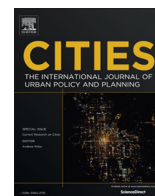


Contents lists available at [SciVerse ScienceDirect](#)

Cities

journal homepage: [www.elsevier.com/locate/cities](http://www.elsevier.com/locate/cities)

## City profile

## What makes a 'happy city'? ☆

Dimitris Ballas \*

Department of Geography, University of Sheffield, Winter Street, Sheffield S10 2TN, United Kingdom

## ARTICLE INFO

## Article history:

Available online 21 June 2013

## Keywords:

Quality of life (QoL)  
 Cities and regions  
 Objective indicators  
 Subjective measures  
 Well-being  
 Happiness  
 Social justice

## ABSTRACT

Measuring and analysing the factors that affect the quality of life (QoL) in cities and regions has long been the subject of theoretical and empirical work in a wide range of fields. More recently there have been an increasing number of studies involving traditional so-called objective indicators of QoL as well as more subjective measures of well-being, drawing on the emerging new science of happiness. This article presents an overview of studies in this field and highlights the key issues and debates pertaining to measuring, analysing and theorising QoL and happiness in cities and regions. It also highlights the importance of geographical and socio-economic contextual factors pertaining to QoL, well-being and happiness with a particular emphasis on the impact of social and spatial inequalities and social justice.

© 2013 The Author. Published by Elsevier Ltd. All rights reserved.

## Introduction

Measuring the extent to which *where* we live affects how we feel and our overall QoL has long been the subject matter of theoretical and empirical work in the fields of human geography, urban and regional studies, regional science and regional Economics. Most of the efforts to date involve the use of objective approaches to researching QoL and well-being, whereby factors pertaining to the social and physical environment, that are relatively easy to quantify and which are assumed to determine human well-being (e.g. income, consumption, residential land, wages and rents, local amenities, natural environment, environmental pollution) are observed, measured and modelled. These factors are typically rated, and regions and cities are ranked on this basis (e.g. see [Savageau's \(2007\) Places Rated Almanac](#), [Mercer's \(2012\) Quality of Living](#) rankings, or a more negative approach in *Crap Towns: The 50 Worst Places to Live in the UK* by [Jordison and Kieran \(2003\)](#)). Nevertheless, over the past decade there has been a massively increased interest in *subjective* measures of QoL and well-being, which are based on social survey data, whereby people are asked to rate their health, well-being, life satisfaction and overall happiness. In particular, in recent years there have been numerous attempts in the social sciences to define, measure and analyse subjective measures of happiness from different academic disciplinary perspectives, ranging from neuroscience and psychology to philosophy and economics. 'Happiness questions' are increasingly used in population

surveys and there is a rapidly growing body of interdisciplinary research on the determinants of subjective happiness and well-being. There has also been theoretical work discussing the possible links between subjective happiness and geographical or wider 'contextual' circumstances and characteristics (e.g. climate and socio-economic environment) as well as the relative importance of such characteristics in different countries and within regions and cities in a country ([Ballas & Dorling, 2013](#)).

An important distinction that can be made with regards to all these issues is that between studies of *happiness*, which typically analyse subjective measures measured via social survey questions such as 'are you happy with your life?' or 'how happy do you feel as you live now?', whereas *quality of life* (QoL) studies usually pertain to the analysis of more objective factors, such as the quantity and quality of natural amenities (e.g. climate and physical beauty) as well human-created amenities (e.g. recreation/entertainment opportunities, education and health services) and other 'objective' factors (e.g. unemployment rate and human capital). In the past decade there has been an increased interest in studying both objective and subjective measures of QoL and happiness and their socio-economic, demographic as well as possible geographical determinants. Given that most of the world's population now lives in cities, it is not surprising to see that a large and rapidly growing number of such studies focuses on urban areas, building on the long tradition of analysing 'objective' QoL measures and combining them with subjective approaches to measuring well-being. Of particular relevance and importance is a recent edited volume by [Marans and Stimson \(2011\)](#) "Investigating Quality of Urban Life", which included a detailed overview of pertinent studies over the last 50 years. It also included an impressive and cohesive set of empirical case studies of cities around the world, illustrating the

\* This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

\* Tel.: +44 114 2227923; fax: +44 114 2227907.

E-mail address: [d.ballas@sheffield.ac.uk](mailto:d.ballas@sheffield.ac.uk)

key issues and approaches to the objective as well as subjective measurement of quality of urban life. Further, the volume highlights recent methodological developments and innovations (such as GIS and agent-based modelling) aimed at integrating objective and subjective approaches.

This article aims to further build on efforts such as the work of Marans and Stimson by highlighting the key issues pertaining to the factors affecting QoL, well-being and happiness in cities and also by reviewing some more recent work. The article is organised as follows: the next section presents an overview of ‘objective’ approaches to measuring QoL and well-being, drawing on some key comprehensive reviews that were carried out in the past, but also highlighting more recent work. The ‘Subjective happiness and well-being’ section introduces approaches to measuring and analysing ‘subjective’ measures of well-being and happiness and discusses the studies with a geographical and urban focus in this field to date. The ‘Contextual factors: social and spatial inequalities, social justice and the city’ section provides a discussion of city and city-region contextual factors pertaining to QoL, well-being and happiness. It also discusses methods and attempts to examine the interaction between individual level QoL and happiness and context. The concluding section discusses the role that cities can and should play in the new agendas of subjective happiness and well-being indicators and presents a research agenda to that end.

## Objective approaches to measuring QoL in cities

### *Conceptualising QoL in cities and regions*

It can be argued that the first comprehensive geographical approach to measuring city and regional QoL and well-being using objective measures is the work of David Smith, who systematically examined the geography of social well-being in the US (Smith, 1973). This study was based on the statistical analysis of secondary data for different geographical levels. Since then there has been a steadily growing number of similar but increasingly sophisticated studies of urban and regional QoL. There have also been a number of reviews of such studies, some of which have been very comprehensive and informative. Amongst the notable most recent surveys is the work of Craglia, Leontidou, Nuvolati, and Schweikart (2004), Mulligan, Carruthers, and Cahill (2004), Stimson and Marans (2011), Mulligan and Carruthers (2011) and Lambiri, Biagi, and Royuela (2007). This section provides an overview of the key debates, points and themes highlighted by these reviews, but it also aims to enrich these debates with a discussion of additional and more recent work.

It has often been suggested (Mulligan & Carruthers, 2011; Mulligan et al., 2004) that amongst the first attempts to quantify and analyse QoL in cities is the work of Goodrich, Allin, and Hayes (1935), Goodrich (1936), who identified a data-based “plane of living” for US counties during the Great Depression, and Thorndike (1939), who rated the “goodness of life” in US cities. These studies were followed by Tiebout’s (1956) theory that people select where they live by considering public services in relation to the tax they have to pay, ‘voting with their feet’ when they are not satisfied with the level of services they receive in a particular location. Nevertheless, as noted above, it can be argued that the first attempt to build an *evidence-based* framework that can be used for the analysis of social well-being and QoL is the work of Smith (1973). In addition, there have been considerable efforts aimed at building a comprehensive conceptual, theoretical and empirical framework for the analysis of regional variation of QoL such as the work of Rosen (1974), Cropper (1981), Graves (1982) and Roback (1982), who examined the relationship between wages, rents and QoL indica-

tors, as well as the work of Hoehn, Berger, and Blomquist (1987) who demonstrated how amenity values can be estimated in an inter-regional context. These studies typically define individual well-being as a utility function of factors that can be measured (e.g. consumption, residential land, wages and rents, local amenities) and which are assumed to be associated with QoL. The theories underpinning these debates suggest that, assuming constant-returns-to-scale technology and free mobility, “an interregional equilibrium implies that firms cannot reduce their costs and individuals cannot improve their well-being by relocation” (Hoehn et al., 1987, p. 608).

### *Building objective well-being indicators for cities and regions*

These theoretical developments have been complemented by numerous attempts to provide *specific objective indicators* of QoL by city and region, and to identify the factors affecting it, including natural and urban amenities. In particular, there has been considerable research on the impact of the latter and of related public policy initiatives upon a range of measures that are thought to affect QoL in cities and regions (e.g. Bartik and Smith, 1987; Beeson, 1991). A recent example is the work of Morais and Camanho (2011) who presented an evaluation of the performance of 206 European cities on the basis of QoL based on two approaches: the construction of a composite indicator and an assessment of the ability of local authorities to promote QoL in the city given the economic position of their country. Further, Morais, Miguèis, and Camanho (2011) present an assessment of the urban QoL in European cities from the perspective of highly qualified and educated workers. They highlight the increasing policy relevance of urban QoL, given that it plays a major role in the migration decisions of highly educated workers. The attraction of highly educated workers in turn significantly affects the competitiveness of cities, so it is argued that there is a strong need to improve methods to evaluate and monitor urban QoL. Morais et al. (2011) developed a composite QoL index for 246 European cities by using data from the European Urban Audit.

It can be argued that the quantity and standard of amenities could be seen as a suitable objective indicator of QoL in cities. As Mulligan and Carruthers (2011) point out, amenities can be seen as “site- or region-specific goods and services, of either the private or public variety, that make some locations particularly attractive for living and working. Their opposites, disamenities, make other places unattractive”. Amenities in this context include both natural (e.g. climate, physical beauty, proximity to mountains or coasts) as well as social or human-created (theatres, music halls, restaurants, public parks, health and education services, and shopping choice) phenomena. Mulligan et al. (2004), in a very comprehensive and synthetic overview of multidisciplinary research on QoL and cities, suggested that natural amenities such as climate and topography have an important impact on household migration decisions as well as on the cost of housing. In addition, social and human-created amenities such as fiscal prudence, cultural and lifestyle tolerance, education, crime levels and the responsible management of land use are increasingly important for the success of cities. Relevant examples of modelling natural amenities include the work of Cheshire and Magrini (2006), who used measures relating to climate, and Shapiro (2006) who used air quality measures. Similarly, with regards to social/human created amenities Glaeser, Kolko, and Saiz (2001) explored the impact of bars, restaurants and theatres and Glaeser and Sacerdote (1999) explored the impact of crime.

More recently, Mulligan and Carruthers (2011) examined the role of amenities in regional economic development and identified the following key debates: “jobs versus amenities”, “jobs versus people adjustment” and “household migration”. The “jobs versus

amenities" debate is underpinned by the ideas of Rosen (1974) and Roback (1982), which were briefly discussed above. Of particular importance is the idea that geographical differences in QoL would be compensated by respective disparities in wages and house prices. This is also commonly referred to as the urban–rural wage gap or *compensating differentials framework* (see Mulligan & Carruthers, 2011). It is argued that everything else being equal, people would be prepared to accept lower wages and to pay more to buy a house in cities and regions with better amenities. In contrast, they would demand higher wages and would be prepared to pay much less for a house in areas with fewer and lower-quality amenities and with disamenities such as high levels of crime and environmental pollution.

A good recent example of a relevant empirical study is the work of Kahsai, Gebremedhin, and Schaeffer (2011) who investigated the impact of the natural and built amenities on growth by analysing data for 299 counties in the Northeast region of the US. Their analysis suggests that historical and cultural amenities (including the amenities of neighbouring counties), as well as water-based recreational amenities, have a positive impact on population growth. In contrast, the impact of natural amenities was found to be negative or insignificant. However, the overall analysis did not find any evidence of a consistent and strong relationship between amenities and regional economic growth. Another is the work of Robinson, Murray-Rust, Rieser, Milicic, and Rounsevell (2012), who adopted an agent-based modelling approach to explore the links between land system dynamics and well-being. In particular, they built agent-based models and used them to simulate the impact of the availability of highly productive agricultural soil, noise pollution and indicators such as 'access to green space', public transport and 'access to shops' on the well-being (defined as utility, drawing on utility theory) of agents. Their results suggested that aggregate resident QoL increases non-linearly with changes in development density and that clustering of industrial development has a positive impact on well-being.

More recently, Carruthers and Mulligan (2012) revisited the concept of the 'plane of living' coined by Goodrich et al. (1935) in order to explore the relationship between QoL differentials and housing values in the three decades leading to the financial crisis in the USA. They defined the plane of living as "the surface that modern American households negotiate as they decide where to live, and at what cost" (Carruthers & Mulligan, 2012, p. 754). Using systematic mapping and spatial econometric methods they present and explore the impact of both the natural as well as socio-economic dimensions of the plane of living upon housing values. Their analysis indicates that both natural as well as human amenities have a very important role, but with the latter having a more powerful influence. It is also suggested, however, that human amenities offer an opportunity for public policy to make a difference, especially by investing in human capital.

#### *Migration-based and 'voting with their feet' approaches*

The second key debate identified and considered by Mulligan and Carruthers is 'jobs versus people', or, in other words, demand (employment) versus supply (population). This is underpinned by the ideas discussed above, as well as the thinking of Borts and Stein (1964), Muth (1971), and Steines and Fisher (1974) according to which jobs follow people into cities and regions in addition to the other way around. In particular, people move between cities and regions in search for work but also consider other issues directly affecting their QoL. Nevertheless, when there are high numbers of moves based on QoL considerations into a region, this could result in increased demand for goods and services (e.g. enhanced demand for leisure services, real estate, health services) which in turn could lead to increased demand for labour and to additional

people moving in the region for employment. Mulligan and Carruthers (2011) present an overview of studies tackling these issues with the use of the so called regional adjustment tool (Mulligan et al., 1999; Mulligan et al., 2006). Also, a very good recent example of this type of work is a comparative study of Europe and North America by Faggian, Olfert, and Partridge (2011) who examine the relationship between population change and local natural amenities as well as income per capita; they point out that the migration-behaviour revealed preferences (or 'voting with their feet') measures are more reflective of well-being in North America than in Europe.

The 'household migration' debate is very relevant to Tiebout's (1956) original theory. There is a closer focus on the individual and household motives behind population movements, recognising that different demographic and socio-economic groups are attracted by different factors which need to be taken into account in analysis. Older populations may place more emphasis on climate factors and health services, whereas households with children would be attracted by areas with better child care and education services. A number of studies deal with such issues, the most recent of which is that by Whisler, Waldorf, Mulligan, and Plane (2008) who add a 'life course' dimension to the study of QoL and migration, highlighting the importance of simultaneously looking at personal characteristics and type and quality of amenities, suggesting that valuations of amenities differ across life-course groups. They look at the migration patterns of college-educated populations across metropolitan areas in the US in relation to QoL indicators and explore the relationship between out-migration patterns and a range of individual characteristics, which include life course stage, spatial-demographic setting as well as QoL characteristics. Their findings suggest that cultural and recreational amenities are particularly important for the younger segments of this population. On the other hand, safety issues and a preference for milder climate are what matters for the older college educated population. In addition, an important finding of this study is that areas with growing human capital had significantly lower migration rates.

Also of relevance here is a recent relevant study by Korpi, Clark, and Malmberg (2011) who explored the interaction between internal migration, disposable income and the cost of living in Sweden. They pointed out that most studies to date suggest that migration is associated with positive changes in disposable individual and household income. Nevertheless, they also suggest that if the housing costs in the destination region are taken into account, then this pattern is reversed. In particular, their analysis suggests that households moving up the 'urban hierarchy' (from smaller to larger labour markets and population growth regions) also experience increases in their disposable income, but at the same time considerable rises in their housing expenditure, which may offset the gains in disposable income. They also point out that the willingness to accept such costs may be explained by other factors pertaining to regional or city level QoL such as amenities as well as possible long-term economic gain. In other words, and as it would be expected, people are willing to pay more for their homes when moving to more attractive areas. This is consistent with the theoretical framework originating in the work of Rosen (1979) and Roback (1982), discussed earlier.

Also of relevance to the 'household migration' theme, is the work of Faggian and Royuela (2010) who studied migration flows between municipal areas in Barcelona. Their modelling work includes a QoL composite indicator comprising objective area measures, as well as individual variables. Their work suggests that a single composite index of QoL can be used to proxy differentials between areas; but they also suggest that individual variables can also be used to better identify aspects of QoL that may be particularly important in different contexts. With regards to Barcelona they point out that inter-municipal migration is significantly affected by variables such as sport, culture and education facilities

as well as public transport and traffic congestion. Royuela, Moreno, and Vayà (2010) and Royuela (2011) further build on this work by examining the impact of QoL measures upon population growth in the municipalities of Barcelona using a simultaneous equation model. This confirms a positive and statistically significant impact and also highlights the importance of spatial lags for some variables, given that services are not homogeneously provided in the territory.

#### *Housing-market analysis perspectives*

The above discussion demonstrates the significant progress and further contributions to knowledge about the socio-economic and geographical determinants of 'objective' QoL in cities and social well-being, since the early theoretical work of Tiebout (1956) and the first comprehensive empirical study of this kind by Smith (1973). Nevertheless, there are increasingly debates calling for new approaches to the analysis of QoL and for a better understanding of what makes a place attractive and what maximises utility from living in a particular city or neighbourhood. Of particular importance here are the current lively debates regarding the most suitable approach to the analysis of housing markets (Boelhouwer, 2011; Clark, 2011; Marsh & Gibb, 2011; Smith, 2011; Watkins & McMaster, 2011, and Clapham, 2011).

Marsh and Gibb (2011) revisit standard neoclassical economic theories of explaining housing market decisions and they argue that they are not suitable for understanding the complexity of residential mobility, arguing that expected utility theory is particularly ill-suited for the understanding of housing decisions. They provide a discussion of potential alternative approaches to behavioural and institutional economics. Most standard models (and this is also the case with most of the work discussed above) focus on physical and human amenities, but Marsh and Gibb argue that this is not enough and that social context should also be taken into account. In particular, they highlight the relevance of relative and conspicuous consumption theories, including the work of Veblen (1899) as well as more recent discussions of signalling social position through consumption (Bagwell & Bernheim, 1996; Charles, Hurst, & Roussanov, 2009; Frank, 2008). These debates are also revisited later in this article. It is argued that there is a very strong social dimension of housing consumption and that this has long been established in the social sciences, although it is very often ignored by conventional economists.

Smith (2011) also highlights the inadequacy of mainstream economic theories and tools for the understanding of house price dynamics and considers the possibility of cross-disciplinary alliances (including the fields of material sociology and social psychology) for the development of new models of housing market behaviour. In particular, she offers a comprehensive criticism of the ability of mainstream models to explain regional house prices on the basis of economic fundamentals such as income, population growth, housing supply and interest rates, and argues that there is a need to also consider the psychology of expectations, money illusion, over-confidence, greed and fear, thus revisiting earlier relevant work on the financial markets by Shiller (2005) as well as the economists' debate on the merits of Adam Smith's "invisible hand" and Keynes' "animal spirits". In this context, she also discusses relevant work by Case and Shiller (2003) on the so called 'Glamour Cities' which are characterised by entertainment amenities and high tech industries as well as world class universities, that are also the places where international celebrities want to live. It is argued that in these cities "home price appreciation surges ahead of incomes, as money illusion combines with over-optimistic expectations to extract high prices from buyers who regard their homes as luxury goods, and who are looking for investment returns" (Smith, 2011, p. 244), which leads to prices being driven

by "irrational emotional impulses: by the economic fallacies people believe in; by the mechanisms (word of mouth, media frenzies) which amplify these; by the imprint of animal spirits" (Case & Shiller, 2003; cf, Smith, 2011, p. 244). She also discusses the so called 'superstar cities', drawing on the work of Gyourko, Mayer, and Sinai (2006). In contrast to 'glamour cities', house prices in 'superstar cities' are driven by economic fundamentals and they are described as "metropolitan areas where demand for housing exceeds supply, and where supply is constrained, generally because of coastal locations. In these cities, prices are driven up primarily by wealth-selection: in-movers have higher-than-average incomes; while out-movers are disproportionately drawn from low-income groups" (Smith, 2011, p. 244). Smith also provides an overview of the different perspectives coming from material sociology, social psychology and cultural economy and concludes that there is a need for an interdisciplinary approach to the analysis of the housing economy.

Watkins and McMaster (2011) have commented on the papers of Marsh and Gibb and Smith, and endorse the call for the need to "energise inter-disciplinary working in behavioural studies" and, in particular "the need to work on resolving some of the tensions that might arise from attempts to blend the insights and approaches associated with different disciplinary perspectives" (p. 281). Clark (2011) also discusses expected utility models and reflects on the key messages, providing a discussion of whether traditional growth models are appropriate for the analysis of house prices: "...are the traditional growth models suspended in these 'glamour cities'? Why should home prices be driven by fundamentals in some cities while in 'glamour cities' price dynamics are more sensitive to irrational behaviours? Are high prices less a function of attractive amenities and a simple willingness to pay? These are research questions which may well be amenable to hypothesis testing and analysis. Whether there are some cities where price rises are driven by fundamentals and others by speculative and psychological imperatives is not yet clear, nor is it clear how it would change the modelling strategy" (Clark, 2011, p. 272). Clark also provides a very interesting overview of the background to and causes of housing price escalation in the US and points out that households gradually viewed housing as both home and ATM: "the rapid increases in housing prices shifted the psychology from the house simply as a place to raise a family and have a secure living environment to how much money was being generated by the rise in property values" (Clark, 2011, p. 265).

#### *Towards an interdisciplinary approach and a synthesis*

It is increasingly argued that there are lessons to be learned from disciplines such as psychology and behavioural economics regarding the better understanding and measurement of concepts such as utility, QoL, happiness and well-being with the use of subjective measures. As noted in the introduction, a rapidly growing number of studies in the social sciences use subjective measures of QoL, well-being and happiness. Although there is a relative paucity of such studies with a regional or urban focus, this seems to be changing. The next section reviews the key issues pertaining to subjective measures of well-being and overall QoL and the studies of subjective happiness and well-being in cities and regions.

### **Subjective happiness and well-being**

#### *Subjective versus 'objective' well-being*

We have seen that there has been a long, successful history and lively debates regarding the 'objective' measurement of QoL in cities. All studies reviewed in the previous section are

underpinned – at least implicitly – by the assumption that objectively measured variables (such as life expectancy, education attainment, number of amenities or disamenities) are correlated with how the inhabitants of the cities subjectively feel about their quality of their life. However, it has often been argued that any such correlation would vary and would depend on individual characteristics (e.g. gender, income, and position in the life cycle) as well as area, or contextual and cultural characteristics. In addition, any such correlation would depend on the ways in which subjective QoL and well-being are measured. The importance of exploring this issue has long been recognised and also highlighted in the work of Smith (1973), who argued that there is a need to compare objective measures to social attitude and other subjective measures. Amongst the first attempts to actually examine whether there is any association is the work of Schneider (1975), who investigated correlations between objective indicators such as those proposed by Smith with subjective measures of QoL (such as ‘life satisfaction’, ‘satisfaction with job’, and ‘satisfaction with housing’) in a selection of large American cities and found that:

“... no relationship exists between the level of well being found in a city as measured by a wide range of commonly used objective social indicators and the quality of life subjectively experienced by individuals in that city. Cities that are most well off as measured by objective indicators are not necessarily the same cities in which people are subjectively the most satisfied with their life situations. Conversely, cities that are worst off objectively are not necessarily the same cities where subjective dissatisfaction is highest. Moreover, while considerable differences in objective conditions between cities are readily apparent, city residence does not appear to be of any great importance in structuring individual evaluations of life experiences.” (Schneider, 1975, p. 505).

However, such findings are in stark contrast with recent research, such as the work of Oswald and Wu (2010), which can be seen as part of the wider field of the economics of happiness, or more broadly the new ‘science of happiness’.

#### *The new science of happiness*

As noted in the introduction, there is a growing body of literature in the social sciences presenting an analysis of subjective measures of QoL such as subjective happiness and well-being. In particular, in recent years there have been numerous attempts to define, measure and analyse happiness in various contexts and pertaining to a wide range of disciplines, ranging from neuroscience and psychology to philosophy and economics. There are a number of theories and ways of measuring subjective happiness and well-being. In particular, happiness questions are increasingly used in population surveys and it is suggested that a new ‘Science of Happiness’ is emerging, which aims to measure happiness, identify the main factors affecting it and to quantify their relative importance. There is a rapidly growing body of interdisciplinary research on the determinants of happiness and well-being (Dolan, Peasgood, & White, 2007; Frey & Stutzer, 2002; Huppert, Baylis, & Keverne, 2005; Layard, 2005). In addition, there have been on-going debates about whether happiness can be measured, whether it should be measured, how it should be measured and what are the factors affecting it (for a recent comprehensive overview see David, Boniwell, and Conley Ayers (2013)).

Quantitative studies of happiness are typically based on some measurement of subjective well-being derived by survey questions such as: “Taking all things together would you say you are *very happy*, *quite happy*, or *not very happy*” (Dolan et al., 2007; Frey &

Stutzer, 2002; Layard, 2005). Although there are critiques of the idea that happiness can be measured and compared between people, there is a growing amount of strong evidence in support of the validity of such measures. For instance, research in the fields of neuroscience suggests that there is a correlation between the subjective feelings that people report in surveys and brain activity patterns (Davidson, 2000; Davidson et al., 2000). Other examples cited in the literature include the work of Di Tella, MacCulloch, and Oswald (2003) and Bray and Gunnell (2006), suggesting that there is strong evidence that the rises and falls in suicide rates move in the opposite direction to changes in general levels of happiness (also see Blanchflower & Oswald, 2004; Powdthavee, 2007a). Nevertheless, there is on-going debate on the most appropriate and valid measure of well-being and it has long been argued that there are different types and dimensions of happiness. For instance, Dolan et al. (2006) present detailed discussions of different concepts of well-being and classify them in the following categories: “Preference satisfaction” based on the fulfillment of desires; “Flourishing accounts”, based on the satisfaction of certain psychological needs; “Hedonic accounts” based on how people feel and “Evaluative accounts” based on how people think they feel. A more recent review is presented by Layard (2010).

#### *Individual and household factors affecting subjective happiness*

Most of the quantitative studies of subjective happiness to date have been aimed at developing statistical methodological frameworks for the analysis of the main demographic, socio-economic and contextual determinants of subjective well-being and happiness. Most of these studies have been aimed at identifying the relationship between individual demographic (e.g. age and sex) and socio-economic factors (e.g. education, individual and household income) and happiness.

It has often been argued that age and happiness have a “u-shaped” relationship, suggesting that people are happier when they are younger as well as when they are older (Blanchflower & Oswald, 2008; Clark, 2003; Ferrer-i-Carbonell & Gowdy, 2007; Gerdttham & Johannesson, 2001; Oswald, 1997; Warr, 1992). There have also been numerous studies exploring gender differences in well-being, suggesting that females tend to report slightly higher subjective well-being than males (Frey & Stutzer, 2002; Gerdttham & Johannesson, 2001). In addition, most studies include various measures of income as an explanatory variable in happiness equations and it is very often suggested that there is a positive albeit relatively weak relationship between absolute income and happiness (Easterlin, 1974; Diener et al., 1999; Di Tella et al., 2001; Clark, 2003). Nevertheless, it has also been suggested that such a weak association may be due to the correlation of individual income with variables that reduce well-being, such as number of hours worked and commuting time (Clark, 2003). It has also been argued that there is a positive – but not linear – relationship between income and happiness, with diminishing marginal returns: income appears to have a higher impact for lower income groups and much lower or zero impact for higher income groups. But it has also been argued that there is no definite proof for such a relationship and there are on-going debates (Oswald, 2005; Easterlin, 2005). In addition, it has long been argued that relative income and the position of an individual in the national income distribution has very strong effects on happiness (Clark, 2003; Frank, 1999, 2007; Clark and Oswald, 1996; Luttmer, 2005; Ferrer-i-Carbonell, 2005). The role of changing aspirations in the life-cycle has also been highlighted (Easterlin, 2001). Moreover, it has often been argued (and this will be revisited and discussed in more detail in the next section) that it is inequality that affects happiness rather than levels of income (Ballas, Dorling, & Shaw, 2007). One of the variables for which there is very strong and consistent evidence of negative association with happiness is unemployment

(Clark, 2003; Clark & Oswald, 1994). In particular, it has been suggested that being in a state of unemployment has severe and long lasting negative impacts on happiness. These impacts cannot be explained only in terms of loss of income and there are significant non-pecuniary effects (Clark, 2003; Clark & Oswald, 1994; Theodossiou, 1998; Winkelmann & Winkelmann, 1998). Perhaps one of the most important factors affecting happiness that is also associated (in varying degrees) with the variables described above is the quality of interpersonal relationships and friendships. Single people appear to be on average less happy than married couples (Frey & Stutzer, 2002; Helliwell, 2003) and in general there is evidence that stable and secure intimate relationships are beneficial for happiness, and, in contrast, the dissolution of such relationships is damaging (Ballas & Dorling, 2007; Dolan et al., 2007). There are also studies of the impact of social networks and social capital upon happiness that highlight the importance of social well-being (Keyes, 1998) as well as social trust and local community networks (Putnam, 2000), suggesting that friendship is one of the biggest sources of happiness and well-being (Burt, 1987; Diener and Seligman, 2002; Layard, 2005; Powdthavee, 2007b). Another extremely important factor affecting happiness is health status, as most relevant studies consistently report a high positive correlation between well-being and physical and psychological health (Dolan et al., 2007; Frey & Stutzer, 2002).

The above very brief review of happiness studies discussed some of the key variables that appear to affect subjective happiness and well-being (for detailed and comprehensive reviews see David et al., 2013; Dolan et al., 2007; Frey & Stutzer, 2002; Layard, 2005). Although most of these studies do not explicitly consider the role of space and place in affecting happiness and well-being, they provide insights into the issues that cities and regions could provide to increase the happiness of their inhabitants, ranging from regional and social policies (e.g. labour market policies to tackle unemployment) to transport-related investment, such as high-speed rail (which may reduce commute times which have a detrimental impact on happiness, and also enhancing employment opportunities) and more local community initiatives that may be aimed at enhancing social trust and community networks. In addition, as Oswald and Wu (2010, p. 577) point out “places have characteristics that human beings find objectively pleasant (Hawaiian sunshine or Colorado scenery) and unpleasant (Connecticut land prices or New York City traffic fumes)”. Nevertheless, there will never be a city or city-region that would be ‘optimal’ from a happiness point of view, given that (as also discussed in the previous section) various characteristics and factors are valued differently from different people (or from the same people at different points in their ‘life course’ (Whisler et al., 2008). For example, the happiness of parents with small children would be affected by the quality of local schools, quality (and cost) of housing and overall facilities offered for families in a city (who may perhaps prefer to live in a smaller city or conurbation, or in the suburbs), whereas this would not be the case for an 18-year old who would place more emphasis on opportunities for recreational amenities, or for elderly retirees, who may rate highly a milder climate and the quality of health services.

Nevertheless, having detailed information on the socio-economic and demographic make-up of a city can help identify the city-level or regional factors that could affect (and possibly change, through policy) the happiness and well-being of its citizens. In addition, there are possibilities to explicitly address geographical context and the impact of place.

#### *Geographical studies of subjective happiness and well-being*

Although the studies discussed above are undoubtedly useful in providing insights into what are the types of cities and regions that

would increase happiness, there has been very little research with a regional science or city or local area perspective that defines QoL or utility on the basis of *subjective* well-being and happiness data from social surveys. It is only relatively recently that the literature on subjective happiness has begun to take serious account of the role of place, local community and social cohesion and belonging (e.g. Blanchflower & Oswald, 2009; Brereton, Clinch, & Ferreira, 2008; Clark, 2003; Clark, Kristensen, & Westergård-Nielsen, 2009; Luttmer, 2005; Powdthavee, 2007c; Propper et al., 2005; Putnam, 2000, Ballas, 2008; Ballas et al., 2007). It has also been suggested by some, from an anti-globalisation and ‘economics of localisation’ perspective (e.g. see Norberg-Hodge, Gorelick, & Page, 2011) that living in urban areas may be detrimental to human happiness. On the other hand, as Glaeser (2011) points out: “There is a myth that even if cities enhance prosperity, they still make people miserable. But people report being happier in those countries that are more urban. In those countries where more than half of the population is urban, 30% of people say that they are very happy and 17% say that they are not very or not at all happy. In nations where more than half of the population is rural, 25% of people report being very happy and 22% report unhappiness. Across countries, reported life satisfaction rises with the share of the population that lives in cities, even when controlling for the countries’ income and education” (Glaeser, 2011, pp. 7–8).

There is a need for such arguments and evidence to be considered more closely and there is now a steadily growing number of studies of subjective measures of happiness and well-being with a geographical dimension. Oswald and Wu (2009, 2010) explored the geography of life satisfaction and mental health in the US, drawing on a sample of over one million people collected under the auspices of the Behavioural Risk Factor Surveillance System (BRFSS). In particular, they fitted regression models to estimate levels of well-being across the American states and concluded that, after controlling for individual characteristics, the state of Louisiana and the District of Columbia have high levels of psychological well-being, whereas the states of California and West Virginia have low well-being. Similarly to the work of Hoehn et al. (1987) discussed above, Oswald and Wu pointed out that economic theory would predict that well-being should be the same in all regions. In particular, they point out that, if we assume that there are sufficiently low mobility costs and accurate levels of information about what it would be like to live in another state, then individuals would be expected to keep moving into attractive places until these places become too congested and expensive to be desirable. This process would lead to equilibrium, where utility would be the same in every location. Oswald and Wu (2009) applied regression methods to BRFSS data to empirically test this theoretical proposition and they suggested that their results are consistent with a weak version of this theory, assuming subjective mental well-being can be seen as analogous to utility. Also, recent research by Ballas and Tranmer (2012) combined the British Household Survey with census data in order to explore levels of happiness and well-being at the individual, household, district and regional level. Their findings suggested that while most of the variation in happiness and well-being is attributable to the individual level, some variation in these measures was also found at the household and area levels. However, this geographical variation in happiness was not found to be statistically significant when controlling for a number of pertinent socio-economic and demographic variables. Nevertheless, it was also suggested that the lack of statistical significance of place at the district level may have been due to the small sample size (Ballas & Tranmer, 2012) and that there is a need for further investigation of the impact of geographical and social context upon happiness. Aslam and Corrado (2011) also present a regional study of subjective well-being in Europe and find a statisti-

cally significant relationship between subjective life satisfaction and regional factors.

Other notable geographical work of subjective well-being measures, with more focus on cities, includes the work of Marans and Kweon (2011) who examined community life in Detroit, Stimson, McCrea, and Western (2011), who investigated resident perceptions of QoL in the Brisbane–Southeast Queensland region in Australia (including an analysis at sub-regional level), and McCrea et al. (2011), who further disaggregates the analysis spatially. They spatially cluster objective indicators to identify different types of subjective QoL linking it to neighbourhood level information. Chheetri et al. (2011) use GIS-based techniques and principal components analysis to explore and map spatial patterns of QoL dimensions at the intra-urban level. Keul and Prinz (2011) also apply GIS to the analysis of subjective QoL in Salzburg, Austria. Ballas (2010) presents a GIS-based spatial microsimulation approach aimed at estimating small area subjective well-being, while also of relevance is the more recent work of Higgins, Campanera, and Nobajas (2012) who examined the geographical distribution of QoL at the intra-urban scale, exploring geographical patterns of key indicators for London boroughs using cluster analysis of both objective and subjective measures. Bergstad et al. (2012) explored the relationship between urbanisation and life satisfaction and found no statistical significance, but Morrison (2007), who used survey data for 12 locations in New Zealand suggested that living in highly urbanised dense environments lowers subjective measures of life satisfaction and happiness. Morrison (2011) further built on this work, while Berry and Okulicz-Kozaryn (2011) explored subjective well-being in American cities and found that small towns and rural areas have higher scores, possibly due to natural amenities such as more space, nicer views, clean air and low crime. Brereton et al. (2008) presented an even more geographically disaggregated analysis of well-being by using GIS-based techniques to explore the impact of location-specific factors upon life satisfaction and well-being; their work suggested that living in Dublin results in lower subjective well-being scores, compared to living in the countryside. Brereton, Bullock, Clinch, and Scott (2011) built on this work to explore subjective well-being in rural areas in Ireland and their results suggested that there is a consistently high life satisfaction in rural Ireland, whereas more recently Mitchell (in press, 2013) explored the relationship between green spaces and measures of health in Scotland and found that although greener neighbourhoods do not seem to be healthier “people who actually visit and use green spaces, whether for exercise, or just to get away from it all for a while, do seem to have better mental health and more life satisfaction, all else being equal” (Mitchell, 2013; emphasis in the original). Also of relevance is the recent work of Wells and Donofrio (2011), exploring links between urban planning, the natural environment and public health measures in the US.

### Contextual factors: social and spatial inequalities, social justice and the city

There have been considerable efforts to build frameworks for the analysis of QoL, well-being and happiness on the basis of both objective and subjective measures. Nevertheless, there have been relatively limited attempts to consider the impact of context upon individual well-being, happiness and QoL. This is perhaps surprising given the considerable amount of theoretical work on the importance of social comparisons and socio-economic context which dates back to the original work of Adam Smith (1759) who argued that: “By necessities, I understand not only the commodities which are indispensably necessary for the support of life, but whatever the customs of the country

renders it indecent for creditable people, even of the lower order, to be without. A creditable day labourer would be ashamed to appear in public without a linen shirt” (Smith, 1759, p. 383). Marx also identified the importance of relative social position on inequality and social comparisons upon human well-being in a social justice context.

A house may be large or small; as long as the neighbouring houses are likewise small, it satisfies all social requirements for a residence. But let there arise next to the little house a palace, and the little house shrinks to a hut. The little house now makes it clear that its inmate has no social position at all to maintain, or but a very insignificant one; and however high it may shoot up in the course of civilisation, if the neighbouring palace rises in equal or even in greater measure, the occupant of the relatively little house will always find himself more uncomfortable, more dissatisfied, more cramped within his four walls” (Marx, 1847)

Veblen (1899) and Duesenberry (1949) also highlighted the importance of social comparison of consumption patterns, whereas Runciman (1966) argued that people compare themselves most with their “near equals” and there have long been very important theoretical and evidence based debates about the relationships between social context, social norms and human need (also see Dorling, 2011; Doyal & Gough, 1991; Gordon & Pantazis, 1997; James, 2007; Marmot, 2004; Sen, 1987; Townsend, 1987). In particular and with specific reference to happiness, it has long been argued that people tend to compare themselves to their colleagues, friends, neighbours or “reference groups” and this in turn has an impact on happiness and health (Layard, 2005). As Clark and Oswald (2002) point out, the group of people to whom we compare our income is thought to be our “peer group”, defined as “people like me” (of the same sex, age and education). Most of the empirical studies that examined comparison effects to date have focused on relative income. As noted above, research into the impact of income on happiness highlighted the importance of relative income and income-rank, given that an individual’s position in the income distribution is also an indicator of how they are “valued”, communicating their relative status in the social hierarchy (Alesina, Di Tella, & MacCulloch, 2004; Clark & Oswald, 1998; Frank, 1999, 2007; Layard, 2005). This occurs despite incomes not often being explicitly known. In fact it is because income is so important in relation to status that we tend not to let others know our exact incomes, although they can be guessed from our consumption patterns, job titles and residential address. The importance of social justice issues in cities have also long been discussed in the seminal work of Harvey (1973).

Also of high relevance here is the ‘Spirit Level’ work by Wilkinson and Pickett (2009), who present comprehensive and compelling evidence on the relationship between income inequality and a wide range of different health and social problems. Of particular relevance is the evidence pertaining to the relationship between income inequality and mental health (see Fig. 1), trust and community life (see Fig. 2) and income inequality and child well-being (see Fig. 3). Even within wealthy Western nations, outcomes in these and other areas are very substantially worse in more unequal societies. These findings highlight clearly the role of social and geographical context with regard to a wide range of factors that are associated with QoL, well-being and happiness. It is also interesting to note the positions of Spain, Italy and Germany in the graph shown in Fig. 1, suggesting that there may be additional contextual factors that have an important role.

From an urban and regional perspective, these issues have been highlighted in models of residential mobility and the housing

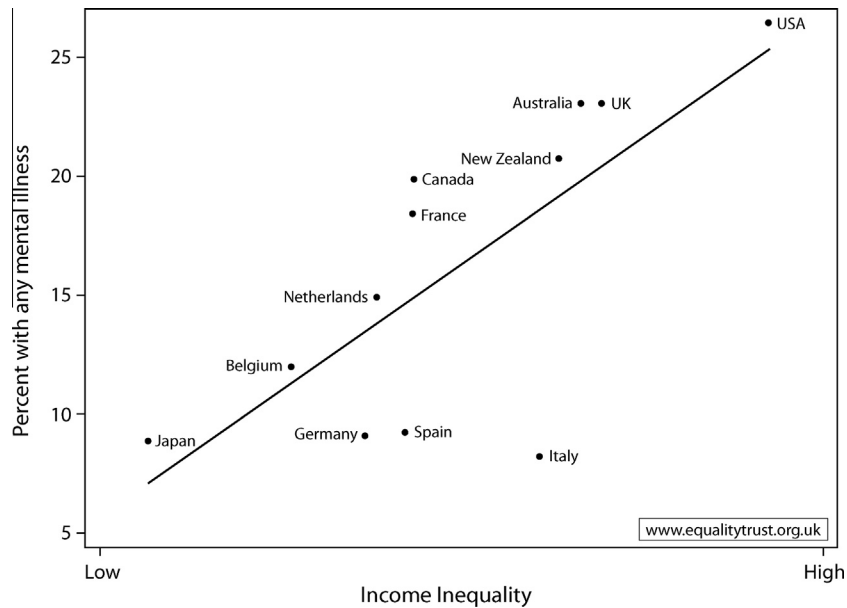


Fig. 1. Mental illness and income inequality (source: www.equalitytrust.org.uk).



Fig. 2. "Community Life" and income inequality (source: www.equalitytrust.org.uk).

market, such as the work of Clark (2011) and Smith (2011) reviewed above. It has long been argued (at least as early as the writings of Marx quoted above) that housing is a highly positional good (both in terms of size and location) for which context matters (also see Frank, 2007). Marsh and Gibb (2011) revisit this issue and consider housing-related consumption and the desired levels, controlling for social status as well as individual characteristics and the local and social context. As Clark (2011) puts it in his comment of Marsh and Gibb work:

Unlike the expected utility model, which emphasises the amount of space and the comparison of the current level of satisfaction with the level of satisfaction to be gained by moving, the emphasis shifts to search and mobility, which is triggered *when consuming the current dwelling drops below some reference level* defined either as a social reference group or because the

current location is predicted to decline. The heart of the new approach to behaviour is to take the choice out of the context. (Clark, 2011, p. 270; my emphasis)

Marsh and Gibb (2011) argue that "the trigger for considering mobility is when consuming at the current dwelling drops below the reference level (i.e.  $CSQ < CRef$ ) either because the reference level has shifted up (and hence the need to "keep up with the Joneses") or consumption at the current location is predicted to decline (e.g. as a result of neighbourhood decline)". They also endorse long held arguments suggesting that the absolute characteristics of persons cannot be seen in abstraction of the reference level with regards to what they consume.

As noted above, there have long been arguments highlighting the positionality of particular goods, leading to conflicts between individual and collective choice, generating so called 'smart for





Fig. 3. “Child well-being” and income inequality (source: www.equalitytrust.org.uk).

one, dumb for all’ behaviours (see Frank, 1999, 2007). Overall, the importance of social justice and inequality affecting QoL and cities has long been identified but there has been very little empirical research exploring these issues in relation to well-being. This is surprising, given the positionality of housing and geographical residential location as goods. Amongst the notable exceptions of geographical work exploring these issues is the research of Luttmer (2005), who matched individual level happiness data to information about average earnings in the US Public Use Microdata Areas to investigate whether individuals feel worse off when their neighbours earn more. He found that, on average, higher earnings of neighbours are associated with lower levels of self-reported well-being. Clark (2003) used data from the British Household Panel Survey (BHPS) to show that the well-being of unemployed people is strongly positively correlated with reference group unemployment at the regional and household level, suggesting that “unemployment hurts, but it hurts less when there are more unemployed people around” (Clark, 2003, p. 346). Powdthavee (2007c) examined the role of social norms in the relationship between happiness and unemployment, using cross-sectional data in South Africa and also reported that unemployment appears to be less detrimental to happiness in regions where the rate of unemployment is high. Ballas and Tranmer (2012) also explored context, and their findings corroborated those of Clark and Powdthavee with regards to the relationship between unemployment and context.

The issues discussed above have very important policy implications for cities and city regions. In particular, these issues highlight the need to pay attention to geographical context when it comes to happiness, moving away from “individual level” remedies. In particular, it can be argued that policies aimed at enhancing social cohesion at the city level may have a more effective impact on the happiness and well-being of individuals compared to actions or initiatives focused on individual behaviour. As Wilkinson and Pickett (2009) point out:

“Politics was once seen as a way of improving people’s social and emotional well-being by changing their economic circumstances. But over the last few decades the bigger picture has been lost. People are now more likely to see psychosocial well-being as dependent on what can be done at the individual level, using cognitive behavioural therapy – one person at a time – or on providing support in early childhood, or on the

reassertion of religious or family values. However, it is now clear that income distribution provides policy makers with a way of improving the psychosocial wellbeing of whole populations. Politicians have an opportunity to do genuine good”. (Wilkinson & Pickett, 2009, p. 233)

### Concluding comments

As pointed out throughout this article, there has been a very long and successful history of urban and regional research into the determinants of QoL. Most of the research studies to date were based on relatively ‘objective’ measures of QoL. There has been renewed interest in this field recently with the emergence of the new ‘Science of Happiness’ which explores whether subjective happiness can be measured, whether it should be measured, how it should be measured and what are the factors affecting it. Although there has been relatively limited urban and regional research in this new emerging inter-disciplinary field, it is increasingly being recognised that there is huge potential for social and behavioural scientists to add a spatial dimension by identifying characteristics and factors of cities and regions that affect subjective happiness and well-being measures. This article provided an overview of both objective and subjective studies of QoL and happiness in cities and regions and also identified key current issues and debates in this field.

A key issue that was identified is the potential for inter-disciplinary research aimed at a better understanding of what makes a ‘happy’ city. In particular, there is great potential to build on the very successful urban and regional research of QoL indicators by complementing them and/or combining them with subjective measures of happiness and well-being. However, in order to fulfill this potential there is a need to conduct research drawing on a wide range of disciplines including geography, economics, sociology, urban and regional planning and psychology. There have already been calls for such inter-disciplinary research, as well as some attempts which were reviewed in this article, but it can be argued that there is huge potential for the new emergent *Science of Cities* (Batty, 2012) to engage with the very important debates on what makes people happy and, in particular, on what cities and regions can do about it.

The overview presented in this article demonstrated the potential and the need for a geographical dimension to be added by researchers interested in cities and regions to the new Science of Happiness, in order to address the extent to which well-being and happiness may be attributed to so-called individual (e.g. employment status and age-group), household (e.g. household income, household type, house type and size) and contextual circumstances and characteristics, and the relative importance of such characteristics within regions and cities (e.g. the importance of income levels and of its distribution within the city). A particularly important issue is that of social and spatial inequalities in income and wealth and generally social justice and social cohesion which, as argued in the last section of this article paper, have huge implications for individual well-being and happiness and the QoL of whole populations. There has been some very impressive research in this field over the last few years (such as the 'Spirit Level' work discussed in the previous section) and there is now a great challenge to add a city and regional dimension to this work and to revisit traditional debates on social justice. In this context, it may be particularly interesting to consider the possibility (and the impact on happiness) of a hypothetical implementation of basic income policies which could increase the economic independence of all individuals in society (Van Parijs, 1997, 2001) as well as the possible impact of innovative progressive consumption tax policies (Frank, 1999, 2007) and to further investigate the degree to which the source of happiness or unhappiness is personal or has more to do with inequalities in the distribution of income, wealth, skills and capability.

Finally, there is also great potential for interdisciplinary research (drawing on expertise from computer science and statistics, in addition to the fields mentioned above) on the methodological frameworks that could be developed and implemented to address the issues raised above, and to further explore QoL and happiness in cities and regions. In particular, in addition to traditional spatial econometric methods, it is increasingly possible (due to new regional and local social survey microdata availability, and computer software and hardware advances) to use multilevel models, agent-based models and spatial microsimulation modelling techniques to explore subjective happiness, well-being and QoL at different levels, ranging from the individual to household, neighbourhood, city and region. There have already been some developments in this field, which were reviewed in this article, but it can be argued that a lot more is now possible!

## Acknowledgements

Funding from the UK Economic and Social Research Council (RES-163-27-1013) is gratefully acknowledged. I am very grateful to Andrew Kirby, Gordon Mulligan and Danny Dorling for their very useful and constructive comments and suggestions. Also, thanks to Paul Coles for redrawing Figures 1–3.

## References

- Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: are Europeans and Americans different? *Journal of Public Economics*, 88, 2009–2042.
- Aslam, A., & Corrado, L. (2011). The geography of well-being. *Journal of Economic Geography*. <http://dx.doi.org/10.1093/jeg/lbr041>.
- Bagwell, L. S., & Bernheim, B. D. (1996). Veblen effects in a theory of conspicuous consumption. *American Economic Review*, 86(3), 349–373.
- Ballas, D., & Dorling, D. (2007). Measuring the impact of major life events upon happiness. *International Journal of Epidemiology*, 36, 1244–1252.
- Ballas, D., & Dorling, D. (2013). The geography of happiness. In S. David, I. Boniwell, & A. Conley Ayers (Eds.), *The Oxford handbook of happiness* (pp. 465–481). Oxford University Press.
- Ballas, D., Dorling, D., & Shaw, M. (2007). Social inequality, health, and well-being. In J. Haworth & G. Hart (Eds.), *Well-being: Individual, community, and social perspectives* (pp. 163–186). Basingstoke: Palgrave.
- Ballas, D. (2008). Geographical Modelling of Happiness and Well-being. *BURISA*, 177, 12–17.
- Ballas, D. (2010). Geographical modelling of happiness and well-being. In J. Stillwell, P. Norman, C. Thomas, & P. Surridge (Eds.), *Understanding Population Trends and Processes. Population, Employment, Health and Well-being* (Vol. 2, pp. 53–66). Springer.
- Ballas, D., & Tranmer, M. (2012). Happy people or happy places? A multi-level modelling approach to the analysis of happiness and well-being. *International Regional Science Review*, 35, 70–102.
- Bartik, T. J., & Kerry Smith, V. (1987). Urban Amenities and Public Policy. In Edwin S. Mills (Ed.), *Handbook of Regional and Urban Economics: Volume 2, Urban Economics*. Amsterdam: North-Holland.
- Batty, M. (2012). Building a science of cities. *Cities*, 29, S9–S16.
- Beeson, Patricia E. (1991). Amenities and Regional Differences in Returns to Worker Characteristics. *Journal of Urban Economics*, 30, 224–241.
- Bergstad, C. J., Gamble, A., Hagman, O., Polk, M., Gärling, T., Ettema, D., Friman, M., & Olsson, L. E. (2012). Influences of Affect Associated with Routine Out-of-Home Activities on Subjective Well-Being. *Applied Research Quality of Life*, 7, 49–62.
- Berry, B. J. L., & Okulicz-Kozaryn, A. (2011). An Urban-Rural Happiness Gradient. *Urban Geography*, 32(6), 871–883.
- Blanchflower, D. G., & Oswald, A. J. (2004). Well-being over time in Britain and the USA. *Journal of Public Economics*, 88, 1359–1386.
- Blanchflower, D. G., & Oswald, A. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine*, 66(8), 1733–1749.
- Blanchflower, D., Oswald, A. (2009). Hypertension and Happiness across Regions, working paper. <<http://www2.warwick.ac.uk/fac/soc/economics/staff/academic/oswald/hypertensionregionsblanchos.pdf>> Accessed 25.06.09.
- Boelhouwer, P. J. (2011). Neo-classical economic theory on housing markets and behavioural sciences: ally or opponent? *Housing, Theory and Society*, 3(28), 276–280.
- Borts, G. H., & Stein, Jerome L. (1964). *Economic growth in a free market*. New York: Columbia University Press.
- Bray, I., & Gunnell, D. (2006). Suicide rates, life satisfaction and happiness as markers for population mental health. *Social Psychiatry and Psychiatric Epidemiology*, 41, 333–337.
- Brereton, F., Bullock, C., Clinch, J. P., & Scott, M. (2011). Rural change and individual well-being: the case of Ireland and rural QoL. *European Urban and Regional Studies*, 18(2), 203–227.
- Brereton, F., Clinch, J. P., & Ferreira, S. (2008). Happiness, geography and the environment. *Ecological Economics*, 65, 386–396.
- Burt, R. S. (1987). A note on strangers, friends and happiness. *Social Networks*, 9, 311–331.
- Carruthers, J., & Mulligan, G. (2012). The plane of living and the precrisis evolution of housing values in the USA. *Journal of Economic Geography*, 12(4), 739–773.
- Case, K. E., & Shiller, R. J. (2003). Is there a bubble in the housing market? *An Analysis, Brookings Papers on Economic Activity, September*.
- Charles, K. K., Hurst, E., & Roussanov, N. (2009). Conspicuous consumption and race. *Quarterly Journal of Economics*, 74(2), 425–467.
- Cheshire, P., & Magrini, S. (2006). Population growth in European cities: Weather matters – But only nationally. *Regional Studies*, 40, 23–37.
- Chhetri, P., Stimson, R., Western, J. (2011). Using GIS to Derive Region-Wide Patterns of Quality of Urban Life Dimensions: Illustrated with Data from the Brisbane-SEQ Region. In RW. Marans, R W, RJ. Stimson (Eds.), *Investigating Quality of Urban Life* (pp. 405–436). Springer, Dodrecht.
- Clapham, D. (2011). "I wouldn't start from here": Some reflections on the analysis of housing markets. *Housing, Theory and Society*, 288–291.
- Clark, A., & Oswald, A. (1996). Satisfaction and Comparison Income", with Andrew Clark. *Journal of Public Economics*, 61, 359–381.
- Clark, A. (2003). Unemployment as a social norm: Psychological evidence from panel data. *Journal of Labor Economics*, 21, 324–351.
- Clark, W. A. V. (2011). Prices, expectations and the changing housing market: A commentary and discussion. *Housing, Theory and Society*, 28(3), 262–275.
- Clark, A., Kristensen, N., & Westergård-Nielsen, N. (2009). Economic satisfaction and income rank in small neighbourhoods. *Journal of the European Economic Association*, 7, 519–527.
- Clark, A. E., & Oswald, A. J. (1994). Unhappiness and unemployment. *Economic Journal*, 104, 648–659.
- Clark, A. E., & Oswald, A. J. (1998). Comparison-concave utility and following behaviour in social and economic settings. *Journal of Public Economics*, 70, 133–155.
- Clark, A., & Oswald, A. (2002). A simple statistical method for measuring how life events affect happiness. *International Journal of Epidemiology*, 31(6), 1139–1144.
- Craglia, M., Leontidou, L., Nuvolati, G., & Schweikart, J. (2004). Towards the development of QoL indicators in the digital city. *Environment and Planning B: Planning and Design*, 31, 51–64.
- Cropper, M. L. (1981). The value of urban amenities. *Journal of Regional Science*, 21, 359–372.
- Davidson, R. (2000). Affective style, psychopathology and resilience: Brain mechanisms and plasticity. *American Psychologist*, 55, 1196–1214.
- Davidson, R., Jackson, D., & Kalin, N. (2000). Emotion, plasticity, context and regulation: Perspectives from affective neuroscience. *Psychological Bulletin*, 126, 890–906.
- David, S., Boniwell, I., & Conley Ayers, A. (Eds.). (2013). *The Oxford handbook of happiness*. Oxford University Press.
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. *Psychological review*, 125, 276–302.

- Diener, E., & Seligman, M. E. (2002). Very happy people. *Psychological Science*, 13(1), 81–84.
- Di Tella, R., MacCulloch, R., & Oswald, A. (2001). Preferences over inflation and unemployment. Evidence from surveys of happiness. *The American Economic Review*, 91(1), 335–341.
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2003). The macroeconomics of happiness. *Review of Economics and Statistics*, 85, 809–827.
- Dolan, P., Peasgood, T., & White, M. (2006). *Review of research on the influences on personal well-being and application to policy making*. Final report for DEFRA, 24 August 2006.
- Dolan, P., Peasgood, T., & White, M. (2007). Do we really know what makes us happy? A review of the literature on the factors associated with subjective well-being. *Journal of Economic Psychology*. <http://dx.doi.org/10.1016/j.joep.2007.09.001>.
- Dorling, D. (2011). *Injustice: Why social inequality persists*. Bristol: Policy Press.
- Doyal, L., & Gough, I. (1991). *A theory of human need*. London: Macmillan.
- Duesenberry, J. S. (1949). *Income, saving and the theory of consumer behaviour*. Cambridge: Harvard University Press.
- Easterlin, R. (2001). Income and happiness: Towards a unified theory. *The Economic Journal*, 111, 465–484.
- Easterlin, R. (2005). A puzzle for adaptive theory. *Journal of Economic Behavior and Organization*, 56, 513–521.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth: Essays in honor of Moses Abramovitz* (pp. 89–125). New York and London: Academic Press.
- Faggian, A., Olfert, M. R., & Partridge, M. D. (2011). Inferring regional well-being from individual revealed preferences: The 'voting with your feet' approach. *Cambridge Journal of Regions, Economy and Society*, 5(1), 163–180.
- Faggian, A., & Royuela, V. (2010). Migration flows and QoL in a metropolitan area: The case of Barcelona–Spain. *Applied Research Quality Life*, 5, 241–259.
- Ferrer-i-Carbonell, A. (2005). Income and well-being: an empirical analysis of the comparison income effect. *Journal of Public Economics*, 89, 997–1019.
- Ferrer-i-Carbonell, A., & Gowdy, J. M. (2007). Environmental degradation and happiness. *Ecological Economics*, 60(3,15), 509–516.
- Frank, R. (1999). *Luxury fever: Money and happiness in an era of excess*. New York: Princeton University Press.
- Frank, R. (2005). Falling Behind: How Rising Inequality Harms the Middle Class, 2007.
- Frank, R. H. (2008). Should public policy respond to positional externalities? *Journal of Public Economics*, 92(8–9), 1773–1862.
- Frey, B., & Stutzer, A. (2002). *Happiness and economics*. Princeton: Princeton University Press.
- Gerdttham, U. G., & Johannesson, M. (2001). The relationship between happiness, health and socio-economic factors: Results based on Swedish micro data. *Journal of Socio-Economics*, 30, 553–557.
- Glaeser, E. (2011). *Triumph of the city: How urban spaces make us human*. London: MacMillan.
- Glaeser, E. L., Kolko, J., & Saiz, A. (2001). Consumer city. *Journal of Economic Geography*, 1, 27–50.
- Glaeser, E. L., & Sacerdote, B. (1999). Why is there more crime in cities? *Journal of Political Economy*, 107, 225–258.
- Goodrich, C. B. (1936). *Migration and economic opportunity: The report of the study of population redistribution*. Philadelphia, PA: University of Pennsylvania Press.
- Goodrich, C. B., Allin, W., & Hayes, M. (1935). *Migration and planes of living: 1920–1934*. Philadelphia, PA: University of Pennsylvania Press.
- Gordon, D., & Pantazis, C. (1997). Measuring poverty: Breadline Britain in the 1990s. In D. Gordon & C. Pantazis (Eds.), *Breadline Britain in the 1990s*. Aldershot: Ashgate.
- Graves, P. E. (1982). Migration with a Composite Amenity: The Role of Rents. *Journal of Regional Science*, 23, 541–546.
- Gyourko, J., Mayer, C., & Sinai, T. (2006). *Superstar cities*. NBER working paper 12355. Cambridge, MA: National Bureau of Economic Research.
- Harvey D., *Social justice and the city*, 1973, Edward Arnold; London.
- Helliwell, J. F. (2003). How's life? *Combining individual and national variables explain subjective well-being*. *Economic Modelling*, 20, 331–360.
- Higgins, P., Campanera, J., & Nobajas, A. (2012). QoL and spatial inequality in London. *European and Urban Regional Studies*. <http://dx.doi.org/10.1177/0969776412439201>. Advance access, published, online 05.04.12.
- Hoehn, J., Berger, M., & Blomquist, G. C. (1987). A hedonic model of interregional wages, rents and amenity values. *Journal of Regional Science*, 27, 605–620.
- Huppert, F. A., Baylis, N., & Keverne, B. (2005). *The science of well-being*. Oxford University Press.
- James, O. (2007). *Affluenza*. London: Vermilion.
- Jordison, S., & Kieran, D. (2003). *Crap towns: The 50 worst places to live in the UK*. Bostree.
- Kahsai, M. S., Gebremedhin, T. G., & Schaeffer, P. V. (2011). A Spatial analysis of amenity and regional economic growth in northeast region. *Urban and Regional Development Studies*, 23, 77–93.
- Keul, A. G., Pinz, T. (2011). The Salzburg Quality of Urban Life Study with GIS Support, in RW. Marans, RJ. Stimson (Eds.), *Investigating Quality of Urban Life* (pp. 273–294), Dodrecht: Springer.
- Keyes, C. (1998). Social well-being. *Social Psychology Quarterly*, 61, 121–140.
- Korpi, M., Clark, W. A. V., & Malmberg, B. (2011). The urban hierarchy and domestic migration: The interaction of internal migration, disposable income and the cost of living, Sweden 1993–2002. *Journal of Economic Geography*, 12, 1051–1077.
- Lambiri, D., Biagi, B., & Royuela, V. (2007). QoL in the economic and urban economic literature. *Social Indicators Research*, 84, 1–25.
- Layard, R. (2005). *Happiness. Lessons from a new science*. Allen Lane, Penguin Books.
- Layard, R. (2010). Measuring subjective well-being. *Science*, 327, 534–535.
- Luttmer, E. F. P. (2005). Neighbors as negatives: Relative earnings and wellbeing. *Quarterly Journal of Economics*, 120, 963–1002.
- Marans, RW., & Kweon, B. (2011). The QoL in metro detroit at the beginning of the millenium. In R. W. Marans & R. J. Stimson (Eds.), *Investigating quality of urban life* (pp. 163–184). Dodrecht: Springer.
- Marans, RW., & Stimson, RJ. (Eds.). (2011). *Investigating quality of urban life*. Dodrecht: Springer.
- Marmot, M. (2004). *Status syndrome*. Bloomsbury.
- Marsh, A., & Gibb, K. (2011). Uncertainty, expectations and behavioural aspects of housing market choices. *Housing, Theory and Society*, 28(3), 215–235.
- Marx, K. (1847). [on-line version], *Wage, Labour and Capital*, [on-line document]. Marx/Engels Internet Archive ([www.marxists.org](http://www.marxists.org)) 1993, 1999. <<http://www.marxists.org/archive/marx/works/1847/wage-labour/index.htm>> Accessed 21.04.13.
- McCrea, R., Western, J., Stimson, R. (2011). Modelling Determinants of Subjective Quality of Urban Life at Different Geographic Scales: The Case of the Brisbane-SEQ Region. In RW. Marans, RJ. Stimson (Eds.), *Investigating Quality of Urban Life* (pp. 347–368), Springer, Dodrecht.
- Mercer (2012). *2012 Quality of Living worldwide city rankings – Mercer survey*. Mercer. <<http://uk.mercer.com/press-releases/quality-of-living-report-2012>>.
- Mitchell, R. (2013). *Greener urban areas in Scotland are not healthier*. Centre for Research Environment Society and Health. <<http://cresh.org.uk/2013/03/10/greener-urban-areas-in-scotland-are-not-healthier/>>.
- Mitchell, R. (in press). Is physical activity in natural environments better for mental health than physical activity in other environments? *Social Science and Medicine*, doi: 10.1016/j.sbs.2011.03.031.
- Morais, P., & Camanho, A. S. (2011). Evaluation of performance of European cities with the aim to promote QoL improvements. *Omega*, 39, 398–409.
- Morais, P., Miguéis, V. I., & Camanho, A. S. (2011). QoL experienced by human capital: An assessment of European cities. *Social Indicators Research*. <http://dx.doi.org/10.1007/s11205-011-9923-5>.
- Morrison, P. (2007). Subjective well-being and the city. *Social Policy Journal of New Zealand*, 31, 74–103.
- Morrison, P. (2011). Local expressions of subjective well-being: The New Zealand experience. *Regional Studies*, 45(8), 1039–1058.
- Mulligan, G. F., Vias, A. C., & Glavac, S. M. (1999). Initial diagnostics of a regional adjustment model. *Environment and Planning A*, 31, 855–876.
- Mulligan, G. F., & Vias, A. C. (2006). Growth and change in United States micropolitan areas. *Annals of Regional Science*, 40, 203–228.
- Mulligan, G., Carruthers, J., & Cahill, M. (2004). Urban quality of life and public policy: A survey. In Roberta. Capello & Peter. Nijkamp (Eds.), *Urban dynamics and growth: Advances in urban economics* (pp. 729–802). Amsterdam: Elsevier.
- Mulligan, G., & Carruthers, J. I. (2011). Amenities, QoL and regional development. In RW. Marans & RJ. Stimson (Eds.), *Investigating quality of urban life* (pp. 107–134). Dodrecht: Springer.
- Muth, RF. (1971). Migration: Chicken or egg? *Southern Economic Journal*, 295–306.
- Norberg-Hodge, H., Gorelick, S., & Page, J. (2011). *The Economics of Happiness*, 67 minutes DVD, produced by Helena Norberg-Hodge; co-Directed by Steven Gorelick, John Page, and Helena Norberg Hodge, <<http://www.theeconomicsofhappiness.org/>>.
- Oswald, A. J. (1997). Happiness and economic performance. *Economic Journal*, 107, 1815–1831.
- Oswald, A., & Wu, S. (2009). *Well-being across America: Evidence from a random sample of one million U.S. Citizens*. University of Warwick working paper. <<http://www2.warwick.ac.uk/fac/soc/economics/staff/academic/oswald/oswaldwuwellbeing2009.pdf>> Accessed 18.06.10.
- Oswald, A., & Wu, S. (2010). Objective confirmation of subjective measures of human well-being: Evidence from the U.S.A. *Science*, 327, 576–579.
- Powdthavee, N. (2007a). Economics of happiness: A review of literature and applications. *Chulalongkorn Journal of Economics*, 19(1), 51–73.
- Powdthavee, N. (2007b). Putting a price tag on friends, relatives, and neighbours: Using surveys of life-satisfaction to value social relationships. *Journal of Socio-Economics*, 37(4), 1459–1480.
- Powdthavee, N. (2007c). Are there geographical variations in the psychological cost of unemployment in South Africa? *Social Indicators Research*, 80(3), 629–652.
- Propper, C., Jones, K., Bolster, A., Burgess, S., Johnston, R., & Sarker, R. (2005). Local neighbourhood and mental health: Evidence from the UK. *Social Science and Medicine*, 61, 2065–2083.
- Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.
- Roback, J. (1982). Wages, rents, and the QoL. *Journal of Political Economy*, 90, 1257–1278.
- Robinson, D. T., Murray-Rust, D., Rieser, V., Milicic, V., & Rounsevell, M. (2012). Modelling the impacts of land system dynamics on human well-being: Using an agent-based approach to cope with data limitations in Koper, Slovenia. *Computers, Environment and Urban Systems*, 164–176. 10.1016/j.compenvurbysys.2011.10.002.
- Rosen, S. (1974). Hedonic prices and implicit markets: product differentiation in pure competition. *Journal of Political Economy*, 82, 34–55.

- Rosen, S. (1979). Wage-based indexes of urban quality of life. In P. Mieszkowski & M. Stratzheim (Eds.), *Current Issues in Urban Economics* (pp. 74–104). Baltimore: John Hopkins Press.
- Royuela, V. (2011). Modelling QoL and population growth. The case of the Barcelona metropolitan area. *Spatial Economic Analysis*, 6(1), 83–109.
- Royuela, V., Moreno, R., & Vayà, E. (2010). Influence of QoL on urban growth: A case study of Barcelona, Spain. *Regional Studies*, 44(5), 551–567.
- Runciman, W. G. (1966). *Relative deprivation and social justice*. Henley: Routledge and Kegan Paul.
- Savageau, D. (2007). *Places rated Almanac*. Washington, DC: Places Rated Books LLC.
- Schneider, M. (1975). The QoL in large American cities: Objective and subjective social indicators. *Social Indicators Research*, 12, 495–509.
- Sen, A. (1987). *On ethics and economics*. Oxford: Blackwell.
- Shapiro, J. M. (2006). Smart cities: Quality of life, productivity, and the growth effects of human capital. *Review of Economics and Statistics*, 88(2), 324–335.
- Shiller, R. J. (2005). *Irrational exuberance (2nd ed.)*. Princeton: Princeton University Press.
- Smith, A. (1759). *The theory of the moral sentiments*. Reprint, Indianapolis: Liberty Classics. 1952.
- Smith, D. (1973). *The geography of social well-being*. New York: McGraw-Hill.
- Smith, S. J. (2011). Home price dynamics: A behavioural economy? *Housing, Theory and Society*, 28(3), 236–261.
- Steines, D. N., & Fisher, W. D. (1974). An econometric model of intraurban location. *Journal of Regional Science*, 14, 65–80.
- Stimson, R., & Marans, R. (2011). Objective measurement of QoL and quality of urban life. In RW. Marans & RJ. Stimson (Eds.), *Investigating quality of urban life* (pp. 33–54). Dordrecht: Springer.
- Stimson, R., McCrea, R., & Western, J. (2011). The Brisbane–south east Queensland region, Australia: Subjective assessment of quality of urban life and changes over time. In RW. Marans & RJ. Stimson (Eds.), *Investigating quality of urban life* (pp. 185–208). Dordrecht: Springer.
- Theodossiou, I. (1998). The effects of low pay and unemployment on psychological well-being: A logistic regression approach. *Journal of Health Economics*, 17, 85–104.
- Thorndike, E. L. (1939). *Your city*. New York: Harcourt, Brace, and Company.
- Tiebout, C. M. (1956). A pure theory of local expenditures. *Journal of Political Economy*, 64, 416–424.
- Townsend, P. (1987). Deprivation. *Journal of Social Policy*, 16, 125–146.
- Van Parijs, P. (1997). *Real freedom for all: What (if anything) can justify capitalism? Oxford political theory*. Oxford: Clarendon Press.
- Van Parijs, P. (Ed.). (2001). *What's wrong with a free lunch?* Boston, Mass: Beacon Press.
- Veblen, T. (1899). *The theory of the leisure class*. New York: MacMillan.
- Warr, P. B. (1992). Age and occupational well-being. *Psychology and Aging*, 7, 37–45.
- Watkins, C., & McMaster, R. (2011). The behavioural turn in housing economics: Reflections on the theoretical and operational challenges. *Housing, Theory and Society*, 28(3), 281–287.
- Wells, N. M., & Donofrio, G. A. (2011). Urban planning, the natural environment and public health. *Encyclopedia of Environmental Health*. <http://dx.doi.org/10.1016/B978-0-444-52272-6.00480-3>.
- Whisler, R. L., Waldorf, B. S., Mulligan, G. F., & Plane, D. A. (2008). QoL and the migration of the college-educated. *Growth and Change*, 39, 58–94.
- Wilkinson, R., & Pickett, K. (2009). *The spirit level: Why equality is better for everyone*. Allen Lane.
- Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? *Economica*, 65(257), 1–157.