should emphasize that my purpose here is not to argue against the maximizing goal. Rather I want to lay out some opposing reasons as a preliminary to informed debate. The reasons need to be understood before they can be assessed. This paper is an exercise in understanding, not assessment.

There are at least three areas where this type of issue arise. First, risk and the role it plays in individual lives; second equitable distribution of risk to health between individuals; and third the causal connection between health and other desirable states of individuals. In the first section of this paper, by way of background, I discuss risk itself: how exposure to risk can function in an individual's life. In the second section I then look at the idea of maximizing expected health outcomes in public health, and how this may be problematic in view of the considerations raised in Section 1 together with other reasons focused on individual attitudes to the distribution of risk. Issues of equitable risk and health distribution between individuals are now well-known, and so although they are of high importance I will not discuss them here (for discussion see Peter 2001). In Section 3, drawing again on the analysis of Section 1, I look at problems associated with considering health as its own self-contained sphere, and thus at the causal connection between health and other social goods. While those involved in the theory and delivery of health care quite understandably typically see health as intrinsically valuable, those with broader social concerns are interested in the way in which health – and thus protecting people from risks to health - also can have significant instrumental, and perhaps even symbolic, value. This clearly complicates the picture. Section 4 concludes.

By way of cautionary note, I do not say much here about how to measure and compare desirable health outcomes; whether by quality adjusted life years; morbidity data, life expectancy or some combination. I do not under-estimate the difficulties in defining any of these measures, let alone deciding between them. However the points made in this paper, by and large, do not depend on which measure is chosen, or on the problems in defining a consistent and acceptable measure.

Section 1: Individual Functioning and Risk

Before launching into the discussion of specific risks involved in public health it will be as well to look first at the way in which risk can impact on people's lives. (The following draws on Wolff and de-Shalit, forthcoming.) Consider the following examples from Amartya Sen. The first is from the southern edge of Bangladesh and of West Bengal in India, where the Sundarban ('beautiful forest') grows. This is the habitat of the Royal Bengal tiger, which is protected by a hunting ban. The area is also famous for the honey it produces in natural beehives. The people who live in the area are extremely poor, but survive by collecting and selling the honey, for which they can get a relatively high price in the city. However, this is a very dangerous job. Every year some fifty or more of them are killed by tigers. (Sen, 1999, p. 146). The second case is of Mr. Kedra Mia, a Muslim labourer who would worked in a Hindu neighbourhood in Dhaka, where Sen grew up as a child. Mr. Mia was knifed on the street by Hindus, and later died. While aware of, and

deeply concerned about, the risk of working in a Hindu neighbourhood in troubled times, Mr. Mia had no other choice but to do so to save his family from malnutrition. (Sen 1999, p. 8)

Although Sen does not emphasise the point, the striking thing about these examples is that the primary disadvantage these people suffer is that they are subject to extreme risks. If there were no tigers, or no Hindu knifemen, there would be nothing to distinguish these cases from perhaps hundreds of millions of others. What makes them special, although sadly not uncommon, is that people take a high risk of death in order to put food on the family table. Of course life can never be risk free, and security is a matter of degree. Yet in this case we have people who, in order to achieve a basic level of functioning for their families, are forced to take risks which are far more extreme than those regularly taken by others.

Note too that although in both of Sen's cases people die, even those who do not - the surviving honey collectors, other Muslim day labourers in Hindu districts - suffer disadvantage through exposure to risk. What, though, is this disadvantage? It is multi-dimensional, and intuitively we can list several aspects. First, there is the real possibility of actual harm. Second, there is the fear of and anxiety about that harm. Third there is the cost of the steps one may take to try to reduce either the probability or the extent of the harm. Fourth, there is the costs of steps taken to reduce the impact of the risk, so that if the feared event happens the impact is minimized. Finally there is the 'planning blight' of living with uncertainty in terms of the difficulty of planning one's life under such

conditions.

Some may argue that unless one or more of the other factors are present, the first dimension is illusory: the mere fact of being subject to risks that others are not. To test this, imagine you are a honey collector who is unaware of the risks and lives to a ripe old age. Are you disadvantaged by the fact of facing this risk, even though it has no effect on your mental state or behaviour, and the harm never falls on you? In my view you are, but I have to concede that it is hard to find arguments either way.

To illustrate these dimensions in the context of health, consider someone who has a particular genetic pre-disposition and is diagnosed as having a 25% chance of suffering some sort of serious health difficulty. This fact alone constitutes the first disadvantage. Anxiety and fear was the next category. Of course much here depends on the precise nature of the threat; a risk of deafness, say, would be quite different to a risk of an agonising and debilitating disease. However even where there is no actual fear, anxiety and worry may well be present and persistent. The third factor is the costs of the steps taken to reduce the risk. In this case I have assumed a genetic pre-disposition, although of course this is not the only cause of differential risks to health. But even where there is a genetic pre-disposition non-genetic factors may influence whether the trait expresses itself, or the form it takes. In such cases an individual may make sacrifices of various sorts to reduce a risk, such as tiresome exercise regimes or the use of therapies which may, as it turns out, be unnecessary. The fourth issue is that one may take steps to reduce the impact of the hazard on other aspects of one's life. For example, if one knew one had

a genetic pre-disposition to deafness one may decide to avoid careers that depend on a keen ear; such, obviously, as a musician, or, less obviously, the sort of life that requires one to be able to chat amiably with strangers in noisy surroundings, such as the diplomatic service. In many cases this merges with the final category, 'planning blight', which is named after a common response to uncertainty. If one feels vulnerable in some respect then one may avoid making choices which would amplify the risk; just as firms hold off from major investment decisions if the economic climate is full of risk, individuals may be unwilling or unable to take major decisions, or major commitments, if they feel at risk. For example, if one fears impending severe disability one may be reluctant to entangle another in one's life by way of long-term emotional commitment.

Viewed from another perspective we can see that risks can, although, need not always, spread to other aspects of an individual's well-being or functionings. First a health risk can have direct effects on other functionings, which we can call a cross-category risk. Failing health can, for example, can lead to falling income especially for those already poor, and hence risks to everything in one's life which depends on income. Health risks can be risks to employment, nutrition, housing and the life prospects of one's children. Second, the steps taken to secure one functioning, such as expensive therapies in the case of health, can put other aspects of one's life at risk in a similar way. Such a structure is, indeed, the essence of Sen's examples of Kadar Mia and the honey gatherers. To secure food for themselves and their families they put their own lives in grave danger.

Another extraordinary example comes from Alexander Masters' account of the life of Stuart Shorter. Shorter spent much of his adult life as a 'chaotic homeless' person, addicted to drugs, and alcohol, while engaged in crime and extreme violence. Somehow he partially overcame this, and, with Masters campaigned on behalf of the homeless. In a meeting with his local MP Shorter points out that lives are at risk that winter because two litters of puppies have been born on the streets. His reasoning is that many homeless people care more for their pets than they do for anything else, and so they would rather stay outside even on a cold winter night, rather than sleep in a night shelter which excludes animals. Some of these people will risk their lives, perhaps even accidentally over-dosing on drugs intended merely to keep out the cold - rather than abandon their pets overnight, even when there are beds available. (Masters, 2005, p. 250). The general point in all of these examples is that to reduce the risk that they immediately care most about – hungry children, frightened dogs – they are prepared to put something else at risk. It is an accidental, but in the current context, very interesting feature, that in all these examples people were prepared to risk their own lives and health.

In conclusion we have seen that any risk can create a number of disadvantages for those at risk beyond the risk itself. This is as true for risks to health as for risks to anything else. And this is not to say that there can never be good reasons to take risks, for a flourishing human life involves risk taking of all sorts (especially with respect to emotional relationships). However in this paper I focus on risk as a negative phenomenon. Consequently we need to keep in mind the various ways in which risk can be a disadvantage when considering what policies we should adopt in respect of population

health.

2. The Maximization of Expected Health: Problems at the level of the individual

Before we raise the question of whether maximization of expected health is an attractive aim at a population level, we should look at whether it is an appropriate aim at an individual level. To put the question I hope more clearly: if money – mine or other people's – is to be spent on health interventions on my behalf, could there be reasons why it may be right, rational, or in some other sense desirable, to spend it in ways which do not maximise my health outcomes? There are three issues I want to raise. The first arises naturally from the considerations in the last section concerning anxiety. The second brings in issues about blame, shame and moral responsibility (these two discussions draw on Wolff (forthcoming)). The third concerns a mismatch between a simplistic idea of expected health outcomes and how real individuals often think about risk. In short the simplistic theory regards options as equivalent in value when many individuals will not. Deciding how to deal with this is a matter of debate.

2.1 Fear and Anxiety

First, fear and anxiety. Such responses, we noted, are a common effect of the thought of being at risk in some way. What is the relation between risk and fear? We must distinguish objective risk and subjective risk, or in other words, belief in risk. There need

be no relation between objective risk and fear simply because one may not know the objective risks one faces and so this may have no impact at all upon one's conscious life. Furthermore it is well known that fear may be out of all proportion to objective risk; this is the central finding of those who argue for the 'social amplification of risk': essentially the idea that there are numerous social mechanisms which can make people feel that risks are much higher, or lower, than in fact they are (Pidgeon, Kasperson and Slovic 2003, see also Schelling 1968). But, more pertinently, is there a clear correlation between subjective risks to health and fear? Is there some sort of direct relation between how serious an individual considers a risk to be, and how much he or she fears or is anxious about it?

To clarify, one risk can, of course, be bigger than another either because the hazard is more serious – cancer is worse than chicken pox – or because the probability is higher. There are problems in thinking through how probability and hazard should be combined, which I will discuss in Section 2.3 below. To avoid this complication, consider two simple cases: the first is 'same hazard, different probability', the second 'different hazard, same probability'. In the first case suppose there are two ways in which I am exposed to exactly the same health risk. Suppose I believe that one of these ways has a higher probability than the other. Can we make sense of someone who claims to be more anxious about the form of exposure which he or she also believes has a lower probability of generating the problem? In the second case can we make sense of somehow who knows that two risks have the same probability, but claims to be more anxious about the one that they also say is less serious?

Now there may be exotic examples where we can generate such examples – for example people who have phobias in the sense of fears that they know to be groundless - but in general for any given individual, fear, or at least anxiety, is likely to track subjective beliefs about how serious a risk is. But there are two obvious points to make. First, this is likely to vary considerably from individual to individual (although I will not develop this complication here). Second, as we have already noted, anxiety will not necessarily track objective risk. Hence insofar as a public health policy is intended to reduce public anxiety about health risks then a policy of maximising expected health benefits may fail to achieve this. If people are greatly worried about a relatively small risk, then the goal of anxiety reduction may call for a different policy than would be required to pursue the goal of health promotion.

Here defenders of health promotion are unlikely to be impressed. They need not downplay the importance of fear, anxiety and insecurity in people's lives. Such emotions, it can be conceded, are terrible things to suffer. Perhaps they are much worse than the presence of small health risks in one's life. After all, small risks rarely lead to actual harm, whereas fear and so on can have a constant dampening effect on one's spirits. But, so the argument goes, the way to respond to this is not to distort the goals of health policy, deflecting resources from where they can do most good. Instead education is needed so that public fears track the real risks, and people worry about only what they ought to be worried about. False fears should be calmed by good information and the same means should be used to ensure that people come to fear the objective risks they

face.

While this appears very attractive it nevertheless relies on some assumptions which may well be false. In particular it relies on an intuitive assessment of the effectiveness – and hence the costs and benefits - of alternative policies. Changing public attitudes and emotions through provision of information is very difficult. Or rather, it is difficult to change public attitudes in a positive direction. It is expensive to attempt, and rarely more than marginally effective. Who can we rely on to provide accurate information? In the current climate, at least in the UK, people profess to distrust scientists, doctors, the government, bankers, big business, the police, the media, civil servants, lawyers, educationalists, anyone in the employ of the government and, indeed, anyone on a decent salary. In the light of this it is rather hard to see how anyone comes to any beliefs about anything. But more pertinently, the prospects for a public education strategy which bring subjective and objective risk into step seem pretty bleak. I am not proud of humanity for this, but it may turn out that once we do the sums, the most cost-effective way of reducing public anxiety could be to spend money on what, from another point of view, is an inefficient health policy.

The distinction between objective risk, and fear, is hardly news. It is becoming common in the UK to make a distinction between reduction in crime, and reduction in the fear of crime. This is clearly inspired by the recognition that fear of crime can have a deeper impact on people's lives than crime itself, coupled with the thought that one way of reducing crime is to make people hyper-vigilant, which may make them hyper-scared too.

So the two goals have a complex relation. Consider an example from John Adams. Are roads in the UK safer now for children pedestrians than they were in the 1950s? Statistically the result is surprising. Fewer children pedestrians are killed on the roads now than for decades. But this, he argues, is because we believe that roads are so dangerous that we keep our children away from them. (Adams, 2001, pp 10-14) The message, then, is that if we want to improve public health, and are not worried about anxiety levels in individuals, then it would be better for health officials to induce exaggerated fears in people, where they can credibly do so, so that they take better health precautions. If this seems unattractive one possible reason is that we value anxiety reduction alongside health promotion. Both have their place.

One way in which this is discussed in the literature comes under the heading 'dread risks'. In the UK Health and Safety guidelines, concerning workplace risks, the risk of death from cancer is picked out as especially feared, and is treated as twice as bad as other risks. This may be because cancer is especially feared or it could be because dying from cancer is a particularly horrible process, independently of the fact of death. In the transport area, deaths in tunnels or in fires are considered to be especially dreaded. In such cases we may well have policy dilemmas. On the one hand it seems perfectly reasonable that policy should follow the real and understandable anxieties of individuals, but on the other hand, we can do more good, from the point of view of health outcomes for a given budget, by ignoring this.

2.2 Blame

In the last section we considered the example of someone who faces the same health hazard from two different forms of exposure, one of which threatens a higher probability of harm than the other. I suggested that it is hard to think of cases where the individual would fear the exposure from the lower probability source than from the higher. Yet it does not follow from this that the individual will also think that eliminating the higher probability cause is the higher priority for health policy. Consider, for example, someone who has a small chance of developing lung cancer through their work, and a much higher chance through smoking. Very special circumstances aside (for example, the peculiarities of an insurance policy) it is hard to think of cases where the person may be more anxious about developing cancer through exposure at work. Nevertheless this person may think that the small work related risk is a much greater priority for government action. There are several possible reasons why. For one thing, many activities which carry a health risk also have perceived benefits for individuals, and they may be unwilling to forgo those benefits. Also issues of personal responsibility obviously apply. But once this point is made then a further point requires stress: some causes of hazards are seen as creating a more serious moral problem than another.

In this context it is important to be aware that not all concern about risk is concern about the risks that are faced by oneself, or the people one cares about. People can be deeply concerned about the existence of risks to which they have no exposure. Yet this can not be fear, but, typically, moral concern. Some causes of hazards give rise to greater moral concern than others. This is especially so where there risks are imposed on others by

means of human action which arguably can be seen as culpable. Hence workplace risks may seem more urgent to address than risks people knowingly inflict on themselves, even when better health outcomes could be achieved by devoting resources to changing individual behaviour. Again from a 'health maximization' standpoint this may seem irrational, but from another standpoint it may seem quite reasonable. Blame and culpability give rise to a separate source of concern to anxiety, fear or dread.

If the point is not already made, consider another example. Early on in the HIV/AIDS epidemic a widespread suspicion among certain social and ethnic groups in Europe and Africa was that AIDS had been created by US military scientists and either released deliberately or by accident (Joffe, 1999, pp 47-50). If this were actually the case, and was publicly acknowledged to be so, then it seems very likely that there would have been enormous pressure for even more resources to be devoted to finding a medical solution. And indeed where there have been cases where a virus has escaped from a lab it has seemed a matter of enormous priority to deal with this.

Some may argue that blame and culpability should be left to private law, rather than state action. However typically legal remedies require proof of harm or loss, and so an action for exposure to risk alone would be problematic.

A further extension of this is that the presence of some diseases may seem particularly scandalous. One example again uses the case of an escaping virus; here the point is not just that of culpability but rather that no country would want to go down in the history

books as the last place on earth where there was a documented case of, say, smallpox. This gives rise to a sense of shame, which in turn depends on one's sense of oneself as a member of a collective entity – one's country or state – which is responsible or otherwise identified with a highly regrettable event. People may be ashamed to be part of a collective which does or allows certain things. This is the basis of the various 'not in my name' campaigns. A somewhat more difficult example is where this is an outbreak, or a risk of an outbreak, of a disease which is associated with countries of a much less developed social and economic position. The recent rise of tuberculosis in the UK has been treated in this way: the idea that 'in this day and age' people can die of TB is highly troubling. Now it may be that the thought here is that there are cheap and effective remedies, but there is also the idea that in wealthy countries no one should die of a 'poor country's disease'. Hence there may be pressure to divert resources from areas where they could achieve greater health outcomes.

2.3 Expected Benefits

In the present context facts about objective risk are encoded into ideas about expected health benefits. An expected health benefit is the average (mean) health benefit across a range of possible outcomes. The point of a public health intervention is, of course, to deliver health benefits. Yet there are few certainties in the area of health. Even in the case of the delivery of a specific treatment option a doctor rarely deliver health; only probabilities. But as soon as we move from health to expected health, issues of maximization become more complex. Suppose, a doctor and a critically ill patient are

considering whether the patient should receive surgery, and two possible procedures are available. The doctor explains the two options and informs the patient that, statistically, each brings an expected benefit of five years extra life. The patient may think there is nothing to choose between the operations until the doctor explains that every patient taking option A has lived for exactly five years, while 50% of patients taking option B have lived for ten years and 50% died immediately. Hence in the terms of a simple probability the expected health benefit in both cases is five years, and let us assume that all life years will be of equal quality.

In this case although there is a sense in which the two options have the same value – at least according to one system of valuation – it would be very strange for a patient to be indifferent between them, even if for many patients it may not be simple to choose. But this would be an agonising choice, unlike, say, for most people, the choice between whether the surgeon wears a green gown or white one during the operation. Certainly the dilemma is not solved on learning that the probability of living ten years has now gone up to 51% and hence option B now has a slightly higher expected value. Thinking of expected benefits in this way conceals vital information, and will also fail to predict many people's actual choices.

It is plausible that in the circumstances described unless there are very special circumstances most people will choose to settle for the certainty of five years. This is simply a consequence of a modest risk aversion, and not to argue that in circumstances of

grave risks people will always act as Rawlsian ‘maximizers’, for as the risk of immediate death falls a higher proportion of people will opt for the risky operation. However a theory which argues that we should maximize expected health outcomes, where those outcomes are described in objective terms, seems bound to leave out facts which will be highly material to many individuals.

One response is to say that although the patient will not be indifferent *ex ante*, nevertheless *ex post*, provided the probabilities run true, both options are indeed equivalent. Assuming that every year of life gives the same utility, or QALY value, then a world in which 100 type A procedures are performed will have the same utility as a world in which 100 type B procedures are performed, even though, *ex ante*, the patients would choose type A. Now I do not here want to argue that the *ex ante* position is the right one – what to say here seems a genuine puzzle – but merely to point out that the goal of maximizing health outputs makes sense only on the *ex post* understanding, and that this is, at best, controversial.

If one takes the *ex ante* position, the way to think about this problem seems obvious; that we should accept that health benefits, like most things in, have diminishing marginal value for each individual, at least at the point of choice, if not at the point of ‘consumption’. If we were to cast this in terms of willingness to pay, people would be prepared to pay much more for a first year of increased life than a second, and certainly more than for a tenth. The simple point to make here is that maximizing expected health benefits is quite distinct from maximizing from maximizing the expected value of health

benefits to the individuals concerned at the point of choice. The latter requires us to take into account particular issues of distribution; not because of reasons of fairness but simply because subjective value is not linear with objective outcomes.

In the case of public health not only are there risks but there are uncertainties, and uncertainty aversion – the fear of the unknown – may be even more important than risk aversion in some cases. Consider a vaccination programme against a childhood illness such as chicken pox, which is very unpleasant for the children who catch it and also leads to a small chance of death. A risk averse parent, one may think, would rush to sign up his or her children for the vaccination. Yet the vaccination itself may be thought to present risks, some known, some alleged, some unknown. So a very cautious parent may be prepared to let his or children take the risk of chicken pox rather than subject them to the uncertainties of the vaccination. Indeed this is exactly what has happened in the UK with the MMR jab, which also became associated with the ideas first, that there was a ‘cover-up’ and second, the government was taking unnecessary risks because an alternative, although more expensive, programme was available.

Uncertainty aversion really returns us to the issue of fear and anxiety already discussed, but with a twist. Policy makers and economists estimate probabilities, often based on large number statistics. But where risks are new, or the studies have not been done, probability assessments are little more than guesses. Given this it does not seem irrational to take a very cautious approach. However this is an argument not against maximizing expected health benefits, but to the conclusion that we cannot always know which policy

will maximize expected benefits. Nevertheless we have, in this section, seen a number of reasons why the policy of maximizing expected health benefits could be questioned.

These include: that it could be more important to reduce anxiety; that reducing some causes of risk may seem morally more urgent than others even if the risks are of the same magnitude, and that an ex ante approach can conflict with an ex post approach.

3. Health and Other Social Goods

Those who spend their working lives thinking about health, and how to improve it for the general population, quite understandably can come to think that other social issues are none of their business. One version of this would be to think that health is intrinsically good, perhaps even the highest good. After all, a concern with health has been almost a constant in human history. Or it could be a consequence of a view that we need to think of different areas of concern as ‘separate spheres’ each with their own appropriate principles of justice.

The view of health as an insulated separate sphere has been put under pressure from what is now known as ‘the social determinants of health’. The important work of Wilkinson and Marmot has shown the various ways in which differential social conditions can lead to differential health outcomes, and so, possibly, the best way of achieving better health outcomes is to change social conditions, sometimes in rather surprising ways. Yet we should not overlook the contribution to this debate made by the social disability movement. Whether or not a condition is believed to be something in need of medical

attention is itself, at least in some cases, a result of social and material structures, and the attitudes held by the population.

While these considerations disrupt the idea of health as a separate sphere, they do not challenge the idea of health as the highest intrinsic good. It may be hard to find arguments to support or contest the idea that health is the highest good. It is also hard to dispute that health is an intrinsic good. Yet it is also easy to think of ways in which health can be an instrumental good too.

To start with the most obvious. Those who are ill often cannot work, and thereby have to live dependently on others. Health, then, is a means to a job, to income, to independence, and to self-respect. This is not to say that it is a necessary or a sufficient condition of any of these things, but rather that it raises someone's chances; or to put the point in the terms of the first section of this paper, it reduces the risk of failure to achieve these goods. The point seems so obvious that it hardly seems to need evidence, although I will mention one study below.

More subtly being ill can damage one's social relations. People known to have cancer often become starved of companionship and decent conversation. Their friends can be embarrassed by not knowing what to say, and so avoid contact so as to avoid the problem. Those who look ill, or use a walking stick or wheelchair are treated differently than others, especially in large, anonymous cities. Yet even in tight-knit communities there can be similar effects. A professional footballer reported that his manager simply

ignored him when he was injured. The manager was focused solely on picking the team for the next match, and if you were not available he wouldn't even waste time and effort saying hello. Other diseases can be stigmatising; sexually transmitted diseases are often regarded this way, and scabies is an even better example.

Furthermore, and most interestingly, it may be that a broader social phenomenon also operates. Consider the hookworm-eradication programme that took place in the American South in the early part of the twentieth century, funded by John D Rockefeller. One study reports that the eradication of hookworm led to improved school performance, and eventually increased earnings. (Bleakly 2004). Hence this is a systematic documentation of the intuitive point made above: health affects economic outcomes. Indeed examples abound: the economic consequences of any epidemic can be profound.

Yet there is another dimension to consider. Rockefeller's biographer claims that the hookworm infestation reinforced racist stereotypes. Those infected became listless, lacking energy or enthusiasm. This had been put down to natural indolence of the blacks in the South. The eradication helped undermine this allegation and thus, potentially at least, had much broader social consequences beyond the economic. I do not know whether this is true, or how many other compelling examples there are of cases where a health risk gives rise to broader social problems. But there are some. Consider the example of Irish immigrants to the UK. Many men of working age came to work in the building trade, and although they remained for decades, earning money and sending some of it home, the nature of their work meant that they would travel from town to town,

living in poor quality lodgings, spending evenings drinking alone, and never settling into a regular social or family life. A high level both of alcoholism and of mental illness was discovered in this population, and it is plausible that loneliness was a driving force. At first sight this is simply another sad example of the social determinants of health. Yet the example is deeper than this in that the high incidence of alcoholism and mental illness among Irish men in the UK once more fed racial stereotypes of the drunken, crazy, Irish 'hooligan', to the detriment of a much broader social group. Here we may have mechanisms which mutually reinforce into a downward spiral.

The general point is surely now clear. Health can have effects beyond health itself. One way of handling this is by applying John Broome's point that the concept of a QALY is too narrow, and what is needed is an idea of 'well-being adjusted life years' in which the total effects on an individual's well-being is included. (Broome, 1993). This is on the right lines yet if it is true that a health intervention can, say, lead to better race relations, then people who are not direct beneficiaries of the intervention will also find themselves better off in some respects.

Now, a health policy maker may feel that although these reflections may be of interest they should not be allowed to deflect health policy. First, they are unproven, Second, they are the sort of thing that, if they exist at all, are side-effects of health policy, and cannot be planned or predicted. Third, it is not, in any case, any business of health policy makers to go in for broader social policy. Nevertheless, each of these points is open to debate,

and in particular the last. There are numerous examples where the delivery of health has implications for other aspects of people's lives and blindness to this can have adverse consequences. For a relatively trivial example, it is common in the UK for hospital consultants to give a dozen people the same appointment time. This reduces the burden of administration, and the minimizes the wasted time of no-shows. But it can also mean that many other people – and their time may be just as precious – can spend half a day waiting for a five minute consultation. Treating health as a 'separate sphere' is simply to ignore costs such as this. A more important example concerns disabled people some of whom, sooner or later, start to refuse more surgery because they can no longer bear the pain of the operations, the tedium of hospitals, and the general disruption to their lives.

In brief conclusion of this section, it is clear that reducing health risks can have both positive and negative effects beyond health, certainly for those individuals and, more controversially, for broader social benefit. Once again these arguments raise the question of whether concentrating solely on health benefits should be sole aim of public health policy.

4. Conclusion

This paper has argued that it is plausible to question the thesis that the goal of health policy should be to deliver the greatest expected health benefit. I have not explored the well-known issues of distribution but have concentrated on two other areas: the role of risk in individual life, and the way in which health can interact with other aspects of

individual and social value. How to settle such dilemmas is a matter for further debate. However it is hard to see how these debates can be conducted unless health is placed in a broader social, moral and political context.

Adams, John (2001) *Risk* (London: Routledge)

Bleakley, H. (2004) 'Disease and Development: Evidence from Hookworm Eradication in the American South' August 20, 2004

Broome, J. (1993) 'Qalys', *Journal of Public Economics* 50, 149-67.

Danis, M., Clancy, C. and Churchill L.R. (eds) 2002 *Ethical Dimensions of Health Policy* (New York: Oxford University Press).

Emanuel, E. (2002) 'Patient v. Population: Resolving the Ethical Dilemmas Posed by Treating Patients as Members of Populations, in Danis, Clancy and Churchill 2002, 227-245.

Joffe, Helene (1999) *Risk and the Other* (Cambridge: Cambridge University Press).

Marmot, M. (2004) *Status Syndrome* (London: Bloomsbury).

Masters, Alexander (2005) *Stuart: A Life Lived Backwards* (London: Fourth Estate).

Peter, F. (2001) Health Equity and Social Justice, *Journal of Applied Philosophy* 18 159-170.

Pidgeon, N., Kasperson, R.E., and Slovic, P. (2003) eds, *The Social Amplification of Risk* (Cambridge: Cambridge University Press).

Schelling, T. (1968) 'The Life You Save May Be Your Own', reprinted in Thomas C

Schelling *Choice and Consequence* (Cambridge Ma: Harvard University Press, 1984), pp. 113-146.

Sen, A. (1999) *Development as Freedom* (Cambridge: Cambridge University Press).

Wilkinson, R. (2001) *Mind the Gap: Hierarchy, Health and Human Evolution*. (London: Weidenfeld & Nicolson).

Wolff, J. (forthcoming) 'Risk, Fear, Shame, Blame and the Regulation of Public Safety', *Economics and Philosophy*.

Wolff, J. and de-Shalit, A. (forthcoming) *Disadvantage* (Oxford: Oxford University Press).