

This is a repository copy of *The wellbeing agenda: Implications for policy*.

White Rose Research Online URL for this paper: http://eprints.whiterose.ac.uk/86280/

Version: Accepted Version

# Article:

Reardon, L. and Bache, I.P. (2015) The wellbeing agenda: Implications for policy. East-West Institute for Advanced Studies Viewpoints Journal, 2.

© 2015 The Publisher. This is an author-produced version of a paper accepted for publication in East-West Institute for Advanced Studies Viewpoints Journal. Uploaded in accordance with the publisher's self-archiving policy

#### Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

#### Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk https://eprints.whiterose.ac.uk/

# The Wellbeing Agenda: Implications for Policy

Louise Reardon and Ian Bache

Forthcoming in the EWIAS (East-West Institute for Advanced Studies Viewpoints journal, special issue on Quality of Life

# Introduction

Over the past decade there has been increasing debate at both national and international level over the extent to which governments can improve the wellbeing of their citizens. This debate is often in response to increasing recognition that the dominance of GDP as a measure of prosperity has not led to wholly desirable outcomes for society (Cobb, Halstead & Rowe 1995; Easterlin 1974) and has led to a number of initiatives aimed at developing alternative or complementary measures of progress. Initiatives have taken place both nationally and within international organisations and are generally focused on wellbeing measurement. Research has revealed complex territorially overarching networks of academics, statisticians and policy-makers exchanging information and ideas that result in a cross-pollination of initiatives that often appear separate and distinctive within national settings (Bache and Reardon 2013; Bache 2015).

Accompanying these international developments have been growing demands from epistemic communities for governments to pursue wellbeing measurement in order to put wellbeing at the heart of government activity (Brulde 2010; De Prycker 2010; Duncan 2010). Relevant initiatives have emerged in a number of counties, including Germany, Italy and Canada (Kroll 2011). Much of the attendant debate has focused on one of the key demands of the influential Stiglitz Commission (CMEPSP 2009), which was to use subjective wellbeing (SWB) indicators alongside more widely used objective indicators, such as employment rates and life expectancy, in order to measure wellbeing. SWB refers to a person's own assessment of their lives; their own account of their feelings.

As consensus has grown on how to measure wellbeing and governments around the world begin to recognise wellbeing as a priority, there is an increasing debate on the policy implications of the wellbeing agenda; how might the data be used, and what policies aimed at promoting wellbeing look like? This article reflects on this debate, which has tended to focus on five policy areas; health, the economy, the local environment and planning, society and community, and governance. It draws mainly on sources from the United Kingdom (UK),

which is seen as leading on many aspects of this agenda, but the ideas and arguments apply more broadly. We begin our review with a discussion of health policy.

## **Health Policy**

Health policy is closely associated with wellbeing and for some the concerns are largely synonymous and a two-way flow of causality is generally acknowledged. Psychological health is seen to have a particularly strong link to SWB and appears more highly correlated with wellbeing than physical health (nef 2012, 35). Conditions such as anxiety, depression and schizophrenia have a strong negative effect on SWB. Despite this relationship, wellbeing advocates often identify mental health as a relatively neglected part of health provision (Layard 2005, Halpern 2010). The Legatum Institute (2014, 59) argued that the expansion of mental health treatment is important for three reasons. First, one in six people in advanced countries suffer from a mental health condition, while only one in four of those affected access treatments; second, there is 'impressive' evidence on what treatments work and how cost-effective such treatments are; and third, there is wide agreement that reducing anxiety and depression is a good thing, – even if they have disagreements about what constitutes a good life (Legatum Institute 2014, 58-59).

In addition to emphasising mental health treatment, the UK Parliament's All Party Parliamentary Group (APPG) on Wellbeing Economics (2014, 32-33) stressed the importance of integrating mental and physical healthcare to provide 'whole person care' and a shift in emphasis away from treatment and towards prevention of conditions. Diener et al (2009) highlighted several ways in which subjective measures of wellbeing might be used to complement objective measures of health and lead towards more holistic and targeted care. For example, they pointed to studies showing that subjective reports can predict the longevity of life, even after controlling for objective reports of health. Studies have also found a link between instances of depression and anxiety and subsequent hospitalisation for cardiac problems (Diener et al 2009, 144). Subjective measures of health can also be collected relatively quickly and easily which means they can provide a more efficient method for studying the causes and effects of poor health in some cases (Diener at al 2009, 144). For example, through being able to identify and understand the relationship that social or environmental factors can have on health through the effects on anxiety levels, the more nonmedical interventions can be used to address long term health problems. A comparison of the results of subjective and objective indicators of health might also be useful to target interventions by highlighting the disparities between different demographics, socioeconomic

populations, and tracking trends over time. For example, if subjective measures, such as life satisfaction do not correspond well to objective health measures, such as mortality rates in one geographical area, more research can be done to identify the reasons for the discrepancies and target interventions, where previously the area might have been ignored.

Wellbeing advocates stress that more needs to be done to educate practitioners, parents and children on non-drug based interventions that can improve long term wellbeing. Thus, the APPG on Wellbeing Economics (2014, 30) argued that mindfulness training should be incorporated into the basic training of teachers and their medical students. Mindfulness is defined as 'paying attention in a particular way: on purpose, in the present moment, non-judgementally' (APPGWE 2014, 30) and can be used as a medical intervention to treat recurrent depression. The APPG on Wellbeing Economics argued that this treatment, although recommended for use by the UK's National Institute of Health and Care Excellence, is under-utilised due to lack of trained staff to provide the treatment, and the tendency of medical professionals and patients to prefer drug based treatments.

# **Childhood Interventions**

Numerous wellbeing advocates also suggest that more should be done to teach resilience and mindfulness skills to children in school (Halpern 2010, APPGWE 2014, and Legatum Institute 2014). Evidence suggests that a child's emotional wellbeing strongly predicts their mental health as an adult. Thus, it is suggested that early interventions giving children insight into what effects wellbeing and training them in skills in developing empathy, mindfulness, and self-control can help stave off occurrence of depression and anxiety in later life (Legatum Institute 2014, 60). Moreover, in addition to teaching wellbeing, it is suggested that child wellbeing might be monitored more closely in schools (Diener et al 2009, 140-142). Periodic check-ups would allow opportunities for early intervention in order to prevent more serious instances of mental health problems developing. However, such interventions are not without controversy. There is concern that they might lead to children being unfairly labelled as mentally ill or that practitioners may be quick to medicate children where such treatment is inappropriate (Diener et al 2009, 142).

Due to the importance of childhood wellbeing, and the influence that the parent-child and parent-parent relationships can have on this, the Legatum Institute (2014, 59) also suggested that support should be given to parents from around the time of childbirth. Support might include parenting classes, covering emotional as well as physical aspects of child rearing, and the emotional impact of children on a couple's relationship. It might also include training for dealing with difficult child behaviour and also relationship counselling for couples struggling with parenting. Better training might also be offered for health workers in how to spot the signs of, and treat, maternal depression. Again, such interventions are not without controversy; particularly in relation to the question of where the role of the state should end and the responsibility of parents begin.

# **Economic Policy**

It is often assumed that there is a tension between the promotion of economic growth and the promotion of wellbeing as policy goals. However, the wellbeing literature generally recognises the importance of economic growth to the advancement of wellbeing (Halpern 2010, BRAINPOoL 2014). As the Legatum Institute (2014, 66) noted;

Other things being equal, growth is good for wellbeing. Economic growth can enable citizens and states to build health and welfare systems, protecting or ameliorating against hazards of ill-health and loss of income. Growth can give more time free from time-consuming domestic chores, releasing time and resources for leisure, arts and education.

So, wellbeing policy advocates tend to focus on aspects of economic and labour market policies that might be revised in light of wellbeing evidence without challenging the emphasis on growth. This includes issues of economic stability and job security; low pay; work-life balance; wellbeing in the workplace; taxation policy and aid policy.

## Promote economic stability and job security

One significant piece of evidence from the wellbeing literature is that individuals lose more wellbeing from a loss in income than is gained from the same rise in income (Kahneman et al 1999). This finding implies that a stable rate of growth should be prioritised over accelerated growth that might lead to 'boom and bust' cycles resulting in periodic job losses (Legatum Institute 2014, 66). Such a downturn would eradicate improvements in wellbeing gained during periods of rapid economic growth. Thus, as the APPG on Wellbeing Economics (APPGWE 2014, 19) suggested;

The absence of growth is a problem primarily because of its negative impacts on employment: thus even in recession, when growth understandably looms large on policymakers' lists of priorities, return to high and stable levels of employment is the key objective. Growth is a means to this end, not the other way around. Closely related to stability of economic growth are the issues of unemployment and job security. Unemployed people tend to have lower life satisfaction and happiness levels than employed people, and also worse psychological health (nef 2012, 20). Unemployment is also found to have impacts on wellbeing that exceed those from the loss of income (nef 2012, 22). Job security is identified as one of the most important employment-related determinants of wellbeing. European data suggests that the impact of having a temporary contract is 'half as large' as that of being unemployed. Moving an unemployed person on to a temporary contract may therefore be less beneficial for wellbeing than moving someone on a temporary contract onto a permanent contract' (BRAINPOoL 2014, 17). Such evidence led the APPG on Wellbeing Economics to recommend that;

Stable and secure employment for all should be the primary objective of economic policy. Steady and sustainable growth should be prioritised over absolute levels of national income as a means to this end, and policy should address work insecurity as a priority (APPGWE, 2014, 20).

Of course, how this might be achieved in practise is debatable and with potentially contentious policy implications. As the BRAINPOoL (2014, 18) project reports; 'under the conventional approach to labour market policy, employment protections are generally seen as inefficiencies to be reduced in order to maximise jobs and growth. However, the overwhelming evidence on...wellbeing provides a different perspective.' One approach would be to ban or restrict the use of zero-hours contracts, which allow employers to hire people while guaranteeing no hours of employment and payment is per hour worked. Such contracts are often seen as fostering and perpetuating insecurity in the job market. However employment protection that is too strong may lead to high wellbeing inequality due to what some suggest will lead to the development of a two tier labour market of secure and insecure employment (BRAINPOoL 2014, 18). For instance, Bok (2010, 120) floated the idea of requiring companies to try remedies such as job-sharing before making employees unemployed, but notes that this may be hard to implement effectively and 'might seriously hamper employers needing to adjust to sudden market changes or downturns in the economy.'

An alternative would be to focus on 'work security' rather than the security of tenure of particular jobs. This might involve 'flexicurity' type models, where generous unemployment benefits are coupled with access to ongoing training and active labour market policies to help people get back into work (BRAINPOoL 2014, 18). This type of policy would however imply a significant increase in public spending, or suggest different spending priorities that could prove controversial, particularly where there are concerns over welfare dependency.

However, Donovan and Halpern (2002, 37) suggested that active welfare policies that prioritise fast-tracking the unemployed back to employment; rather than just supporting their income might be a 'less controversial implication' of a wellbeing approach to this policy area and one that would address the concern that the most negative effects of unemployment on life satisfaction relate to lack of social engagement. The Legatum Institute (2014, 67) also stressed the need for active welfare state policies based on a wellbeing approach. They emphasised an early return to employment for the unemployed, requiring relevant training and support, and possibly the provision of temporary work to keep people in touch with the labour market. However they stressed that people would not return quickly to work 'if unemployment benefits are handed out unconditionally' (Legatum Institute 2014, 67).

#### Reduce instances of low pay

Conventional labour market policy recognises that there is a trade-off between ensuring decent wages and reducing unemployment. For example, the UK Low Pay Commission weighs up numerous factors (such as average earnings growth, inflation and employment levels) 'but its recommendations are limited by the rule of thumb that it must not increase unemployment' (APPGWE 2014, 20). The OECD's guidance on labour market policy also recommends that minimum wage levels are not set at levels that would harm job creation significantly (BRAINPOoL 2014, 17). Why this matters for wellbeing advocates is that the impact of money on wellbeing decreases as incomes increase. Thus, raising the incomes of the poorest would have the greatest impact on aggregate or 'national' wellbeing and one way of doing this is through increasing the minimum wage. As the APPG on Wellbeing Economics (2014, 20) highlights;

...minimising unemployment is vital for wellbeing. But at the extreme [the current trade off in favour of employment] implies that a guaranteed rise in wellbeing for millions of low-paid workers would be valued less that the uncertain prospect of even one person being put out of work.

A wellbeing approach to policy might thus conclude that a certain level of risk to wellbeing from increased unemployment could be justified by the significant wellbeing benefits of better pay that may result for those in work. Trade-offs between employment and pay increases are made implicitly on a regular basis using the conventional approach. However, BRAINPOoL (2014, 18) argue that 'wellbeing evidence would allow this trade-off to be analysed explicitly based on the short and long term impacts on pay and employment, the size of the resulting impacts on wellbeing, and the number of people affected.' This has the potential to lead to different decisions from the conventional approach.

The APPG on Wellbeing Economics (2014, 21) also recognised the importance of 'fair pay', receiving evidence during its enquiry into the wellbeing agenda that for 'employees at all levels, feeling one is paid fairly matters much more to job satisfaction than absolute salary.' The wellbeing literature also suggests that it is relative income rather than absolute income (once people have met their basic needs) that has the largest effect on wellbeing. Thus, if executive pay within a firm becomes 'excessive', it not only offers limited improvements in wellbeing to those concerned, but is also likely to reduce the wellbeing of the others in the firm (APPGWE 2014, 21). The APPG on Wellbeing Economics thus recommended on this issue that the government should address the wellbeing consequences of inequality. Policy measures might include requiring firms with more than 500 employees to publish information about ratios between the highest and lowest paid. Such transparency might encourage a move away from excessive pay deals for senior executives.

#### Promote work-life balance

Wellbeing increases with the number of hours worked up to a certain level; beyond which additional hours worked have a negative effect on wellbeing (nef 2012, 24). Thus, those working very long hours tend to have significantly lower wellbeing, while those choosing to work part-time usually have higher wellbeing (though this is not true of part time workers in general). Being able to work flexibly also has a positive impact on wellbeing (BRAINPOoL 2014, 17). Conventional economic policy tends to encourage longer hours of work in order to increase output and competitiveness. However, shorter working hours could reduce instances of over and under employment; too many people working too many hours, and too few people not working at all. In theory shorter working hours could lead to a more equal share of work and to reduced unemployment, as well as to improved productivity (although this last point in particular is contested).

Donovan and Halpern (2002, 38) suggested that stronger regulation of work-life balance would be one of the 'more controversial' implications of wellbeing policy as this could be seen as an issue of individual choice and might be best addressed in that way. Halpern (2010, 39) highlighted how job satisfaction in the UK rose in the 2000s, following its decline during the 1990s and suggested this had more to do with employers having to compete with each other in terms of work quality in the face of 'increasingly tight labour markets' (Halpern 2010, 39) rather than government policy. Following this, he suggested that governments should aim to facilitate individuals' choices and maintain the conditions under which employers have to compete over the quality of work (Halpern 2010, 39). This might include encouraging the publication of firm-specific employee satisfaction tables

## Promote wellbeing in the workplace

There is evidence to suggest that there is a link between how satisfied people are with their jobs and how well people function in their role (nef 2012, 23). Evidence also points to a number of workplace characteristics being important to employee wellbeing. These include workplace trust and autonomy over decision making (nef 2012, 23); having being consulted on decisions, having supportive supervision and having a clear idea of the expectations placed on them (Diener et al 2009, 168; Legatum Institute 2014, 67). If employers are actively made aware of the importance of these job characteristics then steps can be taken by them to improve workplace policies and training.

By contrast, individual performance-related pay, is seen as detrimental to employee wellbeing and job satisfaction overall and has little positive effect on performance (Halpern 2010, 35). Many studies have found that non-financial incentives, like praise from line managers and opportunities to do better work, are viewed by employees as equally (or more) effective compared with cash bonuses, increases in pay, or the opportunity to buy stock options (Legatum Institute 2014, 67).

#### Expand Progressive Taxation and Consumption Taxes

One of the 'headline conclusions' of wellbeing research, as highlighted above, is that a marginal increase in income will have a greater impact on a poor person's wellbeing than a rich person's (Halpern 2010, 36). To put this another way, the wellbeing literature implies that a larger absolute amount of income is required to create the same increases in life satisfaction for those at higher income levels compared to the amount that is required to increase the life satisfaction for those at low income levels (Diener et al 2009, 171). If this is the case, then as Diener at el (2009, 171) note, 'the same taxation will be less of a burden on those with higher incomes than those on lower incomes.' One of the conclusions that can be drawn from this is that redistribution of wealth – or increasing progressive taxation – will lead to a more equal distribution of wealth and in turn increase wellbeing overall.

Redistributing income in this way may also reduce the negative relational effect of an individual comparing their income to that of other people. This is also an argument for increasing consumption taxes. Increasing taxes on 'positional goods'<sup>1</sup> such as luxury cars may deter people from buying such goods and in turn reduce the negative impact of people comparing their goods. However, as Halpern (2010, 39) notes, increasing the expense of goods that are valued mainly for their high price can make them even more sought after. There are also practical complexities in deciding what constitutes a positional good. As Halpern (2010, 39) notes, these goods may be at the cutting edge of technological innovation for the economy, and thus happen to be expensive.

Another use of taxation would be 'sin' taxes on 'wellbeing bads' such as smoking or alcohol consumption (Diener et al 2009, 85). Many countries already impose such taxes in order to discourage these activities and to compensate the state for dealing with the negative externalities they create, particularly in relation to health. However, punitive taxes on smoking and drinking can be seen as unfair – particularly on those with an addiction – and may actually reduce wellbeing significantly in the short term (either through reduced disposable income or because of the pain of quitting) even if longer term benefits are predicted.

Donovan and Halpern (2002, 38) placed progressive taxation in their 'more controversial' category. It is often seen as evidence of excessive state paternalism, restricting individuals from spending money in ways they want. Moreover, higher taxes are often viewed as de-incentivising entrepreneurialism, productivity and economic growth. Bok (2010, 85) questioned the utility of policy decisions based on generalisations about the effects of income redistribution on wellbeing, noting the importance of other factors in relation to the low satisfaction of those on low incomes, including differences in status, autonomy, authority and behavioural patterns.

# Expand foreign aid

Conclusions about the diminishing marginal returns to wellbeing as income grows can also be used to argue that the economic and social development of poorer nations should be prioritised and foreign aid expanded to promote global wellbeing (Donovan and Halpern 2002, 38). However, this argument is not without complications. These include issues of what form aid takes and where it is targeted. Thus, while income transfers might have some

<sup>&</sup>lt;sup>1</sup> Positional goods are those that are scarce in some absolute or socially imposed way, and therefore give more status to their owner.

benefits, others would argue for a more liberalised trade regime as more effective in promoting sustainable development (Donovan and Halpern 2002, 38).

# Create a narrative for a green economy

A more novel suggestion for how wellbeing can inform economic policy comes from the BRAINPOoL Project (2014), which suggested that notions of wellbeing and quality of life are 'integral' to the creation of a successful narrative about a green economy. BRAINPOoL (2014), highlighted how economic departments in government tend to focus on growth and consumer welfare, while environment department's focus on the objective of creating a green economy; an economy that is able to operate within environmental limits. Debates over the trade-offs between the two departments tend to be resolved in favour of the former; for example, concerns about the cost to the taxpayer of investments in new environment-focused technology and infrastructure and the risk of environmental protections hindering economic growth tend to mean these interventions are not prioritised (BRAINPOoL 2014, 19). The way the debate is currently framed presents economic growth as increasing welfare and its absence as associated with severe reductions in welfare, thus limiting the appetite of policymakers for policies that thus risk or hinder it. Thus, the suggestion is that the growth debate should be 'reframed' to overcome this. Rather than strong environmental policies being seen as somewhat dependent on a strong underlying economic performance, the BRAINPOoL project emphasised the importance of the quality of growth as well as its quantity and also the need to think about longer term implications of policy.

# **Local Environment Policy and Planning**

#### Valuing the cost of transport noise

A vast amount of research has been conducted into the effect of transport noise on individual mental and physical health. Den Boer and Schroten (2007) found that in the year 2000, more than 44 per cent of the EU25 population were regularly exposed to over 55 decibels (dB) of road traffic noise, a level potentially dangerous to health. Another found that out of 380 million people in the EU, 24 million are said to be highly annoyed by road traffic noise (Fyhri & Klaeboe, 2009). And a survey conducted in the UK by Grimwood, Skinner, and Raw (2002, 1) found that 40 per cent of their 5000 respondents stated they were "bothered, annoyed, or disturbed" to some extent by road traffic noise. Many epidemiological studies have suggested, to varying degrees, that these high levels of traffic noise ( $\geq$ 65 dB (A)) lead to increased stress and annoyance levels, and in turn increase the risk of hypertension,

cardiovascular disease, and sleep disturbance (Babisch, 2000, 2006; Dora, 1999; Fyhri and Klaeboe, 2009; Ising and Kruppa, 2004; McCarthy, Ravelli, and Sinclair-Williams, 2010). A study by Van Praag and Ferrer-i-Carbonell (2004) assessed the effect of aircraft noise on subjective wellbeing. They found that aircraft noise was related to lowered life satisfaction, and that those who were living in larger families, more expensive housing, and with outdoor space such as a garden, all had more negative responses to aircraft noise. Thus for some citizens, transport noise plays an important role in their overall sense of well-being.

The conventional policy position is that the effect of transport noise on the individual is estimated by comparing the price of housing located in different areas of noise. The presumption being that house prices in areas most affected by airport noise, for example, would be lower due to the annoyance that the aircraft noise presented, reflecting something about the attainable levels of quality of life that can be gained from living there, rather than anything objectively different about the housing itself (Diener et al 2009, 147). Using assessed values or market values to assess the effect of noise in this way has limitations however. First, the buyer may not realise the effect that the noise is going to have on them; they may assume they will adapt to the noise, or underestimate the volume of traffic and noise. Second, the housing market would need to be fluid in order to reflect preferences accurately. However, there are multiple reasons why housing markets are not fluid; such as price restrictions, high costs of moving, or lack of housing supply.

Using wellbeing measures may be a more effective way to more accurately assess the impact of traffic noise on the individual and the effectiveness of measures to control this. Diener et al (2009, 148-149) highlighted a couple of ways this could be done. First, the effect of noise on life satisfaction could be calculated and then the known association between income and life satisfaction could be used to estimate a reasonable amount of financial compensation for those people affected. Second, policy makers could investigate what factors, if any, could moderate the impact of noise on wellbeing and determine the types of interventions that could thus improve wellbeing. For example, insulation cuts the effect of aircraft noise by more than half (Van Praag and Ferrer-i-Carbonell 2004). Thus compensation could be given in the form of interventions such as this that may actually reinstate some levels of lost wellbeing, rather than just providing financial compensation.

#### Address issues around commuting

According to equilibrium location theory, commuters neutralise the negative aspects of the commute to work through trade-offs with salary, house location, or change of job (Novaco,

Stokols, & Milanesi, 1990; So, Orazem, and Otto, 2001). For example, many may decide to commute a longer distance so that they can live in a leafy suburb. Wellbeing levels are therefore thought to be at equilibrium once all these factors are considered. However, Stutzer and Frey (2008) used SWB data to assess whether this equilibrium holds. They identified a 'commuting paradox' with people with longer commuting times reporting systematically lower SWB levels. They found that people who commute 22 minutes (3 minutes less than the average UK commute time) one way per day report on average a 0.103 point lower satisfaction with life than those who spend less time commuting. Other studies have found that the longer the commute, the greater the negative effect on job satisfaction levels (Hagihara et al 1998) and overall life satisfaction (Ahn 2005) when compared with those on shorter commutes.

Research has highlighted many factors that influence the quality of commuting time and in turn the impact on wellbeing (Diener et al 2009, 151). Stress levels tend to be higher on longer and more crowded commutes, affecting frustration tolerance, job stability, and health. Sharing car journeys is found to help mitigate some of the stress generated from commuting. Research conducted by Gatersleben and Uzzell (2007) found that those who considered their journey relaxing were more likely to be cyclists or walkers, with car users more likely to find their journey stressful. Cyclists and walkers were also found to be the most likely to find their journey exciting, with public transport users those most likely to find it depressing or boring. Using the diary day reconstruction method, it has also been found that the morning commute is the least enjoyable part of a person's day, in front of working or childcare (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004).

Apart from commuting's impact on the individual, it also has an effect on the community due to macro-level changes it makes to the dynamics of our lifestyles. Putman (2000, 213) argues that evidence from time use surveys suggests that for each additional 10 minutes spent on the daily commute, involvement in community affairs is reduced by 10 per cent; arguing that after education, the commute is 'more important than almost any other demographic factor' in relation to community involvement. The potential consequences for social capital are subsequently reinforced; with the suggestion that there are negative externalities for the community as a whole. As Putman (2000, 213) highlights; 'strikingly, increased commuting time among residents of a community lowers average levels of civic involvement even among non-commuters'. It may in turn be argued that governments should promote residential stability, rather than increased mobility and travel as people underestimate the costs and benefits to subjective wellbeing that result. Thus, looking at

commuting and travel patterns through a wellbeing lens challenges the current practices of the transport and planning sectors that focus on enabling long commutes through quicker modes of transport, rather than on focusing on ways in which areas are developed to reduce the need to travel large distances to and from work.

Wellbeing evidence thus challenges the working assumptions of those operating within transport and planning sectors. There is often a focus in the transport sector, for example, on reducing journey times. While this is important to wellbeing, journey quality is also important and could play a large role in mitigating for some of the negative effects of longer journey times. For example, reducing overcrowding on public transport and enabling Wi-Fi in order for journeys to be more productive or to increase entertainment options on public transport may improve the wellbeing of passengers. Emphasising the positive emotional effects of walking and cycling to work instead of using the car or public transport (where circumstances allow) may also be another way to improve wellbeing, as well as incentivising the use of these modes of transport through improved infrastructure or bike-buy schemes that allow bikes to be bought at cheaper prices and in instalments through their employer. Policies that incentivise car sharing schemes may also mitigate a loss of wellbeing, while also reducing the amount of congestion on the roads – a cause of commuting stress.

The recognition of a 'commuting paradox' and also the impact of commuting on communities, challenges planners to think about how space is constructed and the ways in which people can live closer to their places of work without sacrificing quality of lives in other areas. The UK Department for Transport are beginning to look at how some of these issues can be addressed (Cabinet Office 2014, para. A85-86). Their Door to Door Strategy is looking at the ease and practicability of making trips using a variety of sustainable modes such as cycling. The Department is also looking at ways in which the need for travel can be reduced or removed through the use of ICT technologies such as tele-conferencing or remote working.

# Recognising the cost of air pollution

According to the UK's Chief Medical Officer poor air quality is one of the top ten causes of mortality in the UK (Cabinet Office 2014, para A24). Air pollutants have an immediate and well-recognised effect on physical health, with air pollution associated with numerous respiratory and cardiovascular diseases (Duhme et al., 1996; Gulliver and Briggs, 2004; Lyons and Chatterjee, 2008). There is also evidence that pollution affects SWB directly, and that it 'plays a significant role as a predictor of inter-country and inter-temporal differences in

subjective well-being' (Welsch, 2002, 2006, 1). In a survey of 400 people living in London, Mackerron and Mourato (2009) found that an annual increase of 10 mg/m3 in mean nitrogen oxide corresponds to a 'drop of nearly half a point of Life Satisfaction on an 11 point rating scale', corroborating an earlier study by Ferreira, Moro, and Clinch (2006) in Ireland. Importantly, this study found life satisfaction declined with measured actual air pollution levels and not just perceived air pollution.

Recognition that air pollution is found to not only affect physical health, but also subjective wellbeing should provide an extra impetus for policy makers to address air pollution. However, as with transport noise and commuting, current ways in which air pollution risks are factored into policy decisions may underestimate the negative impact on wellbeing, where using wellbeing analysis would highlight its more acute impact. For example, Diener et al (2009, 158) highlighted the findings of research that compared the estimated effect of air pollution based on life satisfaction data with data obtained from house price differentials using a revealed preference approach. House prices were found to be sensitive to the influence of air pollution, but the affect was much smaller than for the life satisfaction approach. Again, as with the discussion of noise above, this may be due to the inflexibility of the housing market or due to individuals underestimating the affect that pollution will have on their wellbeing.

#### Importance of green and sociable spaces

A growing body of wellbeing research illustrates the importance of green spaces for wellbeing. People who experience stress are found to recover more quickly when exposed to natural landscapes (Diener et al 2009, 156) and also prefer exposure to natural landscapes such as forests, beaches and parks when recovering from mental fatigue (nef 2012, 40). Even when not stressed, research shows that people have more positive moods, and have higher satisfaction with their neighbourhoods when they have access to views of nature (Diener et al 2009, 156, Legatum Institute 2014, 65). Green spaces may also encourage physical activity, also important for mental and physical wellbeing (nef 2012, 35). Walking in natural environments also has a stronger effect on people's ability to concentrate than walking in an urban environment, with stronger psychological benefits from jogging being felt from doing so in a park rather than on the street (nef 2012, 40). Halpern (2014, 557) noted therefore, that although all trees, for example, may have the same carbon value wherever they are placed, being able to see it gives an added wellbeing boost and therefore may make it more valuable.

Spaces that foster social interactions are also important for wellbeing. Numerous studies have shown how the key to wellbeing in built environments is to create opportunities for easy social interaction, while at the same time upholding the ability of individuals to choose when, with whom, and where to interact (Halpern 1995). As the Legatum Institute (2014, 65) argue 'spaces that create opportunities for people to dwell and meet, be they parks, porches, or post offices, provide the soil for the seeds of friendship and connection to grow.' The opposite may be true for enclosed corridors used to connect many dwellings, or impersonal walkways.

Numerous policy interventions may be able to promote green and sociable spaces. Trees and plants could be planted outside buildings, and plants grown inside buildings, in order that people can receive the positive effects of nature even in urban areas. More clauses could be built into building contracts to ensure that with the building of new homes more social and green spaces are included alongside these developments. More attention could also be paid by planners to street design and street furniture, in order to encourage more people into shared spaces. Making small changes to existing pathways and housing corridors, making them more visually interesting and dividing them into smaller sections may also improve wellbeing (Legatum Institute 2014, 65). Reducing noise and pollution will also help to bring people out of their homes and into public spaces. More financial support could also be given to community groups to help maintain green areas, as well as providing financial support to community facilities that enable people to shape how they interact with one and other (Legatum Institute 2014, 65).

#### Integration of transport and planning policies

The discussion above highlights numerous ways in which planning and transport decisions affect wellbeing and challenges policy-makers concerned with promoting wellbeing to think more holistically about interventions. Providing the places and spaces for voluntary social interactions is very important for wellbeing, highlighting the importance of both planning and transport policy for this end (Reardon and Abdallah 2013). Thus, in order to create high wellbeing places, transport and planning policies need to become more integrated, with the shared aim of promoting accessibility and not just mobility. Planners and developers need to incorporate the evidence of how the physical environment affects wellbeing into the design of cities, buildings and communities. As the Legatum institute (2014, 66) notes, the incorporation of wellbeing evidence into policy needs to go beyond traditional notions of design and 'systematically factor in the ability of built environments to create opportunities

for controlled social interaction by residents, and a sense of connection to the natural environment.' The APPG on Wellbeing Economics (2014, 24) highlights how a wellbeing approach can help planning 'rediscover its sense of purpose', provoking the sector to act in a more proactive 'place-shaping' rather than reactive way, and focus more on outcomes than process. This will mean working far more closely with transport policy makers and those involved in the delivery of local services, and ensuring training is given to planning policy makers that includes a broad range of disciplines including sociology and psychology. Having a wellbeing approach to policy may also provide the long term vision needed to prevent short-termism and the implementation of policies that actually result in reduced wellbeing. For instance, Anna Scott-Marshall of the Royal Institute for British Architects (cited by APPGWE 2014, 25) warned that 'pressure to turn empty shops into houses could "rip the heart out of many high streets" and thus reduce a sense of community and in turn wellbeing.

## Society and community based policy

#### Encourage social connections

Wellbeing research finds that social activity (the amount of time spent socialising) and social connections (both the amount and strength of such connections) are associated with higher levels of wellbeing and a decrease in depressive symptoms in an individual (nef 2012, 28). People who actively participate in their community are also found to have higher levels of wellbeing than those who do not. In turn, at both the individual and aggregate level, social connections are found to be among the most robust predictors of wellbeing (nef 2012, 28).

Social connections are said to foster social capital; defined as 'the social interactions that inspire trust and reciprocity among citizens' (Leyden 2003, 1546). Social capital is in turn important for wellbeing, with trust being one aspect of this that is also associated with higher levels of wellbeing (Diener et al 2009, 177; Bok 2010, 201). Social trust – as measured by trust in 'most other people' – is associated with higher happiness and life satisfaction levels, and a lower probability of suicide (nef 2012). Having trust in key areas of life – such as neighbours, the police, and government – is also important to wellbeing. However, trust in each of these areas is independent: for example, trust in government does not necessarily mean there is trust in the police (nef 2012). Wellbeing advocates therefore argue that it is important for governments to promote policies that foster social relationships and connections in order to improve wellbeing, but also in order to increase levels of social capital.

Arguably one way to do this is through encouraging volunteering. Volunteering as an activity in and of itself increases levels of wellbeing, while also having a positive spillover effect on the community (nef 2012, 29). It is because of the risk of free-riding on the positive effects of volunteering, rather than volunteering oneself, that the Legatum Institute (2014, 61) suggest government should play a role in encouraging volunteering. Legatum (2014, 62) also argue that people systematically underestimate the positive effect volunteering will have on themselves and others, and that to some extent levels of volunteering are linked to its 'regulatory and tax treatment' by the state. Instilling a sense of volunteering at a young age may help sustain volunteering activity into adulthood, supporting the case for groups such as the UK National Citizen's Service. The state could also remove bureaucratic barriers to volunteering such as excessive personal security checks and make it easier to volunteer whilst unemployed without risking the receipt of out of work benefit or tax credits.

Creating spaces for social interaction (as highlighted above) may also lead to opportunities for improved social connections, as well as subsidising community programmes that try and encourage the mixing of people from different ethnic and cultural backgrounds. Using information technology to lower barriers of interaction and the sharing of mutual interests may also increase social connections and trust (Halpern 2010, 43-44). Policies that specifically address loneliness are important for increasing social capital as well as for increasing the health and wellbeing of the individual: loneliness not only has a psychological impact but is found to increase the onset of disability and dementia, and increase the risk of high blood pressure and cardiovascular disease (Legatum 2014, 64). One approach to addressing loneliness would be for governments to support programmes that bring together formal and informal networks of people; for example nurses and neighbours, to work together to help look out for isolated people in their area (Legatum 2014, 64).

# **Discourage Gambling**

Some wellbeing advocates such as Layard (2005, 143) argue that the state should play a role in adjusting for the 'forecasting error' that people make when partaking in certain activities such as gambling. When people start gambling, for example, they do not realise how hard it will be to stop. Individuals are often bad at calculating the seriousness of the potential negative effects and of exaggerating the small probabilities of success, which undermines wellbeing. Therefore, Layard (2005, 143) suggests the state should consider playing a role and in banning gambling because it increases unhappiness and reduces wellbeing, even if there is a risk of paternalism. However, a more palatable and less paternalistic response might be for the state to promote awareness and education as to the causes and consequences of addiction.

## Ban advertising targeted at children

Wellbeing research highlights how wanting things we do not have, and comparing ourselves to others, are factors that contribute to dissatisfaction. Thus, there are those that suggest the state should play a role in protecting children from such dissatisfaction and from the 'hedonic treadmill' of ever increasing desires for goods (Halpern 2010, 36). As children are not able to protect themselves from exposure to advertising that promotes such desires, they are an obvious category for targeted policies. Indeed, this has already happened in countries like the UK, which has placed bans on the advertising of certain products, such as fast foods, during children's TV programmes.

However, the impact of such bans is likely to have less impact in the face of the expanding use of the internet and social media by children. Moreover, government action in this sphere is again seen by some as encroaching on the responsibilities of parents.

# **Encourage Religion**

There is strong evidence to suggest that regular engagement in religious activity has a positive effect on life satisfaction, positive emotion, happiness and is negatively correlated with depressive symptoms (nef 2012, 29). However, Halpern (2010, 44) points out that encouraging religion 'is almost never proposed as a policy conclusion', whereas other policy alternatives supported by less evidence, are regularly proposed. There are obvious challenges here in countries where there is a formal separation of state and church.

However, there may be lessons that governments can draw from wellbeing evidence related to religion that does not entail the promotion of religious practise per se. Nef (2012) highlight evidence showing that the frequency with which people partake in religious activity such as attendance at church services, and the amount of time spent on religious activity are positively correlated with increases in life satisfaction. However, research by Lim and Putnam (2010) found that while increased church attendance increases life satisfaction, more overtly religious factors such as frequency of private prayer and theological beliefs do not predict increases in life satisfaction. Therefore it may be the social aspect of religion, and the social networks that are built up within church congregations that are integral to wellbeing and produce the positive wellbeing effects. Lessons from religion thus provide further impetus to the argument that policy makers need to promote opportunities for social interaction and sense of community discussed elsewhere in this article.

# Encourage Marriage

Research shows that marriage is associated with higher levels of wellbeing (nef 2012, 31). Divorce causes a person's happiness to fall significantly; and has more than double the negative effect on wellbeing than losing a third of your income (Layard 2005, 65). The research however, suggests that after two or three years of marriage wellbeing levels fall, although wellbeing levels remain higher than they were four years before marriage (Layard 2005, 66). There is a similar pattern for divorce, but in the reverse, with the year of divorce producing the lowest levels of wellbeing. After that year men's happiness levels return to a baseline, while for women wellbeing levels remain lower. Second marriages are also associated with lower wellbeing scores, while parental divorce is found in some studies to reduce children's wellbeing into their adulthood (nef 2012, 31).

The wellbeing literature is largely silent on whether marriage should be promoted or incentivised by government. This may be because the literature shows that although there is no association between lower child wellbeing and the prevalence of families where one parent no longer lives at home, there is a negative association between children's subjective wellbeing and family conflict. Therefore to promote marriage at any cost may reduce wellbeing in some cases rather than increase it. Also, opponents may point to other aspects of the wellbeing literature that suggest that being in a stable relationship, where resources are shared, is more important to wellbeing than marriage per se (Layard 2005, 66).

Bok (2010) suggests three ways that the state can and should play a role in strengthening marriages and families. He suggests that policy makers should intervene in this way because although wellbeing of children is not necessarily affected by being from a 'broken family' children who are from a family with two married parents tend to have better school performance, fewer emotional and behavioural problems, partake in less substance abuse or criminal activity and have fewer out of wedlock births. As such, they have greater wellbeing in the long run (Bok 2010, 141). First, policy makers can have an influence through education; teaching teenagers how and why to avoid becoming pregnant, or teaching better skills of communication and conflict avoidance to young couples before and during marriage. The second way is through financially disincentivising couples from having out of wedlock pregnancies, for example by making the requirements stricter for women on welfare to go to work, raising the cost of pregnancy for both parties. However, such a measure may

discourage children out of wedlock, or penalise people for choosing to have children out of wedlock, rather than promote marriage and stability of relationships. In the UK, rather than financial disincentives to remain unmarried, couples have been given an incentive to marry through married tax breaks. The final suggestion from Bok (2010, 146) is to strengthen families through encouraging better care of children. This could be done through increasing paid parental leave for both parents that may reduce the stress on the parties in the relationship and relieve the feeling of being torn between work and family.

#### Governance

# Promote autonomy in service provision

Agency and control are important factors in wellbeing and thus should be recognised as important elements when designing state programmes and reforming services (Legatum Institute 2014; Halpern 2014). This could be done through devolving commissioning of services to the local level, and where appropriate and feasible, the individual. In the UK there has been a move towards such an approach, with social care services commissioned directly by the person in need of the service, rather than the local council (Halpern 2014, 556). However, there are concerns that such a move actually increases stress on the individual when services are not provided correctly, with responsibility directed at the individual where once the local council would be a more obvious mediator. Another approach would be to encourage feedback loops within a service, for example, by asking people whether they would recommend the service to a friend or family member. Such data allows other potential users to assess the quality of a service and 'vote with their feet' and may therefore act as a catalyst for services to improve through risk of losing users or could be used by policy makers as a tool to determine where to allocate funding for services (Kroll and Delhey 2013, 22).

## Inform public debate about societal objectives

One of the most fundamental hopes of wellbeing advocates is that the measurement of subjective wellbeing and its findings will help create a public debate about what objectives governments and societies should pursue. In launching the UK's wellbeing measurement agenda Prime Minister David Cameron (2010) argued that it would:

...open up a national debate about what really matters, not just in government but amongst people who influence our lives: in the media; in business; the people who develop the products we use, who build the towns we live in, who shape the culture we enjoy. And second, this information will help government work out, with evidence, the best ways of trying to help to improve people's wellbeing.

Seaford (2013) argues that wellbeing indicators and their associated analysis will help make explicit the often implicit assumptions that guide public policy making, and the way trade-offs are often made. The analysis of data will allow for a more informed public debate about the validity of the current trade-offs that are made in society and in turn may challenge assumed knowledge and, in time, lead to more effective policies.

#### Allow the public to make more informed decisions

As well as informing the debate about the goals states should work towards, wellbeing measurement and evidence can enable individuals to make more informed decisions about their lifestyle choices through easy to understand, transparent and accessible information provision. This might include decisions about jobs through greater understanding of the trade-offs between, for example, an increase in salary versus more commuting or less autonomy in the workplace. Wellbeing data might also inform individuals about choices over where to locate. Being able to analyse a hospital or school based on the wellbeing of its patients or students may enable potential users to make better informed choices about which services to access. More importantly, research explaining the factors that contribute to higher life satisfaction from such services can help individuals and communities promote wellbeing further in their areas (Diener et al 2009, 180).

#### Enhance policy appraisal

Wellbeing data could be used during policy appraisals as a better way of measuring nonmarket costs and benefits and reduce reliance on stated or revealed preference methodologies. As Seaford (2013, 36) notes;

As we build up our understanding of the wellbeing impacts of investments and policies, it is likely we will be able to draw on a database of the associations between objective outcomes and wellbeing in order to estimate the non-market costs and benefits of goods in wellbeing terms. This will replace or complement existing techniques designed to estimate preferences in the absence of direct market data.

As noted above in the discussion of transport noise and commuting, traditional methods of cost-benefit analysis tend to underestimate social costs. The UK government is currently

experimenting with using SWB as a complement to traditional methods. This type of analysis may mean that in the future, harder to quantify costs and benefits can be measured, and in turn policy options that may currently be undervalued may become higher priorities (Dolan and White 2007). For example, while there is a recognised link between wellbeing and participation in arts and cultural activities, being able to translate this into a social costbenefit measure may mean its potential impact becomes more tangible to policy makers and its value for money in terms of wellbeing impact can be more easily compared to other suggested interventions (APPGWE 2014, 38). Another policy choice it may help promote is in the area of risk prevention; the provision of flood barriers or building of levees, or the imposition of mandatory flood insurance. Utilising a revealed preference method to estimate the value people would put on such preventative measures may fundamentally underestimate the wellbeing impact on individuals. This is because such events may be incredibly rare, and people are not likely to appreciate the impact on them until they have experienced such an event. Utilising wellbeing evidence from a large sample of people who have been affected by a natural disaster would mean that the cost to the individual would be more accurately estimated (Diener et al 2009, 169). This could then be compared to competing policy demands in a more effective way and on a more equal footing.

#### Enhance policy evaluations

Measuring the wellbeing of individuals before and after a policy has been implemented could provide a useful supplement to evaluate a policy intervention. Seaford (2013, 37) gives two reasons for this. First in some circumstances, if wellbeing is produced alongside the more specific outcome of the policy the effects of the policy may be more long lasting. Seaford (2013, 37) points to evidence from an evaluation of a UK Big Lottery funded project in which the impact of a healthy eating programme on behaviour was much greater six months after the programme had ended, when the project had created an immediate effect on wellbeing and healthy eating behaviours immediately after the project had ended. The UK government is currently using wellbeing analysis in ways such as this; for example, in evaluating the success of their National Citizen Service Initiative (Cabinet Office 2014). Second, it may be the case that some interventions are based on understandings of what drives wellbeing. Therefore even if a policy is successful in its stated intention, for example increasing literacy, but has a negative impact on wellbeing, this may lead to some reformulating.

#### Help create 'joined-up' government

Advocates of wellbeing measurement argue that thinking in terms of wellbeing, utilising a dashboard of wellbeing indicators, promotes a more holistic view of the impact of policies. Very few policy interventions only have consequences for one government department but policy makers tend to operate within a departmental system in which only outcomes for their department are considered (Dolan and White 2007, 78). SWB measures may be able to provide a standard unit of comparison that can be used to analyse the impact of a policy across other domains.

#### Conclusion

This article has reviewed key literature that discusses the potential implications of a wellbeing approach to policy. Their prospects for adoption vary across a number of dimensions including political acceptability, technical feasibility and institutional capacity and receptiveness. Their widespread adoption is not an immediate prospect. But what is significant about this review is that it has revealed a range and depth of thinking on these options that would not have been possible just a few years ago. Important contributions to this debate are arriving thicker and faster than at any previous point. Here we have focused mainly on some illustrations emerging from UK policy networks and some key academic contributions (see Table 1 for overview). While we have good reason for focusing on the UK as our main case study – that it is widely seen at the forefront of many developments – it by no means has a monopoly of ideas on these topics and contributions are proliferating from a wide range of international and national sources (e.g., Hall et al (2010); EU Commission 2009; NDP Steering Committee and Secretariat, 2013). Our purpose here has thus been to illustrate how the 'wellbeing agenda' is moving forward. Elsewhere we have distinguished between a 'measurement' and a 'policy' agenda (Bache, Reardon and Anand forthcoming). Until very recently, the measurement agenda had dominated the discussion and debate and controversy in this field remains lively. However, there is an emerging policy debate that is taking its place alongside that on measurement. In the UK context this will be fuelled in the near future by a commitment of significant research council funding to understanding 'What Works for Wellbeing' (whatworkswellbeing.org). So, while there is some way to go before wellbeing might become a key goal of government policy, these developments in the policy stream are bringing this possibility closer.

Policy Area	Proposals	Source
Health	Health funding decisions based on SWB surveys	Diener et al 2009 pp 136 Cabinet office 2014
	Care giving burden cost-benefit measurement	Diener et al 2009 pp 137
	Wellbeing check-ups for children	Diener et al 2009 pp 140
	Subjective health – comparison to objective health, and funding allocations	Diener et al 2009 pp 143 APPGWE 2014 pp 33
	Assessment of health services	Collicelli 2013 Pavot and Diener 2004
	Expand mental health service provision	Halpern 2010 pp 34 Legatum 2014 pp 60 Lelkes 2013
	Integrate mental and physical health provision	APPGWE 2014 pp 32
	Teach children resilience skills/mindfulness	Halpern 2010 pp35 Donovan and Halpern 2002 APPGWE 2014 pp 31 Legatum 2014 pp 60 Halpern 2014
Local Environment policy and planning	Impact of transport noise	Diener et al 2009 pp147 Cabinet office 2014
	Wellbeing consequences of commuting	Diener et al 2009 pp 150 Halpern 2010 pp 38
	Importance of parks and green spaces	Diener et al 2009 pp 154 Legatum 2014 pp 64 Halpern 2014 (in H+C)
	Monitoring air pollution	Diener et al 2009 pp157 Cabinet office 2014
	Rediscover planning policy's purpose	APPGWE 2014 pp 24
Economy	Risks of unemployment/Importance of employment	Diener et al 2009 pp 160 Easterlin 2013
	Promote stability and job security	APPGWE 2014 pp 19 BRAINPOoL 2014 Bok 2010 Ch. 6

# Table 1 – Overview of policy ideas

		۱ ۱
	Promoting wellbeing in the workplace	Diener et al 2009 pp 165 APPGWE 2014 pp 22 Cabinet office 2014 Legatum 2014 pp 67 Pavot and Diener 2004
	Cost-benefit of natural disaster and risk sharing	Diener et al 2009 pp 169
	Income distribution and Income/progressive tax	Diener et al 2009 pp 171 Halpern 2010 pp 36 Donovan and Halpern 2002 Bok 2010 chapter 5
	Tackle low pay	BRAINPOoL 2014
	Tackle poverty and inequality	APPGWE 2014 pp 20 Cabinet office 2014
	Avoid performance related pay	Halpern 2010 pp 35
	Promote work-life balance	Halpern 2010 pp 39 Donovan and Halpern 2002 APPGWE 2014 pp 22 Cabinet office 2014 BRAINPOoL 2014
	Expand consumption taxes	Halpern 2010 pp 39
	Active welfare state policies	Donovan and Halpern 2002 Legatum 2014 pp 66
	Help create a narrative around a green economy	BRAINPOoL 2014
Society and community	Importance of building and maintaining trust	Diener et al 2009 pp 177 Bok 2010 pp 201
	Building social capital	Halpern 2010 pp 43 Halpern 2014
	Promote social cohesion and physical activity	APPGWE 2014 pp 27 Cabinet office 2014
	Place shaping approach to planning needed	APPGWE 2014 pp 28
	Subsidise community engagement	Donovan and Halpern 2002

		1
	Evaluation of aspects of city life eg services	Diener et al 2009 pp 179
	Encourage residential stability	Halpern 2010 pp 38
	Ban advertising for children	Halpern 2010 pp 36
	Discourage gambling	Halpern 2010 pp 37
	Encourage religion	Halpern 2010 pp 44
	Promote volunteering and giving	Legatum 2014 pp 61 Halpern 2014
	Address loneliness	Legatum 2014 pp 63
	Encourage marriage	Bok 2010 Ch. 8
Governance	Inform public debate about objectives	Nef evidence 2014 Seaford 2013 Halpern 2010 pp 41, 48 Donovan and Halpern 2002 Carnegie 2012 pp 21
	Allow the public to make informed choices	Donovan and Halpern 2002 Legatum 2014 pp 71
	Promote autonomy and self-control	Halpern 2014 (in H+C)
	Reduce silo mentality	Carnegie 2012 pp 25 Dolan and White 2007
	Cost-benefit analysis and funding decisions	APPGWE 2014, pp 13 Nef evidence 2014 Donovan and Halpern 2002 Carnegie 2012 pp 21 Cabinet office 2014 Seaford 2013 Legatum 2014 pp 51 Kroll and Delhey 2013
	Use of SWB measures in policy evaluation	Dolan and White 2007 Nef evidence 2014 Carnegie 2012 pp 29
	Improve policy appraisal	Cabinet office 2014 Dolan et al 2011 Cabinet office 2014

		Seaford 2013 Kroll and Delhey 2013
Arts and Culture	Use wellbeing analysis to make case for spending, set priorities, and evaluate them	APPGWE 2014 pp 38
	Ensure benefits of art subsidy reaches those with lowest wellbeing	APPGWE 2014 pp 41

## References

Ahn, N. (2005) Life Satisfaction among Spanish Workers: Importance of Intangible Job Characteristics. Working Papers 2005-17, FEDEA.

APPGWE (2014) Wellbeing in Four Policy Areas, London: nef

Babisch, W. (2000) 'Traffic noise and cardiovascular disease: Epidemiological review and synthesis', Noise Health, 2 (8), 9–32. Available from http://www.noiseandhealth.org/article.asp?issn<sup>1</sup>/<sub>4</sub>1463-1741;year<sup>1</sup>/<sub>4</sub>2000;volume<sup>1</sup>/<sub>4</sub>2;issue<sup>1</sup>/<sub>4</sub>8;spage<sup>1</sup>/<sub>4</sub>9;epage<sup>1</sup>/<sub>4</sub>32;aulast<sup>1</sup>/<sub>4</sub>Babisch

Babisch, W. (2006). 'Transportation noise and cardiovascular risk: Updated review and synthesis of epidemiological studies indicate that the evidence has increased', Noise Health, 8 (30), 1–29. Available from <u>http://www.noiseandhealth.org/text.asp?2006/8/30/1/32464</u>

Bache, I. (2015) 'Measuring Quality of Life: An idea whose time has come? Agenda-setting dynamics in Britain and the European Union', in Søraker, J.H., Boer, J., De Rijt, J., Wong, P., and Brey, P. (eds.): Well-Being in Contemporary Society. Dordrecht: Springer, 197-214

Bache, I. and Reardon, L. (2013) 'An idea whose time has come? Explaining the rise of wellbeing in British politics', Political Studies. 61 (4), pp. 898-914

Bache, I., Reardon, L. and Anand, P. (forthcoming) 'Wellbeing as a wicked problem: navigating the arguments for the role of government', Journal of Happiness Studies.

Bok, D. (2010) The Politics of Happiness: What Government Can Learn From the New Research on Well-Being, Oxford: Princeton University Press.

BRAINPOoL (2014) Beyond GDP: From Measurement to Politics and Policy, London: BRAINPOoL

Brulde, B. (2010) 'Happiness, Morality, and Politics', Journal of Happiness Studies, 11 (5), pp. 567–83

Cabinet Office (2013) Well-being Evidence Submitted by the Government to the Environmental Audit Committee Wellbeing Inquiry. Available from http://www.parliament.uk/business/committees/committees-a-z/commons-select/environmental-audit-committee/inquiries/parliament-2010/well-being/

Cameron, D. (2010) 'PM Speech on Well-Being'. Speech given by the Prime Minister, London, 25 November. Available from: <u>http://www.number10.gov.uk/news/speeches-and-</u> <u>transcripts/2010/11/pm-speech-on-well-being-57569</u>.

CMEPSP (2009) Report by the Commission on the Measurement of Economic Performance and Social Progress. Available from: http://www.stiglitz-sen-fitoussi.fr/en/index.htm [Accessed June 2011].

den Boer, L. C., and Schroten, A. (2007) Traffic noise reduction in Europe: Health effects, Social costs and Technical and Policy Options to Reduce Road and Rail Traffic Noise. The Netherlands: Delft University. Available from http://www.transportenvironment.org/sites/te/files/media/2008–02\_traffic\_noise\_ce\_ delft\_report.pdf

De Prycker, V. (2010) 'Happiness on the Political Agenda? PROS and CONS', Journal of Happiness Studies, 11 (5), pp. 585–603.

Diener, E., Lucas, R., Schimmack, U., and Helliwell, J. (2009) Well-being for Public Policy, New York: Oxford University Press

Donovan, N. and Halpern, D. (2002) Life Satisfaction: The State of Knowledge and Implications for Government, London: UK Government Strategy Unit

Dora, C. (1999). 'A different route to health: Implications of transport policies', British Medical Journal, 318, 1686–1689.

Duhme, H., Weiland, S., Keil, U., Kraemer, B., Schmid, M., Stender, M., and Chambles, S. (1996) 'The association between self-reported symptoms of asthma and allergic rhinitis and self-reported traffic density on street of residence in adolescents', Epidemiology, 7, 578–582.

Duncan, G. (2010) 'Should Happiness-Maximization be the Goal of Government?', Journal of Happiness Studies,11 (2), pp. 163–78.

Easterlin, R. (1974) 'Does Economic Growth Improve the Human Lot?' in P. David and M. Reder (eds.) Nations and Households in Economic Growth: Essays in Honour of Moses Abramovitz, New York: Academic Press Inc.

EU Commission (2009) GDP and beyond Measuring progress in a changing world, Brussels: EU Commission.

Ferreira, S., Moro, M., and Clinch, J. P. (2006) 'Valuing the environment using the lifesatisfaction approach', Working Paper 06/03. Social Science Research Network. Available from http://papers.ssrn.-com/sol3/papers.cfm?abstract\_idl/4904355

Fyhri, A., & Klaeboe, R. (2009). 'Road traffic noise, sensitivity, annoyance and self-reported health – a structural equation model exercise'. Environment International, 35, 91–97.

Gatersleben, B., and Uzzell, D. (2007) 'Affective appraisals of the daily commute: Comparing perceptions of drivers, cyclists, walkers, and users of public transport.' Environment and Behaviour, 39, 416–431.

Grimwood, C. J., Skinner, C. J., and Raw, G. J. (2002). The UK national noise attitude survey. Paper presented at Noise Forum Conference, London.

Gulliver, J., and Briggs, D. (2004) 'Personal exposure to particulate air pollution in transport microenvironments', Atmospheric Environment, 38, 1–8.

Hagihara, A., Tarumi, K., Babazono, A., Nobutomo, K., and Morimoto, K. (1998) 'Work versus non-work predictors of job satisfaction among Japanese white-collar workers', Journal of Occupational Health, 40, 285-292

Hall, J. et al. (2010), A Framework to Measure the Progress of Societies, OECD Statistics Working Papers, 2010/05, OECD Publishing. Available From <u>http://dx.doi.org/10.1787/5km4k7mnrkzw-en</u>

Halpern, D, (1995) Mental Health and the Built Environment: More Than Bricks and Mortar? London: Taylor & Francis.

Halpern, D. (2010) The Hidden Wealth of Nations, Cambridge: Cambridge University Press.

Kahneman, D., Krueger, A., Schkade, D., Schwarz, N., and Stone, A. (2004) 'A survey method for characterizing daily life experience: The day reconstruction method', Science, 306, 1776–1780.

Kahneman, D., Ritov, I. and Schkade, D. (1999) 'Economic Preferences or Attitude Expressions? An Analysis of Dollar Responses to Public Issues', Journal of Risk and Uncertainty, 19, 220-242.

Kroll, C. (2011) Measuring Progress and Well-Being: Achievements and Challenges of a New Global Movement, Berlin: International Policy Analysis.

Layard, R. (2005) Happiness: Lessons From a New Science, London: Penguin

Legatum Institute (2014) Wellbeing and Policy London: Legatum Institute

Leyden, K. (2003) 'Social capital and the built environment: The importance of walkable neighbourhoods', American Journal of Public Health, 93, 1546–1551.

Lim, C. and Putman, R. (2010) 'Religion, Social Networks and Life Satisfaction', American Sociological Review, 75 (6), 914-933.

Lyons, G., and Chatterjee, K. (2008) 'A human perspective on the daily commute: Costs, benefits and trade-offs', Transport Reviews, 28, 181–198.

MacKerron, G., and Mourato, S. (2009). 'Life satisfaction and air quality in London', Ecological Economics, 68, 1441–1453.

NDP Steering Committee and Secretariat (2013). Happiness: Towards a New Development Paradigm: Report of the Kingdom of Bhutan. Bhutan: NDP Steering Committee and Secretariat

Nef (2012) Well-being Evidence for Policy: A Review, London: nef

Nef (2014) Written evidence submitted by the new economics foundation to the Environmental Audit Committee Wellbeing Inquiry. Available from http://www.parliament.uk/business/committees/committees-a-z/commonsselect/environmental-audit-committee/inquiries/parliament-2010/well-being/ Novaco, R., Stokols, D., and Milanesi, L. (1990) 'Objective and subjective dimensions of travel impedance as determinants of commuting stress', American Journal of Community Psychology, 18, 231–257. Available from http://link.springer.com.eresources.shef.ac.uk/journal/10464/18/2/page/1

Putman, R. (2000) Bowling alone: The collapse and revival of American community. New York, NY: Simon & Schuster.

Reardon, L. and Abdallah, S. (2013) 'Transport and Well-Being: Taking Stock and Looking Forward', Transport Reviews. 33 (6) 634-657

Seaford, C. (2013) 'The Multiple Uses of Subjective Well-Being Indicators', Social Indicators Research, 114, 29-43

So, K., Orazem, P., and Otto, D. (2001) 'The effects of housing prices, wages, and commuting time on joint residential and job location choices', American Journal of Agricultural Economics, 83, 1036–1048.

Stutzer, A., and Frey, B. (2008) 'Stress that doesn't pay: The commuting paradox', Scandinavian Journal of Economics, 110, 339–366.

Van Praag, B. and Ferrer-I-Campbell, A. (2004) Happiness Quantified: A Satisfaction Calculus Approach New York: Oxford University Press.

Welsch, H. (2002). Preferences over prosperity and pollution: Environmental valuation based on happiness surveys. KYKLOS, 35, 473–494. Available from http://www.swetswise.com.eresources.shef.ac.uk/eAccess/viewAbstract.do?articleID<sup>1</sup>/<sub>4</sub>15471 3048

Welsch, H. (2006). 'Environment and happiness: Valuation of air pollution using life satisfaction data', Ecological Economics, 58, 801–813.