The Economic Geography of Happiness

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Contents

Abstract

Does geography matter when it comes to happiness? To what extent does where we live affect how we feel, and why? Economists have made significant contributions to both the measurement of subjective happiness and well-being as well as in the analysis of the factors affecting it. Nevertheless, there has been a relative paucity of studies that add a geographical dimension to the analysis of happiness and its determinants. This chapter makes the case for a Spatial Economics of Happiness. In particular, the chapter highlights the importance of geographical and socioeconomic contextual factors pertaining to well-being and happiness

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with a particular emphasis on the impact of social and spatial inequalities and social justice. It also makes a strong case for a spatial economics and economic geography perspective in the analysis of the spatial determinants of happiness, including new innovative ways of geovisualization as well as new possibilities for advanced spatial analysis.

Introduction

Does geography matter when it comes to happiness? To what extent does *where* we live affect *how* we feel, and *why*? (Ballas and Dorling 2013, p. 465)

Economic geography is the study of economic phenomena across space and place. This chapter presents an economic geography perspective on the analysis of happiness and well-being exploring the importance of space and place. The chapter draws and builds upon a professorial inaugural address given at the University of Groningen and associated public lectures (Ballas 2018; Ballas et al. 2018b) as well as previous work engaging with these questions (see Ballas 2013; Ballas and Dorling 2013).

As demonstrated in the chapter by Nikolova and Graham in this volume, the ▶ "Economics of Happiness" is a well-established approach to the study of human welfare based on self-reported measures of well-being collected through appropriate social surveys. Economists have made significant contributions to both the measurement of subjective well-being and happiness as well as in the analysis of the factors affecting it. Nevertheless, there has been a relative paucity of studies that add a geographical dimension to the analysis of happiness and its determinants. This chapter makes the case for a Spatial Economics of Happiness.

The chapter is organized as follows: first individual- and household-level determinants of subjective well-being are considered by reviewing and the current state of the art in the emerging field known as the economics of happiness. The following section then advances an argument for an economic geography perspective, including new innovative ways of visualizing the spatial distribution of happiness and related variables. This is followed by discussion of relevant theoretical insights as well as new possibilities for advanced spatial analysis.

The Economics of Happiness

There have long been systematic attempts to measure happiness and well-being using social surveys. There have been a number of national surveys across the world containing a range of subjective happiness and well-being measures (Tov and Au 2013; Helliwell et al. 2020; see also Veenhoven's World Database of Happiness 2018; Voukelatou et al. 2020; and the chapters ▶ "The Economics of Happiness" and ▶ "Measuring Subjective Well-Being". Although there have long been critiques of the idea that happiness can be measured and compared between people with such survey instruments, there has also been a growing amount of strong evidence in

support of the validity of such measures. For example, Layard (2005) presented relevant evidence from neuroscience in support of the validity of happiness measures. Other relevant studies include the work of Di Tella et al. (2003) and Bray and Gunnell (2006) suggesting that there is strong evidence that the changes in suicide rates move in the opposite direction to changes in general levels of happiness. It has also long been argued that, conceptually, subjective happiness can be seen as a proxy for utility and therefore analyzed with relevant well-established theoretical frameworks from the field of economics (Clark et al. 2008; Clark 2018).

From an applied economics perspective, there are now many examples of comprehensive and sophisticated quantitative studies of subjective happiness aimed at developing statistical methodological frameworks for the analysis of the main demographic, socioeconomic, and contextual determinants of subjective well-being and happiness. In particular, most of the studies of happiness to date have been aimed at identifying the relationship between individual demographics (e.g., age and sex) and socioeconomic factors (e.g., education, individual and household income) and happiness. Layard et al. (2012), and more recently Clark (2018), provide very insightful and informative overviews of studies into factors that affect subjective happiness. The key demographic and socioeconomic characteristics that are considered to be significant determinants of subjective happiness and well-being include age, income, health status, employment status, marital status, education, and interpersonal relationships.

For example, there is a "u-shaped" relationship between age and happiness: people are happier when they are young or old (Blanchflower and Oswald 2008; Clark 2003; Gerdtham and Johannesson 2001; Graham and Ruiz Pozuelo 2016). It has also been suggested that women tend to report higher values of subjective happiness than men (Frey and Stutzer 2002; Gerdtham and Johannesson 2001) but also higher levels of stress (Clark 2018; Kanheman and Deaton 2010). Other significant individual-level factors that affect happiness include marital status with married people appearing on average happier than singles (Frey and Stutzer 2002), although some studies on the causality suggest that this may be due to happier people being more likely to marry (Clark 2018; Stutzer and Frey 2006). Similar findings have been reported regarding the association between having children and happiness, suggesting that that "(prior to any fertility) individuals who will later become parents report higher levels of life satisfaction than do those who will never have children" (Stutzer and Frey 2006, cited by Clark 2018, p. 249). It has also been suggested that the impact of having children on happiness is context-specific and varies by country (and GDP level) and the age of the parents (for a more detailed discussion of relevant studies, see Clark 2018).

Turning from demographic to socioeconomic characteristics, it has long been established that there is a very strong and highly significant relationship between unemployment and happiness. In particular, being unemployed has a very strong and long-lasting negative impact on happiness which cannot be explained only in terms of loss of income, as there are significant non-pecuniary effects (Clark 2003, 2018; Farre et al. 2018; Theodossiou 1998, Winkelmann and Winkelmann 1998). For those in employment, the type and conditions of their job also have a considerable impact on their happiness (Graeber 2018; Nikolova 2019).

Economists have also long been involved in efforts to address the question of whether money can buy happiness, and, to that end, research has identified a positive relationship (ceteris paribus) between income and happiness (Easterlin 1974; Clark 2003), but with the marginal increase in happiness declining as income rises (Layard et al. 2008). As Clark (2018, p. 247) puts it: "the subjective well-being effect of an additional dollar of income being larger for those with lower incomes than for those with higher incomes." It has also been argued that the marginal change in happiness is proportional rather than absolute across income groups, following the so-called "one percent is always the same" rule (Jencks 2002). In addition, it has been argued that relative income, and the position of an individual in the national income distribution, has a very strong influence on happiness (Clark 2003; Frank 1999, 2007; Ferrer-i-Carbonell 2005; Wilkinson and Pickett 2018).

Finally, another extremely important factor affecting happiness is health status, with most relevant studies consistently reporting a strong positive correlation between well-being and physical and psychological health (Dolan et al. 2007; Frey and Stutzer 2002).

The above brief review has focused on studies predominantly conducted by economists and comprises part of the science of happiness and well-being field (also see the chapter by Nikolova and Graham in this volume). The interdisciplinary nature of this emerging new science is evident in a rapidly increasing number of influential edited collections and reports (e.g., David et al. 2013; Helliwell et al. 2020) and the founding of the *Journal of Happiness Studies* in 2000. One of the fields that is particularly powerful and insightful is that of spatial sciences, and in particular economic geography, adding a spatial dimension to the economics of happiness.

The Spatial Economics of Happiness

Most of the studies by social scientists have involved an individual-level analysis of happiness and its determinants in specific nations, as well as comparisons of aggregate happiness levels between nations (see Veenhoven 1993, 2000; Inglehart et al. 2008; and the World Happiness Reports archive 2020). However, very few analyses of these data have explicitly considered the importance of *space* and *place* for happiness.

The importance of spatial context in the analysis of happiness has long been recognized in economic studies, including the seminal work by Easterlin (1974) who considered the impact of national Gross Domestic Project on well-being. Since then, there have been a considerable number of studies that consider both individual and household characteristics as well as spatial context (for a recent review, see Clark 2018, pp. 250–253), and the argument for adopting an explicitly geographical approach has been increasingly highlighted (Ballas 2013; Ballas and Dorling 2013; Morrison 2020; Rijnks 2020). Furthermore, the most recent World Happiness Report (Helliwell et al. 2020) includes a detailed discussion of geographical context

that considers and analyzes factors pertaining to social environments (Helliwell et al. 2020; Martela et al. 2020), the physical environment, the ranking of urban environments (De Neve and Krekel 2020), and urban/rural differentials (Burger et al. 2020).

Nevertheless, there has been a relative paucity of economic geography studies into the importance of economic, social, and spatial contexts for happiness and in particular in exploring why where someone lives, works, or has been may affect how they respond to happiness questions in surveys: in other words, how place and space affect the measurement of people's feelings. Place is usually defined and determined by the physical and cultural environment, whereas "space" is determined by the possible links between socio-spatial processes (e.g., migration), states (e.g., socio-economic spatial polarization, social and spatial inequalities), and subjective happiness. In this context, it is also important to highlight the interdependencies between population, space, and place. Places are not fixed containers of people and their characteristics, but rather they are shaped by the behavior of people (including residential mobility and migration) in search of greater well-being. At the same time, the well-being of people is affected by their personal circumstances as well as those of their family and friends, their social networks, as well as factors pertaining to the area in which they live on different levels (e.g., immediate neighborhood, village or city, region) and that of neighboring regions. The circumstances and characteristics of places are also dynamic and affected by the people who live there (including migration) and by changes in attitudes and circumstances through their life course.

Adding a regional science and economic geography perspective to the study of happiness involves the simultaneous analysis of social, economic, temporal, and spatial factors and patterns. The remainder of this chapter presents such a perspective and illustrates how economic geographers, and more broadly spatial scientists, can contribute to the science of happiness in terms of descriptive and analytical methods as well as theoretical and conceptual frameworks.

Mapping and Analyzing Happiness and Its Economic, Social, and Geographical Determinants

An important contribution that can be made by spatial scientists and especially economic geographers is to extensively map and analyze the economic and socio-spatial determinants of happiness and well-being. Regional science and economic geography perspectives can offer powerful insights into understanding the extent to which geography matters when it comes to happiness.

Quantitative studies of happiness are typically based on some measurement of subjective happiness derived by survey questions such as: "Taking all things together would you say you are very happy, quite happy, not very happy or not at all happy?" (European Values Survey 2020) (It should be noted that there are many different measures of "happiness" or well-being more generally. The methodological challenges associated with the measurement of self-reported happiness and well-being are discussed in detail in the chapters ▶ "The Economics of Happiness" and

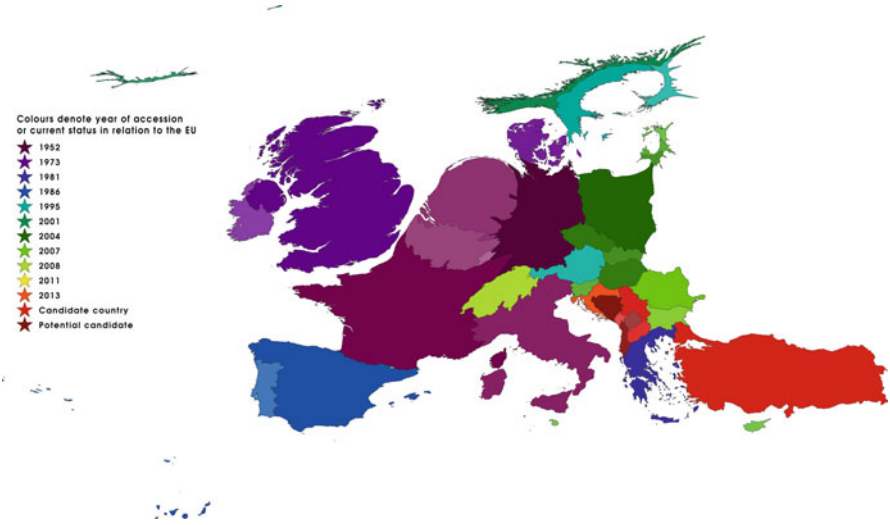

Fig. 1 The geography of subjective happiness in Europe. (Countries drawn in proportion to the total number of *very happy people* estimated using the European Values Survey; source: Ballas et al. 2017a, p. 158)

► "Measuring Subjective Well-Being"). The map shown in Fig. 1 is taken from the *Human Atlas of Europe* (Ballas et al. 2017a) and uses the variable generated by this survey question.

This is just one of the very many ways in which geography and spatial sciences can be used to inform the debates on the determinants of happiness. This map of Europe was created using state-of-the-art geographical information systems (GIS) and human cartographic methods that redraw geographical regions such that each area is proportional to the number of people who live there rather than land area. This population cartogram technique is considered a more appropriate way to visualize geographical data in the social sciences when you are interested in *mapping people rather than land*, especially if you do not wish to overemphasize empty land in the map image. What the technique does is to iteratively alter the more conventional map structure so that areas of high density expand and areas of low density shrink in such a way that eventually all areas are of, say, equal population density, in which case an equal population cartogram is created (Ballas et al. 2014, 2017a, b). The map shown in Fig. 1 is an example of a country-level cartogram where countries are resized in proportion to a variable of interest. In particular, rather than showing land area, Fig. 1 shows the countries resized according to their total number of *very happy people* (according to European Values Survey). The larger the total number of *very happy people*, the larger the area it occupies on the map. Figure 1 visualizes happiness in absolute terms (total numbers of estimated very happy people in each country). It is also useful to consider happiness in relative terms by looking at the distribution of share of very happy people as a percentage of the total population.

Table 1 Top and bottom five countries in Europe in terms of happiness (very happy people as a proportion of total population). (Source: Ballas et al. 2017a)

Very happy	
Top five (%)	
Netherlands	56.1
Iceland	51.1
Denmark	47.1
Ireland	46.5
Belgium	43.5
Bottom five	
Germany	12.9
Albania	12.3
Estonia	10.6
Latvia	9.9
Lithuania	6.4

Fig. 2 Human cartogram of Europe based on population showing association of states with the European Union. Basemap: Hennig Projection Gridded Population Cartogram. (Source: Ballas et al. 2017a, p. 14)

Table 1 lists the top five and bottom five countries in terms of the proportions of their residents who answered that they were very happy in the European Values Survey.

Figure 1 includes all countries that are either member states of the European Union (EU) or have demonstrated a strong commitment to a common European future by being closely associated with the EU, either as official candidate states (or official potential candidates) for EU accession or states that have signed up to any of the following agreements: the European Economic Area, the Schengen Zone, and the European Monetary Union. The map shows these countries using a rainbow color scale to reflect the year of association with the European Union (also see Fig. 2).

Fig. 3 Hennig Projection Gridded Population Cartogram showing altitudes. Note: Lighter colors represent higher altitudes. (Source: Ballas et al. 2014, p. 10)

As a further example of this cartographic approach, Fig. 2 uses the same color scheme but is scaled proportionally to total population (all population and not just the total number of very happy people in each area) on a very small-area level (approximately 1 square kilometer) resulting in a considerably different impression. Major cities are indicated to aid interpretation.

As seen in Table 1, the Netherlands is top of the happiness table in Europe based on the total number of people that claim to be very happy as a percentage of the total population. It is also worth noting that the Netherlands is consistently in the top 10 happiest countries in the world according to the World Happiness Reports published since 2012 (World Happiness Report archive 2020). It should be noted that the survey question used for the measurement of happiness differs from that used in the European Values Survey. According to the most recent report (Helliwell et al. 2020), the Netherlands is ranked sixth. The happiest country in the world is Finland, followed by Denmark, Switzerland, Iceland, and Norway (and all these countries are consistently among the happiest places to live according to that survey and many other similar surveys). The question is why are these countries the happiest?

To consider possible physical geography or environmental factors that may affect happiness, one could explore the geographical patterns as shown in Fig. 3, which is a topographic version of the previous cartogram, with areas again being proportional to populations at a very small-area level (as in Fig. 2) but colored by altitude.

In this way, physical and human geographies can be combined in a single map. Somewhat similar to a traditional physical geography map superimposed with cities, this is a human geography map that also depicts mountains and valleys.

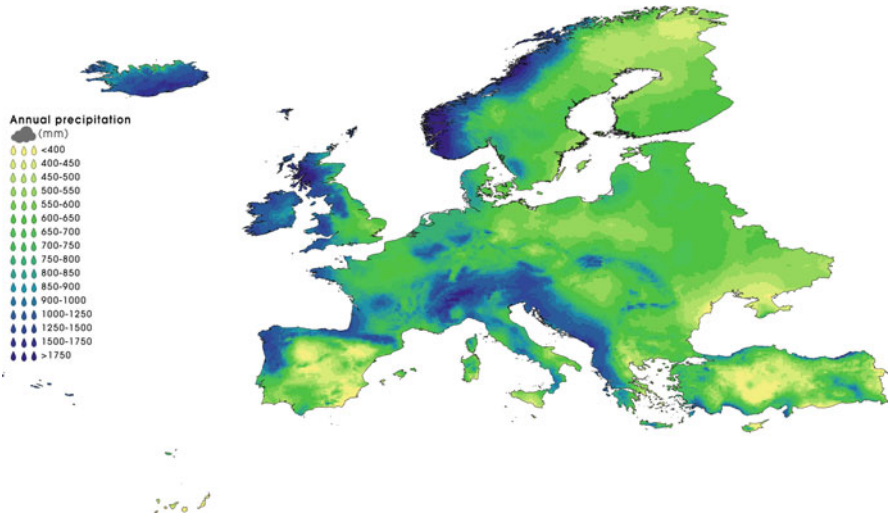

Fig. 4 Annual precipitation in Europe. (Source: Ballas et al. 2014, p.13)

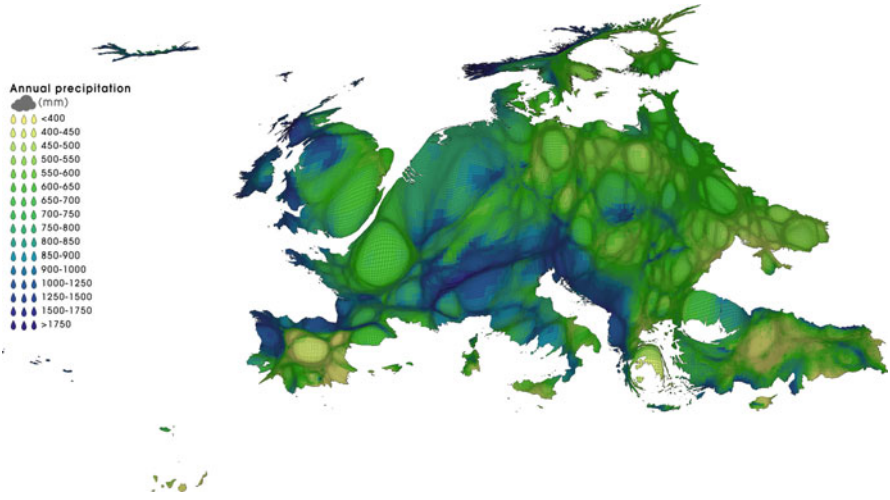

Fig. 5 Annual precipitation of Europe. Basemap: Hennig Projection Gridded Population Cartogram. (Source: Ballas et al. 2014, p. 14)

Another aspect that might influence happiness is the weather! Figure 4 shows a conventional thematic map of rainfall showing how much rain falls in different areas. Figure 5 shows a human cartographic representation of the same information but with areas being scaled to population (as in the altitude map) but this time colored by precipitation.

Looking at both of these maps, one can probably conclude that the rainfall is not a decisive factor when it comes to a country's overall happiness on the basis that a lot of rain is something that human beings find objectively unpleasant. It is also relevant to note here that, according to the most recent World Happiness Report, moderate temperatures have a small but significant effect on happiness (Krekel and MacKerron 2020).

Another important consideration and question to be asked is whether levels of happiness among individuals in Europe reflect different characteristics of residents in different countries (compositional effects) and whether there are environmental or other factors (e.g., social capital and cohesion, socioeconomic inequality) of places that cause their inhabitants to be happy or unhappy (contextual effects). In other words, a particular area may have high levels of subjective happiness because its population has all the characteristics that strongly and positively correlate with happiness as described and discussed in the previous section of this chapter. For example, an area with large numbers of very young and/or very old people, people in excellent health, and people in employment with high incomes. Furthermore, contextual effects could include environmental factors such as the weather, air quality, natural amenities (e.g., proximity to green spaces, coastal areas, areas of outstanding natural beauty, national parks), urban amenities (e.g., theaters, restaurants, public parks, health and education services, and shopping variety), and human-created contextual aspects (e.g., income inequality, poverty and social exclusion, social cohesion, cultural and lifestyle tolerance).

Another key factor to consider is that of social and spatial inequalities. Not just who we are and what we have, but also how this relates to what others have. It has long been argued that the position that a person has in their own society, as well as the overall level of status inequalities, strongly influences their subjective experiences, including happiness and unhappiness. As argued in more detail elsewhere (see Ballas 2013), it can be argued that the first scholars to identify the importance of inequality and relative social position include Adam Smith and Karl Marx:

> 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)

> 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)

The importance of social comparisons of how people live and what they have has also been highlighted by Veblen (1899) and Duesenberry (1949). More recently and

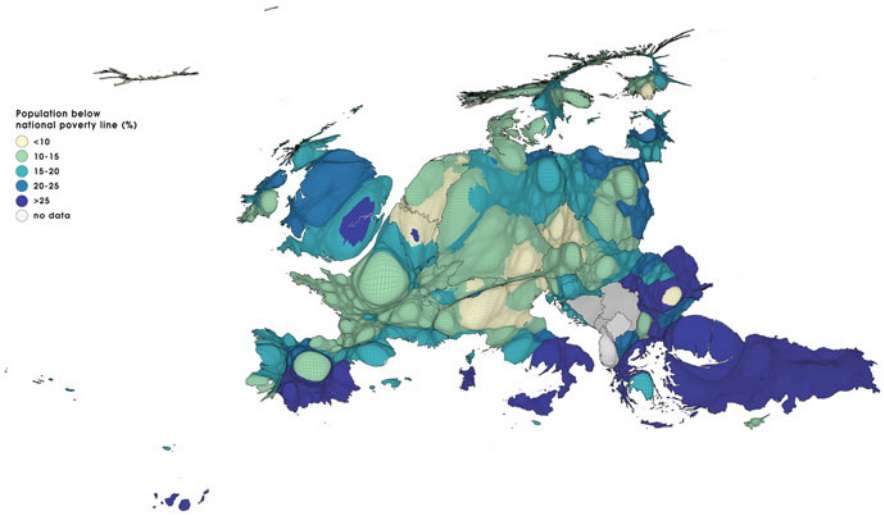

Fig. 6 Population at risk of poverty, NUTS-2 regions 2014, map using data from Eurostat: Basemap: Hennig Projection Gridded Population Cartogram. (Source: Ballas et al. 2017a, p. 46)

in the context of the new science of happiness, Layard (2005) has suggested that people tend to compare themselves to their colleagues, friends, and neighbors, with consequences for both happiness and health. In addition, from a social epidemiology perspective, it has been demonstrated that the relationship between income distribution and well-being is mediated, through psychosocial pathways, by the impacts of economic structure on social relationships (Wilkinson and Pickett 2010, 2018). According to their Spirit Level theory, less income inequality is seen to result in societies with more cohesion, greater trust and cooperation, and lower social stress. Another relevant key issue is that a certain degree of inequality, and its determinants, seems to be more accepted in some societies and places than in others along with the social attitudes and beliefs that bolster injustice (Dorling 2011). The impact of inequality upon well-being is perhaps more relevant now than ever given the rapidly rising inequalities seen in recent years (Dorling 2018; Picketty 2014). In addition to income and wealth inequality, Morrison (2020) and Burger et al. (2020) have highlighted the impact of aggregated well-being inequalities (at the level of regions and countries) on individual well-being.

It could therefore be insightful and relevant to also consider and visualize potential contextual factors (including factors relating to income and wealth inequalities) that can be described as the "social weather" (building on the earlier discussion on the possible impact of the weather and the physical environment). Figure 6 provides a visual exploration of social and spatial inequalities across Europe using the same cartographic approach adopted in Figs. 2, 3, 4, and 5 with the small areas now shaded to show the regional poverty rate (people across European regions who live on an income that is less than 60% of the national median income as

a percentage of the regional total population). Using the weather analogy and theme, it can be argued that this is a "social weather" map, highlighting a social contextual variable (and also a measure of inequality) that has an impact on individual and collective happiness. Similar "social weather" or human-created amenity (as discussed above) variables could include income inequality, unemployment rates, social capital, and other forms of collective social well-being or social problems (see Ballas et al. 2017b for more examples of this type of variable and geovisualizations). It should also be noted that this "social weather" (and this includes the magnitude and spatial patterns of poverty as mapped in Fig. 6) is currently rapidly changing across Europe and beyond due to the current Covid-19 pandemic which is likely to disproportionally and massively affect the poorest and most vulnerable groups in society (Dorling 2020; Harris 2020; Kapitsinis 2020).

In addition to considering the physical and social environment and associated factors when attempting to measure and quantify happiness, there may also be cultural (Tiberius 2004; Lu and Gilmour 2004; Uchida et al. 2004) and linguistic (Veenhoven 1993; Russel and Sato 1995) issues that affect responses to happiness questions in surveys. In particular, it has been suggested that people living in societies where personal modesty is valued over individualism may understate their levels of happiness, whereas happiness may be overstated by those living in societies that encourage individuals to "stand out from the crowd" (Ballas and Dorling 2013). For instance, it is often argued that Americans have a tendency to say that they are "very happy" because salient happiness is so positively valued in the USA, whereas in countries like France, the exact opposite may be the case (Frey and Stutzer 2002). In "The French unhappiness puzzle: The cultural dimension of happiness," Senik (2014) analyzed the differences in self-reported happiness across countries in order to disentangle the influence of objective circumstances from psychological and cultural factors. One of the highlights of her research was evidence suggesting that a large proportion of the differences in self-reported happiness across countries comes from cultural and mental attitudes.

There are even regional variations in linguistic and cultural aspects within countries. A good example is a typical response that you might receive to such a question in the city where the author of this chapter works and lives, Groningen in the Netherlands: Kon minder! Freely translating this from Dutch to English, this means "it could be worse." This may not sound very positive to people in other parts of the Netherlands and even more so in other parts of the world, and it may lead to misleading results when comparing different areas and people. In fact, a person who says *kon minder* in Groningen would probably be very happy, but this may not be the case in other Dutch cities (and especially in the south) such as Maastricht and Amsterdam! Although these issues should be acknowledged and considered, there are nevertheless strong arguments and evidence suggesting that happiness can be compared across nations and used as an indicator of how well people thrive in a society (Veenhoven 2012, p. 333).

Economic geographers can play a leading role in investigating all the issues discussed above by mapping and analyzing happiness and its socio-spatial determinants and by considering and analyzing the impact that social and spatial inequalities

have. First, from a methodological perspective, a comprehensive geographical approach to subjective happiness and well-being is needed to clarify the extent to which subjective happiness can be attributed to "individual" (e.g., employment status, age group), "household" (e.g., household income, accommodation type and size), and/or wider "contextual" circumstances and characteristics (e.g., climate, socioeconomic environment) across the world and to establish the relative importance of such characteristics in different countries and within regions and cities in a country. To that end, an economic geography approach in the analysis of happiness and its determinants can be adopted to address questions such as:

- Is the source of happiness or unhappiness purely personal, or **do spatial/contextual factors matter? (And if they do, to what extent?)**
- Are there **happiness spatial spillover effects?** Does the happiness level of an individual affect that of their neighbors?
- Are social comparisons important, and if so **what is the spatial scale at which people make their social comparisons?**
- Do the levels of happiness among individuals reflect different characteristics of residents in **different districts and regions and areas** (compositional effects), or are there environmental, geographical, or other factors (e.g., amenities, social capital and cohesion, socioeconomic inequality) of places that cause their inhabitants to be happy or unhappy (contextual effects)? In other words, should we talk of **happy people, happy households, or happy places?**

Although there has already been considerable progress in exploring these types of questions from a geographical perspective including analyses at subnational and subregional levels (e.g., Albor et al. 2014; Aslam and Corrado 2012; Ballas 2010; Ballas and Tranmer 2012; Brereton et al. 2008; Morrison 2011), there is still a huge potential for more comprehensive analysis that would include more explicit modeling of spatial interdependencies (such as the recent work of Rijnks 2020; Rijnks et al. 2019; Ziogas et al. 2020) and the importance of place and space, while also engaging with relevant theoretical perspectives such as those discussed in the next section.

Toward New Theoretical Insights

Interpersonal and Spatial Interdependencies of Happiness and Feelings of Solidarity

The extent to which we have feelings of solidarity with others and to which this affects our happiness is also extremely relevant to theoretical debates in economics and economic geography. For example, this could be seen as contradicting Adam Smith's invisible hand and the notion that the most efficient management of economic resources and the maximum economic benefit for all can be achieved when individuals act in their own self-interest. Of particular relevance here is the work in medical science suggesting that altruistic emotions and behaviors are associated with greater well-being, health, and longevity (e.g., Prost 2005). It has long been argued that happiness can be considered as a proxy for individual preferences or utility in

a welfare economics context (Frey and Stutzer 2002; Layard 2005) and there have been considerable efforts to explore the utility (or happiness) interdependency between individuals (Powdthavee 2009; Shields and Price 2005; Scharze and Winkelmann 2011; Clark et al. 2008). However, how much is our happiness really affected by the happiness of others, and to what extent are geography and economic geography relevant and important? Adding a geographical dimension to these debates could involve giving consideration to possible socio-spatial interdependencies between people in different neighborhoods, cities, regions, and countries and to expressions of solidarity, including the recent manifestations of support and reaching out to refugees in Europe, even from people with few material resources (Ballas 2016).

The importance of neighborhood effects has long been acknowledged theoretically as discussed in the previous section. Economists have also made notable attempts to empirically measure and analyze such effects. However, in most of these attempts, geographical interactions and comparisons were not directly modeled but instead proxied using average regional income (e.g., Luttmer 2005) due to the lack of suitable small-area data. Nevertheless, there have been efforts to combine datasets from different sources in order to build small-area or community-level datasets on happiness that could enable more direct modeling of possible interdependencies between neighbors (Ballas 2010; Helliwell et al. 2019). From a methodological perspective, there has been some progress toward explicitly modeling spatial interdependencies by implementing appropriate spatial econometric approaches (see next section) with the use of existing high-quality survey data disaggregated at the neighborhood level in the Netherlands (Rijnks et al. 2019) and a dataset for Canadian community areas created by Helliwell et al. (2019).

Happiness, the Geography of Discontent, and Place Identities

The above discussion is also extremely relevant to very recent and ongoing work on the political geography of the rise of the far right (Georgiadou et al. 2018), on Brexit (Dorling and Tomlinson 2019), and on the "geography of discontent and the revenge of places that don't matter" (Rodriguez-Pose 2018; Dijkstra et al. 2019; McCann 2020). In particular, temporal and spatial variations in subjective happiness may be linked to voting behavior (Di Tella and MacCulloch 2005; Koeppen et al. 2021; Napier and Jost 2008; Powdthavee et al. 2008; Ward 2015), as well as to the socio-spatial and historical processes of shaping place and group identities and the feelings of belonging. In addition, place and group identities are also interdependent with subjective happiness and well-being. For instance, Dorling and Tomlinson (2019) argue that one of the key factors affecting the result of the referendum on the UK's membership of the European Union had a strong link to an identification with the British Empire and associated nostalgia. Conversely, there are a rapidly growing number of people across Europe who affiliate strongly with a European identity and the values associated with the European project (Ballas et al. 2017c), which can also be considered to relate to happiness, values, ideals, way of living, and what makes the good life!

Our happiness is not only dependent on what *we* have as individuals; it also depends on the happiness of *others*. As Danny Dorling put it: "We cannot truly be happy, if those around us are not happy. Not just our family and friends, but our fellow citizens, whose lives are entwined with ours and will affect us for good or ill at some point" (2016, p. 1). It is therefore important to better understand the factors that affect our perceptions of group and place identity and feelings of affiliation and belonging and the ability to feel solidarity with other people and places. The expression of solidarity with people in other places, regions, and countries may also be relevant in determining the degree to which regional economic and territorial cohesion policies can be politically viable and successful. Here, the emerging European identity is a good example of how happiness may relate to group and place identity and to feelings of belonging and solidarity. As Bono of the Irish band U2 pointed out in an address to the delegates of the European People's Party Congress in Dublin, 7 March 2014 (RTE 2014):

> Europe is a thought that needs to become a feeling. When Americans talk about their United States, they get all misty eyed, they get emotional. Hell, when the Irish talk about the United States, we get misty eyed. Do we think that way about Europe? And if not why not?

Can Europe be seen as one country? To what extent can Europe become a "feeling"? Are there any Europeans that might become passionate and misty eyed when talking about the European Union? And why is this important?

It could be argued that for the European project to be successful, there is need for the emerging common European identity to be further bolstered and, as Bono put it, for Europe to become more of a "feeling": for Europeans to get "misty eyed" when talking about Europe and "feeling united not just by bonds of interest, but by bonds of affection." Or, in other words, for their personal happiness to be associated with the happiness of people in regions elsewhere in their own country and elsewhere in Europe. This may also be a model for the rest of the world to consider.

Spatial Equilibrium

Another very interesting and relevant theoretical debate that is related to economic geography is the consideration of happiness as a proxy for utility, and the revisiting of equilibrium models of migration, compensating differentials frameworks (Mulligan and Carruthers 2011), and of the happiness equilibrium hypothesis. The latter suggests that economic theory would predict that happiness should be the same in all regions: "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). The recent advances in happiness research and the improved data availability offer renewed potential to revisit these theories with new models that consider happiness as a proxy for utility. There has already been considerable progress here (e.g., Oswald and Wu 2010; Ballas and Tranmer 2012; Rijnks 2020), but there is huge potential for more significant contributions from economic geographers,

especially given the availability of new data as well as advances in geoinformatics and spatial analysis methods in the social sciences.

What Can Economic Geography and Regional Science Offer in Terms of Methods?

Multilevel Modeling

Economic geographers and regional scientists have been very successful in the analysis of compositional and contextual determinants of happiness through the specification and use of multilevel modeling frameworks that take several spatial levels into account at the same time (Aslam and Corrado 2012; Ballas and Tranmer 2012; Bernini and Tampieri 2019). In particular, multilevel modeling methods are particularly suitable for addressing questions such as: Happy people or happy places? In other words, they can be used to examine variations in happiness on different levels simultaneously to determine the extent to which happy or unhappy people congregate in similar locations (compositional effects), or whether certain attributes of places cause their inhabitants to be happy or unhappy (contextual effects), and whether, having taken these factors into account, there remains any unobserved heterogeneity between places with respect to self-reported happiness and well-being measures (Ballas and Tranmer 2012). Nevertheless, there is significant potential to further develop and apply multilevel frameworks by considering both space and place (also on smaller-area levels than the region or district which have typically been adopted in most studies to date) as well as by adding a temporal dimension in order to explore "within-individual changes" and "inter-individual differences" over time. Such changes and differences can include adaptation effects related to space, place, and time and involve analysis of spatial behavior and its dynamics (including residential mobility and in situ adaptation).

Spatial Regression and Spatial Econometrics

There is also great potential to further explore social and spatial inequalities in subjective happiness through the use of spatial regression and spatial econometric modeling frameworks (Anselin 1988; Elhorst 2014) to analyze possible spatial happiness spillover and its determinants. In particular, such frameworks could be very powerful in addressing the questions posed throughout the chapter by explicitly and specifically considering possible spatial interdependencies between people and places. In adding what could be described as a *spatial spillover twist*, these questions can be rephrased as follows:

Does how we feel affect the well-being and happiness of our neighbors (and vice versa*), and is there a similar link at an aggregated level?*
Does an area's collective sense of well-being affect that of neighboring areas?

*Do the characteristics of an individual (*e.g.*, income, employment status) affect the happiness of individuals living in neighboring areas?*
Does the level of aggregate income, unemployment rate, and other socioeconomic indicators in one area affect the happiness levels of neighboring communities?

As also noted, there have already been some efforts in this direction (Rijnks et al. 2019; Ziogas et al. 2020), but there remains significant potential to build on this work, especially given the increasing availability of suitable small-area microdata.

Geoinformatics, Big Data, Spatial Microsimulation, and Agent-Based Models

Geoinformatics and GIS have a great and rapidly increasing potential for applications in economic geography. These applications include the mapping (as illustrated earlier in this chapter with the use of human cartography; see Figs. 1, 2, 3, 4, 5, and 6) and analysis of the socioeconomic and spatial determinants of happiness and well-being. This potential is further enhanced by the increasing availability of regional and local social survey microdata as well as big data from various forms of open data sources (Arribas-Bel 2014; Batty 2012, 2020) and social media data with geospatial footprints (Stefanidis et al. 2013). The increased frequency of these data open up possibilities for the spatial dynamics of well-being to be studied in new ways (e.g., Iacus et al. 2019).

In addition, it is increasingly possible (given computer software and hardware advances) to use agent-based models and spatial microsimulation modeling techniques to explore subjective happiness on different levels, ranging from the individual to household, neighborhood, city, and region. Of particular relevance here are the GIS-based research efforts (Ballas et al. 2017d; Ballas et al. 2018a) aimed at developing simulation models that can estimate the spatial impacts of social policies, as well as their socioeconomic impact, in order to respond to the need for spatial analysis of national social policies. These geographical simulation methods are conceptually very similar to popular life simulation computer games such as SimCity and the Sims but, rather than using game-based rules and hypothetical imaginary data on the synthetic characters of the game, involve the merging of small-area statistics (such as population census data) and social survey data to simulate a population of individuals within households (or other geographical units) whose characteristics are as close to real populations as it is possible to estimate. These methods can also involve the development and use of computer agent-based models (Ballas et al. 2018), and dynamic microsimulation models that involve forecasting past changes forward to produce a best estimate of an individual's future circumstances were current trends to continue or under different policy scenarios.

It can be argued that spatial microsimulation is particularly suited for the analysis of happiness since the degree of well-being varies significantly between individuals (different people are made happy by different things, life courses, etc.). As Nobel laureate Amartya Sen observed: "A person who has had a life of misfortune, with very little opportunities, and rather little hope, may be more easily reconciled to

deprivations than others reared in more fortunate and affluent circumstances. The metric of happiness may, therefore, distort the extent of deprivation in a specific and biased way" (Sen 1987, p. 45).

Spatial microsimulation models are considered very powerful tools for the analysis of happiness (Ballas 2010) at the microlevel (considering different individual circumstances in detail) as well as for exploring alternative policy scenarios and their potential impacts. One of the key application areas of spatial microsimulation is in the estimation of small-area income distributions and the use of these estimates for policy analysis. As noted earlier, social and spatial inequalities can have a significant detrimental impact upon happiness. Spatial microsimulation methods can be used to estimate income inequalities at the small-area level and also when considering policies that could reduce these inequalities, with potential implications for the geography of happiness. A particular policy that is gaining prominence and which could have a potentially positive impact upon happiness is that of basic income. A basic income (also known as a universal basic income) is an income paid unconditionally to every citizen or resident of a country. It is a form of guaranteed minimum income, but distinct from minimum incomes that already exist in some countries because it is paid irrespective of income from other sources and without a requirement to work. The funding and implementation of such a policy may have significant positive effects on individual well-being given the theoretical arguments and evidence discussed in this chapter (particularly given the compelling evidence provided and the arguments by Wilkinson and Pickett 2010, 2018).

Summary

There is a great potential, as well as a need, for economic geographers to engage with the new science of happiness in order to map and address the extent to which well-being and happiness may be attributed to 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 their distribution within a city). This chapter has drawn on and built upon previous relevant reviews (Ballas 2013; Ballas and Dorling 2013) and added a geographical dimension to the efforts of other social scientists to conceptualize and analyze happiness and its determinants.

One of the key advantages of economic geography, and more broadly human geography, is that it is by definition interdisciplinary. In particular, geography as a discipline typically involves research scholars with diverse backgrounds ranging from economics to cultural geography, demography, and planning with equally diverse methodological expertise including geoinformatics, quantitative spatial analysis, qualitative analysis, and ethnography. As such, an economic and human geography approach to the analysis of well-being has the great advantage and potential that it can support interdisciplinary research on the methodological frameworks that could be developed and implemented to explore in greater depth the economic geography of happiness.

A particularly important issue is that of social and spatial inequalities in terms of income and wealth and more generally socio-spatial justice, which can have huge implications for the individual and social well-being and happiness of entire populations. There has been some very impressive research in this field over the past few years, such as the "Spirit Level" and "Inner Level" work (Wilkinson and Pickett 2010, 2018), and there is now the great challenge to add a city and regional dimension to this work and to revisit traditional debates on social justice. In pursuing this goal, it would also be very significant and relevant to consider peer effects and spatial spillovers and the psychosocial processes related to conspicuous consumption and the consumption of positional and non-positional goods (Frank 2007). In this context, there is increasing prominence given to, and media attention on, redistributive taxation policies such as basic income and theoretical as well as on the empirical analysis of the possible implications for happiness and well-being as a consequence of the increasing economic independence of all individuals within society (Bregman 2016; Frank 1999, 2007; Van Parijs 1997, 2001).

In addition, there is an opportunity to engage with new theoretical and empirical work in economic geography, and in the social sciences more generally, related to the geographies of discontent (McCann 2018, 2020) and the rise of populism and protest voting (Dijkstra et al. 2019; Rodriguez-Pose et al. 2020), subjective happiness in areas perceived by their residents as "places that don't matter" (Rodriguez-Pose 2018), as well as feelings of belonging, place identity, and planetary responsibility (Bauman 2011), the refugee crisis and feelings of solidarity with others. Finally, from a data and methodological perspective, there is a great potential in utilizing the expertise of economic geographers and regional scientists in spatial regression and spatial econometrics, social simulation methods, big data analysis, and more widely the use of geoinformatics.

Cross-References

► Measuring Subjective Well-Being
► The Economics of Happiness

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