The French Unhappiness Puzzle: the Cultural Dimension of Happiness

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Summary

This article sheds light on the important differences in self-declared happiness across countries of similar affluence. It hinges on the different happiness statements of natives and immigrants in a set of European countries to disentangle the influence of objective circumstances versus psychological and cultural factors. The latter turn out to be of non-negligible importance in explaining international heterogeneity in happiness. In some countries, such as France, they are responsible for the best part of the country's unobserved idiosyncratic source of unhappiness. French natives are less happy than other Europeans, whether they live in France or outside. By contrast, immigrants are not less happy in France than in another European country. I show that these gaps in self-declared happiness have a real emotional counterpart and do not boil down to purely nominal differences.

JEL Codes: I31, H52, J61, O15, O52, Z10

Key-words: Happiness, Unhappiness, Subjective Well-Being, International Comparisons, France, Immigration, European Social Survey.

I. Introduction

Happiness studies have gained so much credit over the last decade that several governments and organizations have endeavored to collect measures of happiness to be included in national accounts and used to inform policy (Waldron, 2010, Commission 2009, Eurostat 2010). Measuring well-being "beyond GDP" has become a familiar idea, and subjective happiness is one of the main proposed alternative routes. However, targeting an aggregate happiness indicator is not straightforward. Although the literature is quite consensual about the correlates of individual happiness, it is much more controversial when it comes to aggregate measures of happiness.

For one thing, whether happiness follows the evolution of national income per capita over the long run remains a hotly debated issue among specialists (see Clark and Senik, 2011). International comparisons are also quite puzzling; in particular, it is difficult to fully explain the ranking of countries in terms of subjective wellbeing.

For example, as illustrated by Figures 1.A and 1.B, the poor level of happiness in France and, to a lower extent, in Germany is not consistent with a ranking of countries based on income per capita or on the Human Development Index, that include life expectancy at birth and years of schooling. Analyzes of all available international surveys (the *European Social Survey*, the *Euro-Barometer Survey*, the *World Values Survey*, and the *World Gallup Poll*) lead to a similar conclusion: observable characteristics are not sufficient to explain international differences; in all estimates of life satisfaction or happiness, country fixed-effects always remain highly significant, even after controlling for a large number of macroeconomic and institutional controls (Deaton 2008, Stevenson and Wolfers 2008). The suggestive Figure 2, taken from by Inglehart et al. (2008), illustrates the existence of clusters of happiness, with Latin-America and Scandinavia standing systematically above the regression line, and former communist countries, below. As a rule, France, Germany and Italy stand close to Eastern countries at the bottom of the ranking. Figures 3 shows that international differences in happiness are quite stable over time: national happiness fluctuates over the business cycle, but the relative positions of the different national happiness curves remain essentially unchanged.

Several studies suggest that these differences cannot be explained by the structure of satisfaction, i.e. the ingredients of happiness, which are very similar across countries (di Tella et al., 2003). Because France is amongst the countries that rank lower than their wealth would predict, I call this piece of evidence "the French Unhappiness Puzzle", but the puzzle lies more generally in the existence of large, unexplained and persistent country fixed effects, i.e. international heterogeneity in happiness.

The reason for these international differences could be that different countries offer different living conditions that cannot be fully arbitraged because of the imperfect mobility of the population across borders. Inside Europe for instance, absent mobility frictions, Europeans would settle into the most attractive places (that offer the highest amenities) and migration flows would lead to the equalization of wellbeing via the adjustment of house prices and wages (Rosen, 1974; Roback, 1982). If this were the case, in estimates of life satisfaction, country fixed-effects would not be statistically significant (Ferreira and Moro, 2010; Luechinger 2009, Oswald and Wu, 2010). However, in actual estimates, they are. This could reflect the existence of obstacles to mobility and other violations of the perfect competition assumptions (rationality, perfect information about local amenities, instantaneous price adjustments, etc.). Hence, country fixed-effects would reflect international differences in objective non-monetary local living conditions.

However, another possibility is that happiness does not depend only on extrinsic objective circumstances, but also on people's intrinsic cultural dispositions, mental attitudes and representations. This interpretation points to individual heterogeneity not in terms of preferences for such or such local amenity, but in terms of the happiness function, i.e. the capacity to transform circumstances into wellbeing. Therefore, this paper tries to disentangle extrinsic versus intrinsic factors of happiness, i.e. (i) Circumstances (institutions, regulations and general living conditions that inhabitants of a country are confronted with) *versus* (ii) Mentality (the set of specific intrinsic attitudes, beliefs, ideals and ways of apprehending reality that individuals engrain during their infancy and teenage, via education and socialization instances such as school, peer groups, firms and organizations). Mentality may also be persistent over several generations. Long-run persistent attitudes, beliefs and values that characterize groups of people have been called "culture" by (among others) Bisin and Verdier (2001, 2011), Fernandez and Fogli (2006, 2007, 2009), Fernandez (2008, 2011), Guiso et al. (2006), or Algan et al. (2007, 2010). The importance of culture in subjective well-being has been underlined (among others) by Diener and Suh (2000) and Diener et al. (2010). I start with the simplifying assumption that Circumstances and Mentality are separable, and later consider the possibility of their interactions.

Using a survey of seven different countries (ESS, waves 1 to 5), I contrast the happiness of natives to that of immigrants in Europe (pooling together first and second-generation immigrants). In a given country, say France, natives and immigrants share the same external circumstances, but possibly not the same "mentality" or culture. I rely on these commonalities and differences between natives and immigrants of different European countries to identify the nature of national happiness traits. In particular, to the extent to which happiness is due to external circumstances, the pattern of happiness of immigrants in Europe should be the same as that of natives. Bringing this model to the data, I find that the effect of living in a given country inside Europe is not the same for natives and for immigrants. Focusing on France, I find that the idiosyncratic French unhappiness is explained by "Mentality" (in addition to the usual socio-economic determinants) rather than by extrinsic Circumstances. A set of observations comforts the cultural interpretation of the French unhappiness: French emigrants living abroad are less happy, everything else equal, than the average European migrants. Decomposing the sources of happiness à la Oaxaca-Blinder, I find that most of the difference between the French and the Belgians is due to "coefficients", i.e. the happiness function, rather than "endowments" i.e. the objective living circumstances. More generally, the happiness level declared by European expatriates is correlated to the average happiness of their home-fellows.

I verify that the French unhappiness effect is not due to language and translation effects, by studying the happiness of different linguistic groups of the population of Belgium, Switzerland and Canada (sampled from the World Values Survey): in Belgium, the francophone Walloons are less happy than the Dutch-speaking Flemish, but this is not true of French-speaking cantons or individuals in Switzerland, nor of the French-speaking Canadians. I also check that measures of short-term emotional well-being (instead of happiness) lead to a similar ranking of countries as subjective happiness. The French unhappiness is also mirrored by a high degree of depressiveness and dissatisfaction in several domains, and by a weak feeling of inclusiveness in local and national projects.

These results are robust to the inclusion of macroeconomic indicators such as the rate of unemployment, of inflation and the weight of government expenditure in GDP. They are also robust to the inclusion of triple interaction terms between migration status, countries of destination, and several variables of interest, capturing the dimensions that could drive the results.

Overall, these observations suggest that a large share of international heterogeneity in happiness is attributable to mental attitudes that are acquired in school or other socialization instances,

especially during youth. This points to school and childhood environment as a valuable locus of public policy.

The French depressiveness

It has now become common knowledge that the French are much less happy and optimistic than their standard of living would predict. This comes in contrast with the French high standard of living, universal and free access to health care, hospitals, public schools and universities, and the high quality of amenities (as attested by the exceptional inflow of tourists). The low level of life satisfaction of the French is not a recent phenomenon; it has been there for as long as statistical series are available (the early 1970's), as illustrated by figure 3 (based on *Eurobarometer* surveys[1]).

Symmetrically, France obtains high scores in negative dimensions of mental health, such as psychological distress and mental disorders, as measured by internationally recognized medical classifications, such the International Classification of Disease (ICD10) or the American DSM. These measures of mental stress are generally negatively correlated with subjective wellbeing (Eugloreh, 2007). The high prevalence of depressiveness translates into the exceptionally high consumption of psychoactive drugs[2] (especially anti-depression) by European standards (CAS, 2010, graphs 8 and 10, pp 76 and 79).

If the "French paradox" is well established, it remains open to interpretation. The French are made unhappy by the high rate of unemployment, but the country fixed-effect remains, even after the inclusion of this magnitude in happiness regressions. Algan and Cahuc (2007) have stressed the role of the vicious heavy state regulation - low trust - low happiness nexus. A series of papers by the same authors has stressed the cultural dimension of trust and happiness -and the role of school- in cross-country comparisons. Other explanations based on culture and mentality have pointed to the possible role of lost colonial grandeur (that France shares with Italy and Germany), anti-capitalist preferences (Saint Paul, 2010), the conflict between egalitarian and aristocratic values exacerbated by the highly elitist school system (d'Iribarne, 1989), and the excess of hierarchy in the French society (Brulé and Veenhoven, 2011, Algan et al. 2012).

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[1] http://ec.europa.eu/public_opinion/description_en.htm

[2] For instance, according to the European Study of the Epidemiology of Mental disorders (ESEMeD, a study of the general population, run in 2001-2003 over 21 425 individuals aged 18 and over), France had the highest rate of consumption of psychotropic, before, Spain, Italy, Belgium, the Netherlands and Germany (Briot, 2006).

Discussing these interpretations is beyond the scope of this paper, although most of them, especially the latter, are consistent with its findings. Finally, a new paper by Oswald and Proto proposes that cross-country differences in happiness are influenced by genes, in particular the 5-HTTLPR, i.e. the protein-encoded serotonin transporter gene that influences the reuptake of serotonin, which is known to be implicated in human mood.

Related literature

This paper is not studying the effect of migration on happiness per se; rather it is using migration flows to European countries as an identification strategy for national cultural biases in happiness. From this point of view, it is close to that of Luttmer and Singhal (2011), based on the same ESS survey, who relate immigrants' redistributive preferences to the average preference in their birth countries. A recent paper by Algan et al. (2011) uses the fourth wave of the ESS and qualifies Luttmer's result by showing that the inherited part of preferences for redistribution is larger for 1st generations immigrants than it is for second-generation immigrants. Other papers have used migrations flows in order to elicit cultural persistence: Guiso et al. (2006) and Alesina and Giuliano (2011) have shown that country-of-ancestry fixed-effects are significant determinants of preferences for redistribution in the United States. In their studies of women's work behavior and fertility choices, Fernández and Fogli (2006, 2007, 2009) have provided rich evidence of the influence of women's ancestors' culture. All these papers characterize culture as inertia, although Fernandez (2008) provides a model of cultural change, embedded in what she calls an "epidemiological approach".

There is a small literature on migration and happiness, showing unanimously (and unsurprisingly) that immigrants are less happy than natives, controlling for a series of observable characteristics and circumstances (see Stillman et al. 2012, Bartram 2011, Safi 2010, Baltatescu 2007, or De Jong et al. 2002). Of course, there is a much larger literature on acculturation and cultural transmission of immigrants, which includes, inter alia, Portes and Zhou (1993), Bisin and Verdier (2001, 2001), and Bisin et al. (2004). Finally, an even larger literature focuses on the discrimination of immigrants in their host countries, in particular with regards to labor market integration (see Altonj and Blank, 1999 for a survey). Discrimination is certainly a determinant of happiness, and could vary across countries and depend on the origin of immigrants: this has to be taken into account in the empirical analysis.

Finally, international comparisons of happiness are necessarily related to the large literature that focuses on biases and equivalence between constructs, measures and scales (Van de Vijver 1998,

King et al. 2003)[3]. Although an abundant literature suggests that subjective wellbeing is a valid construct that can be reliably measured (see Layard 2005 or Clark et al. 2008 for useful reviews), the question here is whether international differences in happiness are not due to anchoring, Frame-of-Reference Biases (FORB) and general Differential-Item-Functioning (DIF) biases (see ZUMA 1998). However, it is not clear that these "biases" are purely nominal differences that should be treated as misleading measurement errors. Consider, for instance, the case of "social desirability" biases, first underlined by Cronbach (1946): a large literature in psychology, management and sociology has been devoted to identifying these responding biases, and elaborating instruments for correcting them (such as social desirability scales). However, another view has emerged (McCrae and Costa, 1983, Edwards, 1990) proposing that biases are not pure measurement errors, but carry some information and can even constitute personality traits[4] at the individual level, and cultural traits at the more aggregated country level, and are correlated with subjective wellbeing (Eysenck and Eysenck, 1975). Following this literature, I will interpret international differences not as meaningless anchoring biases and measurement errors, but as identity and cultural traits.

It is fair to mention an appealing recent survey-design technique based on "anchoring vignettes", which is meant to correct for self-assessment biases (King et al. 2004, King and Wand, 2006, Beegle et al. 2009, Kapteyn et al. 2009, Angelini et al. 2009, Hopkins and King, 2010). Subjects are asked to answer questions from the perspective of another person (the vignette), as well as for themselves. Respondents in different countries are asked to evaluate the same vignettes, so that their evaluation should be the same if there were no frame of reference bias. Any variation in the answers given by respondents is then interpreted as an anchoring bias, that researchers can use to rescale happiness measures in order to de-bias them (King and Wand, 2006). Two papers are particularly relevant with respect to this one. Kapteyn et al. (2009) introduced randomly assigned vignettes to assess DIF in the self-assessed life satisfaction of Dutch and American respondents. Angelini et al. (2009) used the vignettes of the *Survey of Health, Ageing and Retirement in Europe* (SHARE) in ten European countries to study life satisfaction. Both found that

[3] It should be underlined that the ESS devotes special attention to the translation and comparability of verbal labels across countries (hence a costly process of face-to-face interviews, questionnaire validation, etc.).

[4] Two dimensions of social desirability are classically distinguished: self-deception and deliberate deception (hetero-deception) (Paulhus, 1984, Tournois, et al. 2009). Self-deception was found to be related with personality traits such as good self-esteem, low anxiety and low neuroticism. Hetero-deception ("faking to look good") in turn, is correlated with extraversion, openness, agreeableness and conscientiousness (Paulhus 1994, Tournois et al. 2009).

correcting for the measured bias leads to a reversal in the ranking of countries in terms of happiness. Vignettes-based research is very stimulating and it is getting more space in the social sciences literature. However, it is not clear that anchoring biases evaluated by vignettes should be seen as a pure *artefact*. If the French evaluate the happiness of some hypothetical person in a less positive manner than the Danes, perhaps it is because they would actually feel less happy in the situation of that hypothetical person. Again, anchoring biases can be viewed as a cultural but nonetheless integral part of happiness.

My personal stand is thus to consider the cultural dimension of happiness as a reality rather than a nominal illusion. I thereby join Diener and Suh (2000), Diener et al. (2010) and Inglehart et al. (2008) who have stressed the cultural dimensions of international differences in happiness.

The paper is organized as follows. The next section presents the data, Section III the empirical approach, section IV the results and section V concludes.

II. Data

The paper uses the five first waves of the European Social Survey (ESS, http://www.europeansocialsurvey.org, 2002-2010). In order to have as many observations per country as possible, I keep countries that are surveyed at each of the five waves, and for which the main variables of interest are not missing. I also retain countries that are traditional immigration countries, and in which immigrants represent at least 15% of the sampled population. This leaves me with 7 countries, i.e. Belgium, Switzerland, Germany, France, Great-Britain, the Netherlands and Sweden, with about 5600 (Belgium) to 8400 (Germany) observations per country in the regression sample (Table A1).

Tables A1 to A7 present the descriptive statistics for the regression sample (estimating happiness on age, gender, (log of) household income, employment status, marital status, region of origin, migration status, country of residence and year fixed-effects, as in equation (2) below). Amongst the 47,585 observations with no missing value, 38,419 come from natives and 9,166 from immigrants (of which 4,645 first-generation immigrants, 1,352 second-generation immigrants, and 3,136 immigrants of the 1.5 generation, see Table A1)[5]. Table A2 illustrates the composition

[5] Natives are defined as individuals born in the country where they live and whose both parents were also born in that country. First-generation immigrants are individuals who were born abroad. Second-generation immigrants are those whose parents were born abroad, but who were born in their country of residence. I call "1.5 generation

of the sample in terms of origin and destination countries of migrants. Amongst the 5,997 (first and second) immigrants established in the 7 European countries under review, 926 come from Africa, 1514 from Asia or Australasia, 354 from Latin America, 79 from North America; the bulk of immigrants come from other European countries (3124)[6].

Table A3 shows the descriptive statistics of the main variables used in the analysis. The main variable of interest, subjective happiness ("How happy are you?") is measured on a 0 to 10 scale, where 0 was labeled "extremely unhappy" and 10 "extremely happy". Other measures of satisfaction, trust, depressiveness and economic attitudes are also presented in the table. The average level of self-declared happiness in the sample is 7.6, in the range of what is found in other similar surveys.

All the descriptive statistics are weighted using design weights that correct for the composition each country's national sample (see http://essedunet.nsd.uib.no/cms/userguide/weight/).

III. Empirical strategy

If the effect of living in a country boiled down to the objective circumstances of that country, and if the latter were experienced in the same way by natives and migrants, the ranking of countries in terms of happiness would be the same whether evaluated by natives or by immigrants. Then, in estimates of happiness, controlling for the migration status of individuals (native versus immigrant), their country of origin, their socio-demographic features and their country of residence, the coefficient on the interaction terms between country fixed-effects and migration status would not be statistically significant. On the other hand, if the coefficients on these interactions terms are statistically significant, they can be used to decompose country fixed-effects in terms of extrinsic circumstances versus intrinsic psychological attitudes.

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immigrants" those whose one parent was born abroad whereas the other was born in the country of residence. I do not use this group for the identification of the cultural dimension of happiness. This is because the relative influence of the culture of their origin versus destination country is unclear.

[6] Some individuals had conflicting information about the country of birth of their parents and their immigration status. In particular, some of them declared that they were immigrants although both their parents were born in France. I dropped these observations form the sample, but I verified that reclassifying them in the most sensible way did not alter the results.

The identification strategy relies on the following assumptions: (i) the circumstances of country j are experienced by all its inhabitants in the same way, independently of their geographical origin; (ii) natives differ from immigrants by their "Mentality". I use these difference (between natives and migrants) and double differences (between countries) to identify the share of the country fixed-effects that can be attributed to Circumstances versus Mentality.

I assume that mentality has some cultural inertia and has the same value for immigrants of the first and second general, and disappears after the second-generation. This cut-point is imposed by the survey, which, as is generally the rule, report the origin of individuals and of their parents, but not further. This usual convention probably corresponds to the idea that cultural differences take time to dissipate (in the case of the culture of origin) or to acquire (in the case of the culture of the destination country), and vanishes after two generations. In addition to the persistent mentality of immigrants, the estimated coefficient can encompass the specific position of immigrants in society due to selection effects or discrimination.

The case individuals with one native and one immigrant parent, is less clear-cut. They are likely to be partly influenced by the culture of origin of their immigrant parent, and to have received the cultural capital transmitted by their native parent. In order to avoid making any assumption about the rate of cultural convergence of this generation, I do not use them for the identification and drop them from the regression sample.

I thus estimate a happiness equation on the entire sample of Europeans, at the individual level (indexed by i). The general form of this equation is the following:

$$H_{ijt} = \alpha.I + \beta.X_{it} + \delta_k.O_k + \tau_t.T_t + \gamma_j.D_j + \mu_j.I.D_j + \varepsilon_i \qquad (1)$$

where I is a dummy variable that takes value 1 if the respondent is an immigrant (and 0 otherwise), D_j is a dummy variable indicating the country of residence of the respondent (j=1, 7), $I.D_j$ is the interaction term between being an immigrant and living in country j, and O_k is the region of origin of the respondent (k=1,6). As shown by Table A2, the sample of immigrants is too small to allow controlling for each country of origin, so that I had to aggregate the latter into larger regions (Africa, Asia-Australasia, Europe, Latin America and the Caribbean, North America). Vector X_i contains the usual socio-demographic variables (age, age square, log household income, marital status, gender, employment status) that have been shown to influence happiness and to be relevant to the situation of immigrants. The estimates also include year fixed-effects T_t corresponding to the waves of the survey (t=2002, 2004, 2006, 2008, 2010). Finally, ε_i is

the error term. I do not include education because it is widely recognized that this variable is subject to serious measurement errors when it comes to immigrants, because the education tracks and diplomas are often not fully recognized and valued in migrants' destination country (I verified that including these variables did not change the results).

Estimating a model with country fixed-effects usually implies leaving one of the country dummies out of the regression as a category of reference. However, to facilitate the interpretation and to avoid choosing arbitrarily a country of reference, I recalculate the coefficients of the model so that the effect of living in country j is measured with reference to the average of the sample excluding country j[7]. Hence, I can interpret the coefficient on the "France" dummy as capturing the happiness impact of living in France rather than in the average other European countries of the survey.

All elements of equation (1) that do not pertain to the personal features of respondents characterize the sources of happiness specific to country j. Based on equations (1), I can write the average happiness difference that would be experienced by an individual with given socio-economics features (X) and same origin (O_k) (i.e. controlling for these variables), depending on his migration status and country of residence:

- the average happiness difference between immigrants in country j versus the Rest of Europe (ROE):

  $$\overline{H}_{\text{immigrants j}} - \overline{H}_{\text{immigrants ROE}} = \alpha + \gamma_j + \mu_j - \alpha = \gamma_j + \mu_j$$

- the share of country j's specific happiness explained by mentality rather than circumstances, i.e. the cross-country difference in the happiness gap between natives and immigrants:

  $$\Delta M_j = (M_j - M_{ROE}) = \gamma_j - (\gamma_j + \mu_j) = -\mu_j$$

The idiosyncratic happiness difference of native inhabitants of country j as compared to the rest of Europe (e_j) is thus decomposed into the effects of Circumstances ($\gamma_j + \mu_j$) and Mentality ($-\mu_j$). I retrieve them using on the estimation of the happiness equation (1) at the individual level.

[7] Stata's program *devcon* transforms the coefficients of 0/1 dummy variables so that they reflect deviations from the "grand mean" rather than deviations from the reference category. The modified coefficients sum up to zero over all categories. *devcon* reports coefficients for all categories (including the category that was used as the reference category in the original model) and modifies the model's constant accordingly (see Yun, 2003).

Beyond this baseline specification, I also run other decomposition exercises, allowing for the interdependence between the different arguments of the happiness function. In particular, I run Oaxaca-Blinder type simulation and decomposition of the happiness difference between natives and immigrants living in France and between native French and native Belgians.

I then deepen the analysis of the French cultural difference by looking at the happiness of migrants depending on their country of origin (for Europeans) and on their home language.

IV. Results

Table 1.A displays the estimate of equation (1) spread on three columns for clarity. It confirms the classical findings of the happiness literature in terms of age, gender, marital status, income and employment status. Country fixed-effects are all statistically significant. As explained, the coefficients have been recalculated in order to express the effect of living in a particular country as compared with the rest of Europe in average, so that that they sum up to zero. Immigrants are less happy than natives. Immigrants coming from Asia are less happy than the average, the opposite holds from those who come from North America.

1. Main results

Column (2) displays the coefficient on country fixed-effects, column (3) the coefficient on the interaction between country fixed-effects and the fact of being an immigrant. *Ceteris paribus*, native residents in France, Germany, and Great-Britain are less happy than the average Europeans, whereas native inhabitants of Belgium, the Netherlands, Switzerland and Sweden are happier than the average. But, conditionally on being an immigrant, which as such implies a lower happiness (by 0.142), those who have chosen France as a destination country are just as happy as the average immigrant in Europe (controlling for the region of origin of immigrants).

Based on Table 1.A, Table 1.B presents the decomposition of the idiosyncratic happiness of each country. The happiness gap of natives (γ_j) presented in column (3) is decomposed into the effect of Circumstances ($\gamma_j + \mu_j$, column 1) versus Mentality ($- \mu_j$, column 2). Concerning France, the share of the happiness gap (-0,313) that is due to Circumstances is negligible (-0,066) as compared to Mentality (-0,246). This is in contrast with Germany, where the lower level of happiness seems to originate in objective circumstances to a large extent. The role of mentality is also particularly high in Switzerland.

Hence, under the assumptions stated in Section II, the specific unhappiness trait of French people seems to be due to their values, beliefs and perception of reality rather than to the country's objective general circumstances. Needless to say that this does not mean that objective circumstances do not explain the level of happiness in France and other European countries. Rather, the lesson is that the unexplained part of the French unhappiness specificity, once the effect of measurable objective sources is taken into account, is essentially of a mental phenomenon.

Additional Accounting

The results of Table 2 rely on the assumption that the vector β of coefficients on circumstances (X) is the same for all groups of the population. In other words, the French cultural specificity is treated as an additive element that shifts the whole happiness function upwards or downwards. However, this constraint can be relaxed, allowing not only the constant (shifter) but also the elements of vector β, associated with all the determinants of the happiness function, to vary across countries and groups of the population.

I first estimate a happiness equation for each country and each group of the population (natives/immigrants). I retrieve the β coefficients specific to each group and I run some simulation exercises that allow answering questions of the type: how happy would French natives be, had they the happiness function of migrants? Table 2.A shows that if French natives had the typical happiness function of immigrants in France, they would reach an average level of happiness of 7.3 instead of 7.2. In all other countries except Germany and Switzerland, the situation is the reverse and the happiness function of natives is higher than that of immigrants. One can also compare France and Belgium, two neighboring countries sharing a common language: if the French experienced the objective circumstances of their lives with the happiness function of the Belgians, they would reach an average level of happiness of 7.72 instead of their actual level of 7.19. In Table 2.B, an Oaxaca-Blinder (1973) decomposition of the happiness difference between French and Belgian natives (-0,56) indeed attributes 0.507 happiness points on the account of coefficients, versus -0.053 for endowments, and -0.039 for interactions between the two (see Jann 2008).

One may think that the order of magnitude of these figures is not very impressive. This is due to the narrow range of variation of self-declared happiness, a general fact that is well-known by the

specialists of the field (See Clark and Senik 2011). The mentioned variations represent about one quarter of the standard deviation of the happiness variable (1.67). Moreover, as shown by the tables of this paper, in a typical happiness regression, the share of happiness that is explained by observable variables is small; the typical R^2 of an OLS estimate of happiness is around 10% depending on the controls that are included. However, these differences are equivalent, in terms of well-being, to a variation by about 2% in average income, which is approximately the annual growth rate of national income in these countries over the considered period.

The French Abroad

If it I true that happiness has a persistent cultural dimension, it should be the case that the French (for instance) are less happy than other Europeans in average even when they live in a foreign country. Table 3 shows that among migrants of either generation having moved from one of the 7 European countries under review to another of the 29 European countries surveyed by the ESS, the French are statistically significantly less happy than the average, even controlling for the country of residence. A French origin reduces the level of declared happiness by about 0.10 as compared to the average European origin. Here, the specific unhappiness of French expatriates is shared by the British and the Belgians. As shown by column 2, The level of happiness is also lower for the children of French emigrants, i.e. people whose one or two parents were born French (second and 1.5 generation emigrants).

An epidemiological approach

In Table 3, most coefficients on the country of origin of European migrants are statistically significant, which suggests that the cultural dimension of happiness is important in a general way. To comfort this observation, I replicated the exercise of Luttmer and Singhal (2011) and tested whether the happiness of European migrants of the second generation is correlated with the average happiness of their ascendants in their origin country. Both T test and Spearman test lead to the rejection of the hypothesis that the happiness of migrants is independent or has a different mean value from that of their compatriots in their home country. Table 4 presents estimates of happiness run over the sample of European migrants of the second generation: it shows that the happiness of the latter is positively (and statistically significantly) correlated with the average happiness of natives in their origin country. This "epidemiological" result can be interpreted, in the spirit of Luttmer and Singhal, as testifying to the cultural dimension of happiness.

2. Satisfaction and other Attitudes

If the lower happiness of the native French is not due to circumstances but to the way they perceive them, this should also appear in the other attitudes and values that they endorse. Table 7.A presents estimates of a series of satisfaction measures, while Table 7.B deals with a wider scope of opinions.

Table 7.A includes an estimate of a depressiveness score (column 1), built with questions of the third wave of the ESS (hence the smaller number of observations) that were inspired by the well-known CES-Depression scale (Radloff 1977). These questions asked the respondent how often, during the past week, he "felt depressed", "felt everything he did was effort", "sleep was restless", "felt lonely" "felt sad, "could not get going", "felt anxious", "felt tired" "felt bored", "felt rested when woke up in morning, "seldom time to do things he really enjoy", "feel accomplishment from what he did", "in general feel very positive about oneself", "always optimistic about one's future", "at times feel as if he is a failure", choosing an answer on a scale going from 1 "none or almost none of the time", 2 "some of the time", 3 "most of the time", 4 "all or almost all of the time". (I recoded the scales in order to obtain a score that increases with depression symptoms). By summing up the number of points on these different questions, I obtain an index of depressiveness that runs potentially from 5 to 59. In the regression sample, it takes values from 5 to 57, with an average value of about 20. France has a score of 22, in the vicinity of Portugal and Great-Britain.

Tables 5.A and 5.B offer several lessons. French natives are more depressive than the average European; they are also less satisfied on all the dimensions measured by the survey, except satisfaction with the health system (see also Deaton, 2008, Figure 5 p.68, for a similar finding). They are less satisfied with the state of the economy in the country, with the government, with state of democracy, with the state of the education system. Probit estimates (not shown) show that living in France reduces the probability to be very satisfied with these dimensions (over 7 on a 0-10 scale) by 12% to 20%. Being French also increases the probability of declaring that one lives difficultly with one's household's income (controlling for household income).

Table 5.B measures attitudes that can be interpreted as reflecting feelings of inclusiveness in a local or national collective project. It shows that native French are less likely than average Europeans to declare that they are interested in politics, that they trust the country's institutions, that they are member of a trade-union or an association, that "*most people can be trusted*", that "*most people try to be fair*" or that "*people in the local area help each other*", that one "*feels close to people in the local*

area". The proportion of people who agree that "*for most people life is getting worse*" is particularly high in France. Hence, the specific unhappiness of the French is mirrored by a general pessimism concerning their local and national perspectives.

Together with France, Germany and Great-Britain form a group of dissatisfied countries, although the phenomenon is not as intense and systematic in the case of the two latter.

3. Robustness

Are international differences in self-declared happiness reflecting actual latent differences in well-being or purely nominal differences? To answer, I use two pieces of evidence: (1) measures of emotional well-being à la Kahneman, and (2) the case of multi-linguistic countries. I then discuss the assumption of separability between migration status and individual circumstances that is used for identification in the previous section.

Emotional well-being

It is useful to check whether alternative measures of well-being that focus on emotions and affects lead to a similar picture of the French in the hierarchy of European nations. These measures capture "short run utility" (Kahneman, 1999), as opposed to the more cognitive and judgmental "long-run utility" that is measured by life satisfaction or happiness questions (see Diener et al. 2010, or Kahneman et al. 2010). Such reported affects are generally collected using the *Experience Sampling Method* or the *Day-Reconstruction-Method*, or time-use surveys, where respondents have to qualify the emotions they experience during each of their daily activities. This method was followed by the *Gallup World Poll*, which conducted surveys of representative samples of people from 155 countries between 2005 and 2009, asking individuals to report the emotions they experienced during the previous day. Questions were worded as follows: "*Did you experience the following feelings during a lot of the day yesterday? How about _____?*" Each of seven emotions (smile (*Did you smile a lot yesterday?*), enjoyment, happiness, worry, sadness, anger, stress) was reported separately, using had *yes/no* response options.

I used the country mean frequency of reported affects for the same European countries as analyzed in the rest of the paper, for years going from 2007 to 2009[8]. Following the usage, I built an average positive affect score and an average negative affect score, as well as an average net score of positive minus negative answers.

[8] I am grateful to Angus Deaton for obtaining the authorization for me to use these data.

As shown by the Figures 4.A and 4.B, it turns out that France ranks first in terms of negative affects and last in terms of positive affects! This is driven by the particularly high number of French respondents reporting feelings of anger and worry and the low frequency of feelings of enjoyment and happiness. By contrast, Sweden scores particularly high in terms of enjoyment and low for worry, sadness and angriness (see the descriptive statistics in Table A5).

Hence, measures of emotional well-being, which capture experienced affects and are thus less subject to nominal biases than happiness or life satisfaction judgments, lead to the same picture of international differences as the latter, and in particular to the same assessment of the French unhappiness.

Language: culture or scaling

Country fixed-effects could also be due to language and translation effects, if happiness statements depend on the language in which they are expressed, or if different nations associate a different verbal label to a given internal feeling. Country fixed-effects would then boil down to purely nominal scaling effects. To address this issue, I study the typical happiness of different linguistic groups inside three multilingual countries. If the French unhappiness is purely nominal, in a given country, francophone regions and individuals should declare a lower happiness than non-francophone ones.

Using the ESS, I look at the case of Belgium and Switzerland (about 6000 observations each). In Belgium, three regions are distinguished: Wallonia, Flanders and Brussels. Table 6.A shows that controlling for the usual socio-economic circumstances (age, gender, income, unemployment, marital status), as well as for year dummies (which account for the business cycle), living in a Walloon region reduces the typical individual level of happiness by 0.23 happiness points. Controlling for the regions where they live (column 2) or not (column 3), francophone individuals are less happy than Dutch-speaking ones (by about 0.3 happiness points). However, in Switzerland it is not the case that French-speaking individuals are less happy than German-speaking ones. Table 6.B shows that it is the Italian-speakers (columns 1, 2 and 4) and the Italian-speaking regions (columns 3 and 4) that are statistically significantly less happy, as compared to German-speakers. Controlling for the regional language (columns 3 and 4) or not (column 1), French-speakers appear to be just as happy as German-speakers.

I also used the Canadian sample of the *World Values Survey* available for years 2000 and 2006 (3461 observations, see descriptive statistics in Table A6). The data include information about the

language in which the interview was realized, and the language that people declare they use predominantly at home. In this survey, 68% of respondents declared that English is their home language, 26% French and 5% another language. Table 6.C shows that francophone individuals are happier than English-speaking ones (by about 5%), controlling for a series of objective circumstances, such as the usual socio-demographic features, year fixed-effects and the self-declared ethnic group of respondents.

I take these observations as a sign that the difference in the level of happiness of the French is cultural[9], but not purely nominal.

Omitted variables

The essential element of the identification strategy is the differential happiness effect of common circumstances across different population groups (natives, migrants). I thus need to be sure to compare the comparable.

First, the specific happiness trait of the French could be due to some macroeconomic circumstances that are poorly measured at the individual level. I thus included successively in the estimates of happiness the growth rate of GDP, the unemployment rate, the inflation rate, the yearly GDP per capita, the number of worked hours per week, life expectancy at birth, as well as the weight of government expenditure over GDP (taken from the World Bank's *World Development Indicators*). Including these did not change the magnitude or sign of the coefficients on country and origin dummies and their interactions.

Beyond this basic verification, one needs to address the potential unobserved heterogeneity in the sources of well-being of migrants versus natives. Migrants to different countries could have different characteristics that, themselves, have different effects on happiness across countries. Migrants could also self-select to different countries depending on some macroeconomic differences (the size of budget transfers for instance).

[9] Brügger, Lalive and Zweimuller (2008) have advocated the importance of cultural differences, as vehicled or expressed by linguistic barriers. They show that preference for leisure differs on either parts of the linguistic barrier in Switzerland (the Barrière des Roesties or Röstigraben) that separates German-speaking regions from regions speaking languages derived from Latin (French, Romansh and Italian). They argue forcefully that the observed differences are due to cultural inertia rather than objective circumstances of the regional labor markets.

In the absence of the ideal dataset (that would ensue from a randomized allocation of immigrants to European countries), I can only try to overcome these problems by controlling for the potential sources of heterogeneity that are observable. I thus ran several robustness tests that consist in including triple interaction terms between magnitudes that are suspected of being interdependent (together with main effects and simple interactions), i.e. migration status, destination country and a series of variables of interest. The latter included macroeconomic magnitudes, such as the rate of unemployment and the share of government expenditure over GDP, and individual characteristics such as age, income, employment status and the fact of receiving state transfers.

It turned out that these triple interactions were either statistically insignificant or not signed in the expected way. Overall, most of these tests did not allow rejecting the null hypothesis of separability between the happiness effect of the migration status of respondents and their individual and aggregate circumstances. For space reasons, I do not include these regressions in this version of the paper.

V. Conclusions

This paper has devoted a special attention to France, which appears as an outlier in international studies of happiness. However, beyond the case of France, it underlines the important cultural dimension of happiness, where culture is understood as a real and not a purely nominal phenomenon. The lesson is relevant for policy-makers who have recently endeavored to maximize national well-being and not only income per capita. "Happiness policies" should take into account the irreducible influence of psychological and cultural factors. As those are at least partly acquired in school and other early socialization instances, this points to some new aspects of public policy such as considering the qualitative aspects of the education system.

Investigating the causes of the differences in the cultural dimension of happiness across countries is beyond the objectives of this paper, but certainly constitutes an interesting avenue for future research. The economics of culture could help understanding the how idiosyncratic happiness originates in national institutions and history. The cultural dimension of happiness is also undoubtedly the opportunity for a fruitful encounter between economics and psychology.

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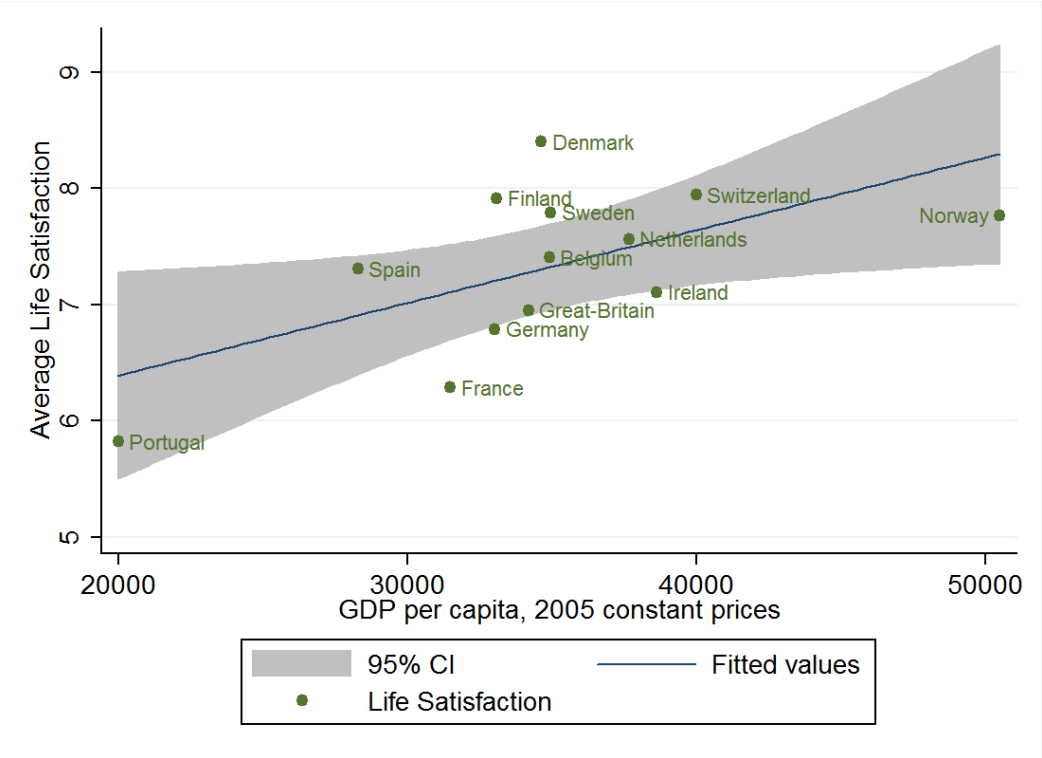
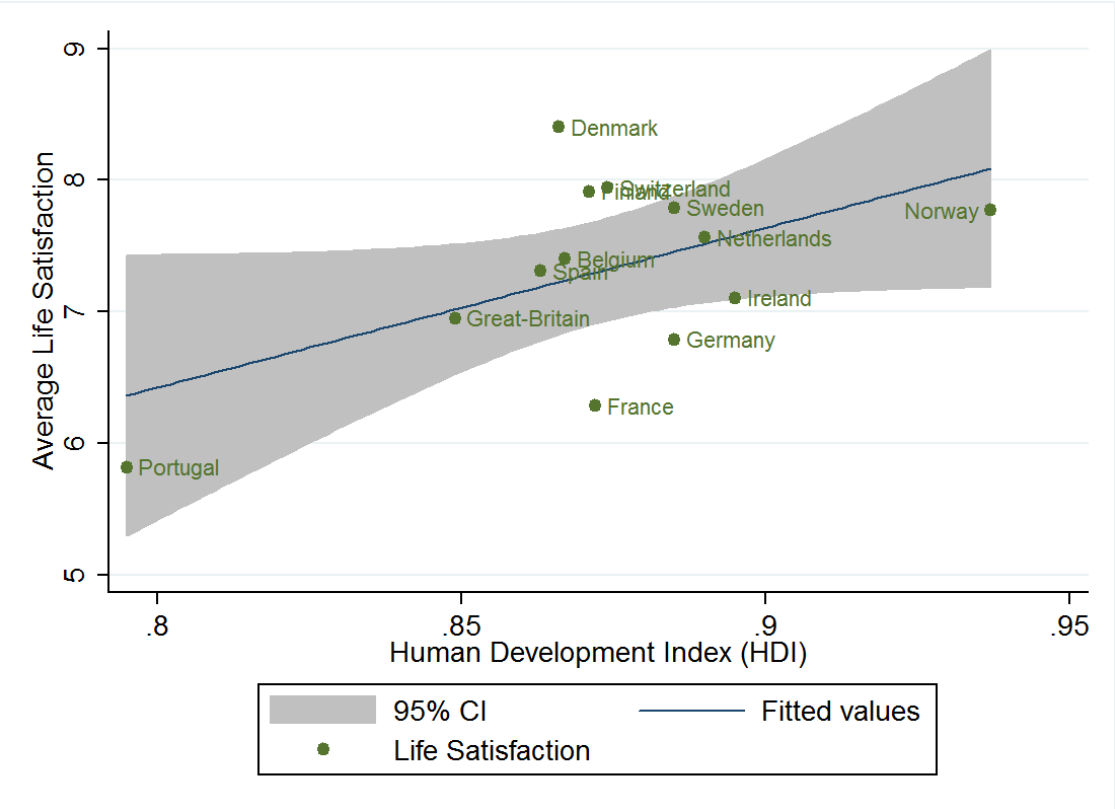
Tables

Figure 1.A GDP and Average National Life Satisfaction (0-10 scale)



Source: ESS (waves 1- 5). Countries surveyed at each of the 5 waves. Average life satisfaction over the 5 waves.

Figure 1.B Human Development Index and Average National Life Satisfaction (0-10 scale)



Source: ESS (waves 1- 5). Countries surveyed at each of the 5 waves. Average life satisfaction over the 5 waves.

Figure 2. Happiness, Income … and Cultural Factors around the World

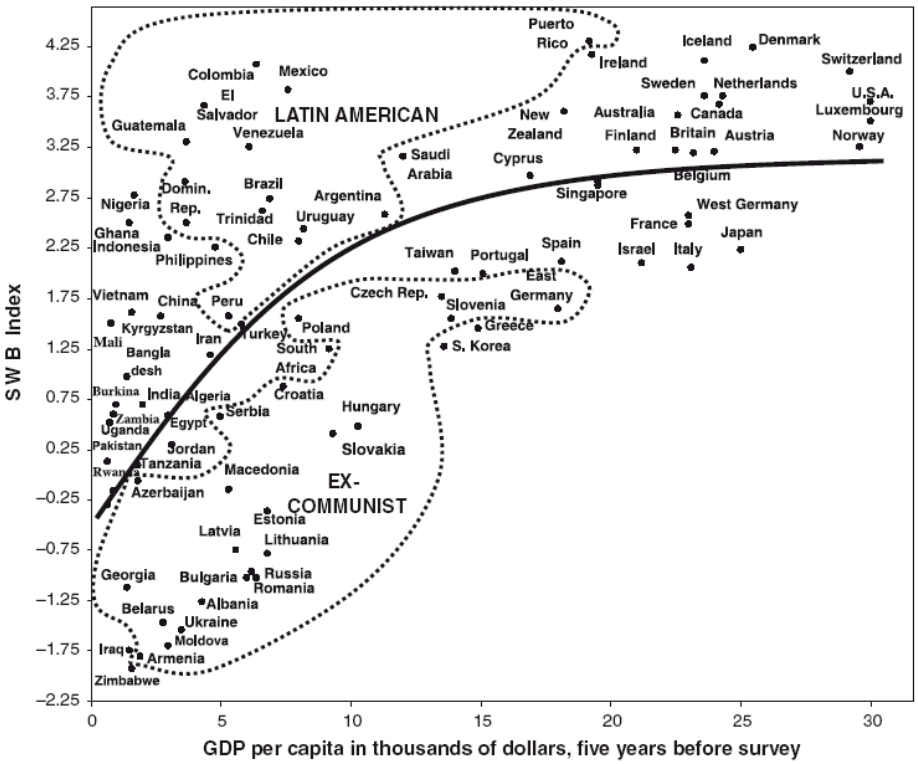
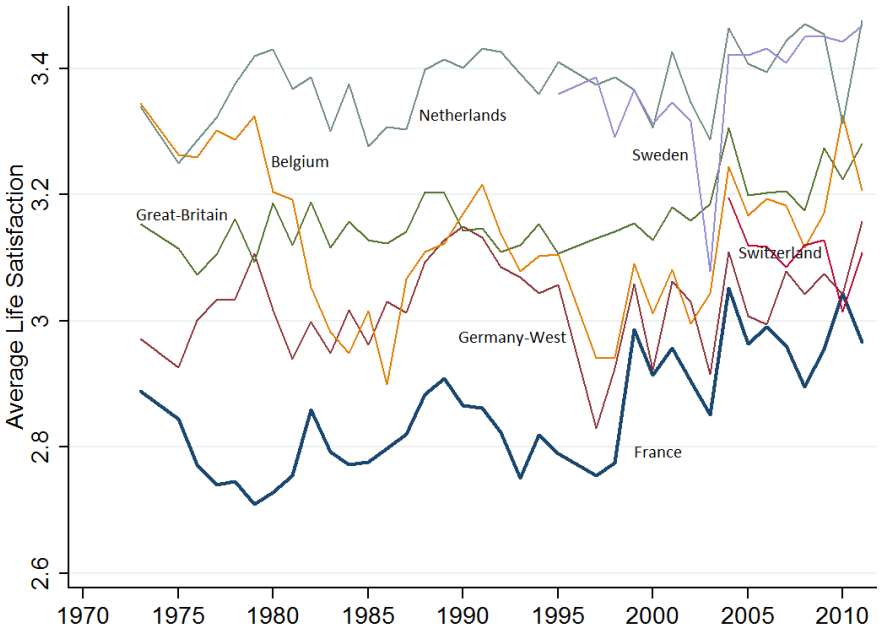


Fig. 2. Subjective well-being (SWB), per capita gross domestic product (GDP), and different types of societies. Well-being index is based on reported life satisfaction and happiness, using mean results from all available surveys conducted 1995–2007 (cubic curve plotted; $r=.62$). PPP=purchasing power parity estimates.

Source : Inglehart, Foa, Peterson, Welzel (2008), p. 269

Figure 3.A Average Life Satisfaction over time (1-4 scale)



Source: Eurobarometer

Table 1.A Estimation of Happiness Equation (2)

$$H_{ijt} = \alpha.I + \beta.X_{it} + \delta_k.O_k + \tau.T_t + \gamma_j.D_j + \mu_j.I.D_j + \varepsilon_i \qquad (2)$$

Happy	(1)		(2) Natives (γ_j)	(3) Immigrants (μ_j)
Age	-0.0719***	Belgium	0.184***	-0.0812***
	(0.0103)		(0.00996)	(0.00860)
Age square	0.0746***	Switzerland	0.262***	-0.201***
	(0.0133)		(0.0243)	(0.0179)
Male	-0.151***	Germany	-0.321***	0.0582**
	(0.0196)		(0.00837)	(0.0200)
Log hh income	0.349***	France	-0.313***	0.246***
	(0.0466)		(0.00744)	(0.0269)
Marital status (reference: single)		Great-Britain	-0.217***	-0.0344*
Married	0.466***		(0.00400)	(0.0162)
	(0.0312)	Netherlands	0.128***	0.0721***
Divorced	-0.144*		(0.00270)	(0.0111)
	(0.0658)	Sweden	0.276***	-0.0594***
Widowed	-0.402***		(0.00325)	(0.0153)
	(0.101)			
Unemployed (ref. in paid work)	-0.691***			
	(0.118)			
Immigrant	-0.142***			
	(0.0254)			
Region of origin:				
Africa	-0.129			
	(0.0869)			
Asia-Australasia	-0.238***			
	(0.0497)			
Europe	-0.0161			
	(0.0403)			
Latin America & Carribean	-0.0705			
	(0.0641)			
North America	0.454**			
	(0.128)			
Year fixed effects (ref. 2002)				
2004	-0.0565**			
	(0.0196)			
2006	-0.0897**			
	(0.0359)			
2008	-0.105**			
	(0.0339)			
2010	0.0218			
	(0.0483)			
Constant	6.498***			
	(0.244)			
Observations	44,416			
R-squared	0.105			

The coefficients of country fixed-effects and region fixed-effects reflect deviations from the "grand mean" rather than deviations from the reference category. The modified coefficients sum up to zero over all categories. Robust standard errors clustered by country.

Table 1.B. Derivation of Parameters Based on the Estimation of Equation (2)

Decomposition of the National Happiness Gap due to Circumstances and Mentality

Happy	Circumstances $\gamma_j + \mu_j$	Mentality $-\mu_j$	Natives fixed effects γ_j
Belgium	0.103	0.081	0.184
Switzerland	0.061	0.201	0.262
Germany	-0.263	-0.058	-0.346
France	**-0.066**	**-0.246**	**-0.313**
UK	-0.251	0.034	-0.217
Netherlands	0.200	-0.072	0.128
Sweden	0.216	0.059	0.276

Coefficients derived from the estimate of equation (2) presented in Table A1.

Note: These are measures of the gap between national happiness and the European average that is due to each factor. Consequently, all columns sum to zero. For example, the happiness gap between French natives and European natives is of -0.220 (column 3): it is attributable to Mentality (-0,216) and only weakly to circumstances.

Table 2.A Simulating the Happiness of Natives with the Parameters of Immigrants

	(1) Actual Happiness of Natives	(3) Happiness of Natives with Parameters of Immigrants	(5) Happiness Gap of Natives due to Parameters (1-3)
Belgium	7,77	7,71	0,06
Switzerland	8,07	7,85	0,22
Germany	7,22	7,30	-0,08
France	7,19	7,30	-0,11
UK	7,38	7,26	0,12
Netherlands	7,75	7,75	0,00
Sweden	7,89	7,76	0,13

Values calculated on the regression sample.

Table 2.B Oaxaca-Blinder Decomposition of Happiness. France versus Belgium. Natives only.

Linear Model		
Belgium	Nb. of obs. 1	4842
France	Nb. of obs. 2	5037
Happy	Coef.	Std. Err.
France	7.172	0.026
Belgium	7.772	0.021
difference	-0.599	0.033
endowments	-0.053	0.010
coefficients	-0.506	0.032
interaction	-0.039	0.012

Table 3. OLS Estimates of Happiness of Europeans living in Another European Country

Happy	All migrants	2nd and 1.5 generations
	(1)	(2)
Age	-0.0523*	-0.0654*
	(0.0266)	(0.0269)
Age square	0.0549	0.0648*
	(0.0314)	(0.0324)
Male	-0.0515	-0.104
	(0.0557)	(0.108)
Log household income	0.386***	0.393***
	(0.0319)	(0.0311)
Married	0.321***	0.466***
	(0.0387)	(0.0793)
Divorced	-0.0716	0.0257
	(0.0958)	(0.0729)
Widowed	-0.143	-0.235
	(0.277)	(0.270)
Unemployed	-0.481**	-0.496
	(0.168)	(0.122)
Country of origin		
Belgium	-0.211***	-0.205***
	(0.00985)	(0.0122)
Switzerland	0.399***	0.375***
	(0.00526)	(0.0137)
Germany	-0.00829	-0.0227***
	(0.00775)	(0.00590)
France	-0.103***	-0.198***
	(0.00462)	(0.00696)
U.K.	-0.227***	-0.263***
	(0.0137)	(0.0246)
Netherlands	0.0372**	0.0796***
	(0.0112)	(0.0122)
Sweden	0.113***	0.233***
	(0.00767)	(0.0102)
Constant	5.685***	5.912***
	(0.348)	(0.601)
Observations	3,056	1,410
R-squared	0.074	0.086

Sample: Migrants from the 7 EU countries mentioned in the table living in any of the 29 ESS countries.
Other controls: year fixed-effects, country of residence. Cluster (country of origin).
No information about country of origin of immigrants in ESS wave 1. The coefficients of country fixed-effects reflect deviations from the "grand mean", not the deviations from a reference category.

Table 4. Replicating Luttmer and Singhal (2011).

OLS Estimate of Happiness of Second Generations immigrants

	Happy
Age	-0.0623
	(0.0328)
Age square	0.0629
	(0.0403)
Male	-0.257*
	(0.121)
Log household income	0.410**
	(0.133)
Married	0.538***
	(0.125)
Divorced	0.121
	(0.0996)
Widowed	0.0138
	(0.186)
Unemployed	-0.441
	(0.368)
Average happiness in origin country	**0.548***
	(0.247)
Constant	1.575
	(2.029)
Observations	749
R-squared	0.148

Sample of second generation immigrants in the seven countries of interest (Belgium, France, Great-Britain, Germany, Netherlands, Sweden, Switzerland).

Other controls: country fixed effects, year fixed effects. Cluster (country of origin)

Table 5.A OLS Estimates of Satisfaction viz. Different Domains. Natives only

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Depressiveness Index (0-59)	Satisfaction with Eco (stfeco) (0-10)	Satisfaction with national government (stfgov) (0-10)	Satisfaction with democracy (stfdem) (0-10)	Satisfaction with education system (stfedu) (0-10)	Satisfaction with Health system (stfhlth) (0-10)	Living comfortably on present income (hincfel) (1-4)
Belgium	0.378***	0.360***	0.0201	-0.115***	1.004***	1.465***	0.0330***
	(0.0163)	(0.00955)	(0.0119)	(0.0141)	(0.0103)	(0.0115)	(0.00326)
Switz	-1.222***	0.702***	0.882***	0.880***	0.686***	0.395***	-0.0687***
	(0.0907)	(0.0193)	(0.0287)	(0.0317)	(0.0196)	(0.0275)	(0.00574)
Germany	-1.401***	-0.688***	-0.855***	-0.251***	-1.177***	-1.197***	-0.106***
	(0.0462)	(0.00581)	(0.00726)	(0.00930)	(0.00548)	(0.00987)	(0.00268)
France	1.350***	-1.343***	-0.604***	-0.945***	-0.641***	0.0494**	-0.0251**
	(0.0345)	(0.0206)	(0.0257)	(0.0146)	(0.0110)	(0.0164)	(0.00894)
UK	2.082***	-0.490***	-0.504***	-0.730***	-0.0201***	-0.466***	-0.157***
	(0.0185)	(0.0242)	(0.0127)	(0.00665)	(0.00287)	(0.00757)	(0.00133)
NL	-0.557***	0.804***	0.410***	0.455***	0.267***	0.0680***	0.122***
	(0.0317)	(0.0207)	(0.00958)	(0.00514)	(0.00619)	(0.00507)	(0.00340)
Sweden	-0.630***	0.655***	0.651***	0.707***	-0.119***	-0.315***	0.202***
	(0.0270)	(0.0193)	(0.0160)	(0.0114)	(0.00925)	(0.0161)	(0.00393)
Constant	14.83***	2.391**	3.468***	3.032***	6.385***	5.640***	0.214
	(1.149)	(0.686)	(0.342)	(0.244)	(0.314)	(0.415)	(0.138)
Observations	7,311	38,096	37,866	37,901	37,550	38,278	36,661
R-squared	0.109	0.187	0.106	0.120	0.123	0.147	0.267

Other controls: all variables of Table 4 (age, age square, marital status, male, log income, region of origin, migration status, employment status, year fixed-effects).
The coefficients of country fixed-effects reflect deviations from the "grand mean" rather than deviations from the reference category.
Robust standard errors clustered by country. Variables recoded in ascending order when necessary.

Table 5.B OLS Estimates: Feelings of Inclusiveness in a Collective Project. Natives only.

	(8) Interested in politics (polintr) (recoded to (0-1)	*(9)* Trust in institutions[1]	*(10)* Member of a trade-union (mbtru) (0-1)	*(11)* Hard to be hopeful about the future of the world (nhpftr) (1-5)	*(12)* For most people in country life is getting worse (lfwrs) (1-5)	*(13)* Fell close to people in the local area (flclpla) (1-5)	*(14)* Member of an association[2]	*(15)* People in local area help one another (pplahlp) (0-6)	*(16)* Most people can be trusted (ppltrst) (0-10)	*(17)* Most people try to be fair (pplfair) (0-10)
Belgium	-0.0563***	-0.0193**	0.127***	0.0436***	0.0455***	0.0448***	-0.0264***	-0.0588***	-0.203***	-0.204***
	(0.00227)	(0.00742)	(0.00378)	(0.00221)	(0.00473)	(0.00315)	(0.00608)	(0.00435)	(0.00740)	(0.00568)
Switz	0.00799*	0.348***	-0.193***	0.0399***	-0.0941***	0.137***		0.246***	0.297***	0.288***
	(0.00375)	(0.0150)	(0.00691)	(0.00786)	(0.0114)	(0.00770)		(0.0121)	(0.0155)	(0.0102)
Germany	0.0598***	-0.249***	-0.0698***	0.140***	0.282***	0.115***	-0.146***	0.0504***	-0.455***	-0.177***
	(0.000559)	(0.00458)	(0.00220)	(0.00445)	(0.00550)	(0.00369)	(0.00693)	(0.00766)	(0.00576)	(0.00357)
France	-0.0946***	-0.462***	-0.195***	0.557***	0.700***	-0.0430***	-0.732***	-0.303***	-0.879***	-0.263***
	(0.00198)	(0.00821)	(0.00302)	(0.00277)	(0.00399)	(0.00242)	(0.00549)	(0.00386)	(0.00618)	(0.00453)
UK	-0.0470***	-0.569***	0.0376***	-0.126***	-0.0776***	-0.298***	-0.258***	-0.446***	-0.227***	-0.518***
	(0.00108)	(0.00486)	(0.000922)	(0.00208)	(0.00310)	(0.00221)	(0.00792)	(0.00347)	(0.00373)	(0.00322)
NL	0.114***	0.390***	-0.0989***	-0.313***	-0.378***	-0.0693***	0.374***	0.239***	0.569***	0.275***
	(0.00205)	(0.00598)	(0.00200)	(0.00249)	(0.00247)	(0.00363)	(0.0111)	(0.00462)	(0.00558)	(0.00563)
Sweden	0.0166***	0.562***	0.393***	-0.342***	-0.477***	0.114***	0.789***	0.272***	0.898***	0.597***
	(0.00124)	(0.00824)	(0.00201)	(0.00319)	(0.00374)	(0.00498)	(0.00938)	(0.00694)	(0.00927)	(0.00717)
Constant	-0.593***	3.479***	-0.485**	4.326***	4.749***	2.956***	-3.618***	2.584***	2.413***	3.891***
	(0.0865)	(0.244)	(0.139)	(0.197)	(0.263)	(0.293)	(0.410)	(0.301)	(0.194)	(0.173)
Observations	38,457	38,446	38,457	7,856	7,310	7,347	6,781	7,222	38,423	38,399
R-squared	0.085	0.106	0.217	0.112	0.201	0.066	0.146	0.051	0.093	0.056

[1] Average score of trust in the following: the country's parliament, the legal system, the police, politicians, political parties, the European parliament, the United-Nations.
[2] Average score of membership in a voluntary organization or club including sports, cultural, trade-union, professional, consumer, humanitarian, environmental-peace-animal, religious, political, science-education, social, other. Only available in wave 1 (2002).
Other controls: all variables of Table 4 (age, age square, marital status, gender, log income, region of origin, migration status, employment status, year fixed-effects).
The coefficients of country fixed-effects reflect deviations from the "grand mean" rather than deviations from the reference category. Robust standard errors clustered by country.
Variables recoded in ascending order when necessary.

Table 6.A Happiness and Usual Language in Belgium

OLS Estimates of Happiness

	(1) Happy	(2) Happy	(3) Happy
Language spoken at home (Omitted : Dutch)			
Other	-0.435***		-0.421***
	(0.101)		(0.0991)
French	**-0.378*** **		**-0.273*** **
	(0.0793)		(0.0397)
Regions (omitted : Flanders)			
Brussels	-0.0622	-0.203***	
	(0.0712)	(0.0663)	
Wallonia	**0.122**	**-0.234*** **	
	(0.0873)	(0.0442)	
Female	0.146***	0.145***	0.146***
	(0.0377)	(0.0378)	(0.0377)
Age of respondent	-0.0432***	-0.0434***	-0.0437***
	(0.00971)	(0.00973)	(0.00971)
Age squared divided by 100	0.0457***	0.0466***	0.0462***
	(0.0113)	(0.0113)	(0.0113)
Marital status (omitted : never married)			
Married	0.354***	0.351***	0.360***
	(0.0562)	(0.0561)	(0.0561)
Divorced	-0.281***	-0.285***	-0.278***
	(0.0755)	(0.0756)	(0.0754)
Widowed	-0.778***	-0.782***	-0.771***
	(0.154)	(0.154)	(0.154)
Log household income	0.288***	0.295***	0.286***
	(0.0313)	(0.0313)	(0.0313)
Unemployed	-0.407***	-0.428***	-0.408***
	(0.0714)	(0.0715)	(0.0714)
Constant	6.267***	6.181***	6.285***
	(0.303)	(0.303)	(0.303)
Observations	6,018	6,018	6,018
R-squared	0.083	0.078	0.082

Sample: Belgium sample of the ESS, 5 waves (2002-2010). Other controls: year fixed-effects.

Table 6.B Happiness and Usual Language in Switzerland

OLS Estimates of Happiness

	(1) Happy	(2) Happy	(3) Happy	(4) Happy
Language spoken at home (omitted: German)				
Other	-0.371***	-0.235***		-0.240***
	(0.0746)	(0.0613)		(0.0739)
French	-0.109	-0.0206		-0.113
	(0.0718)	(0.0479)		(0.0891)
Italian	-0.470***	-0.436***		-0.454***
	(0.112)	(0.0857)		(0.110)
Regional language (omitted: German)				
Italian			-0.268**	0.0778
			(0.117)	(0.142)
French			0.0444	0.133
			(0.0536)	(0.0869)
Female	0.111***	0.108***	0.0957**	0.0943**
	(0.0414)	(0.0377)	(0.0418)	(0.0417)
Age of respondent	-0.0336***	-0.0471***	-0.0529***	-0.0535***
	(0.0118)	(0.0106)	(0.0117)	(0.0117)
Age squared	0.0304**	0.0477***	0.0572***	0.0572***
	(0.0133)	(0.0120)	(0.0133)	(0.0133)
Marital status (omitted : never married)				
married	0.398***	0.424***	0.389***	0.408***
	(0.0553)	(0.0508)	(0.0558)	(0.0561)
divorced	-0.0406	-0.00833	0.0244	0.0234
	(0.0731)	(0.0676)	(0.0749)	(0.0748)
widowed	-0.314**	-0.362***	-0.276*	-0.257*
	(0.140)	(0.132)	(0.148)	(0.148)
Log household income	0.261***	0.274***	0.305***	0.292***
	(0.0321)	(0.0300)	(0.0336)	(0.0336)
Unemployed	-1.085***	-1.016***	-1.064***	-1.051***
	(0.120)	(0.108)	(0.120)	(0.120)
Region (omitted Lemanique)				
Mitteland	0.00436			
	(0.0734)			
North	-0.177**			
	(0.0864)			
Zurich	-0.201**			
	(0.0928)			
East	-0.0463			
	(0.0911)			
Central	-0.0811			
	(0.0953)			
Tessin	-0.0277			
	(0.151)			
Constant	6.474***	6.480***	6.237***	6.406***
	(0.362)	(0.326)	(0.361)	(0.363)
Observations	4,897	5,870	4,768	4,768
R-squared	0.078	0.072	0.065	0.069

Sample: Swiss sample of the ESS, 5 waves (2002-2010). Other controls: year fixed-effects.

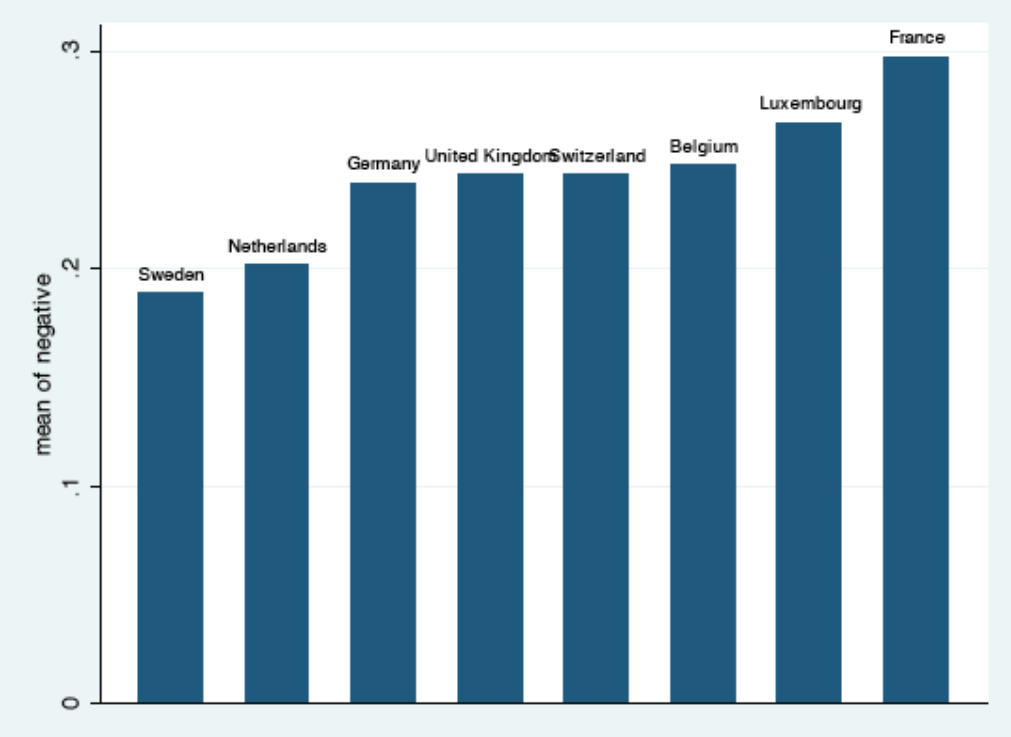
Table 6.C Happiness and Language in Canada

OLS Estimates of Happiness

	(1)	(2)
	Happy	Happy
Language of interview (omitted: English)		
French	**0.0433***	
	(0.0231)	
Other	-0.000434	
	(0.336)	
Language spoken at home (omitted: English)		
French		**0.0525****
		(0.0230)
Other		-0.113**
		(0.0488)
Age	-0.0140***	-0.0141***
	(0.00355)	(0.00355)
Age2	0.000132***	0.000130***
	(3.68e-05)	(3.67e-05)
Male	-0.0623***	
	(0.0213)	
Marital status (omitted : married)		
Living together	-0.114***	-0.120***
	(0.0344)	(0.0343)
Divorced	-0.170***	-0.169***
	(0.0422)	(0.0420)
Separated	-0.294***	-0.283***
	(0.0513)	(0.0507)
Widow	-0.208***	-0.191***
	(0.0426)	(0.0418)
Single	-0.265***	-0.271***
	(0.0315)	(0.0314)
Income scale	0.0139***	0.0131***
	(0.00455)	(0.00451)
Constant	3.716***	3.750***
	(0.142)	(0.144)
Observations	3.439	3.461
R-squared	0.061	0.060

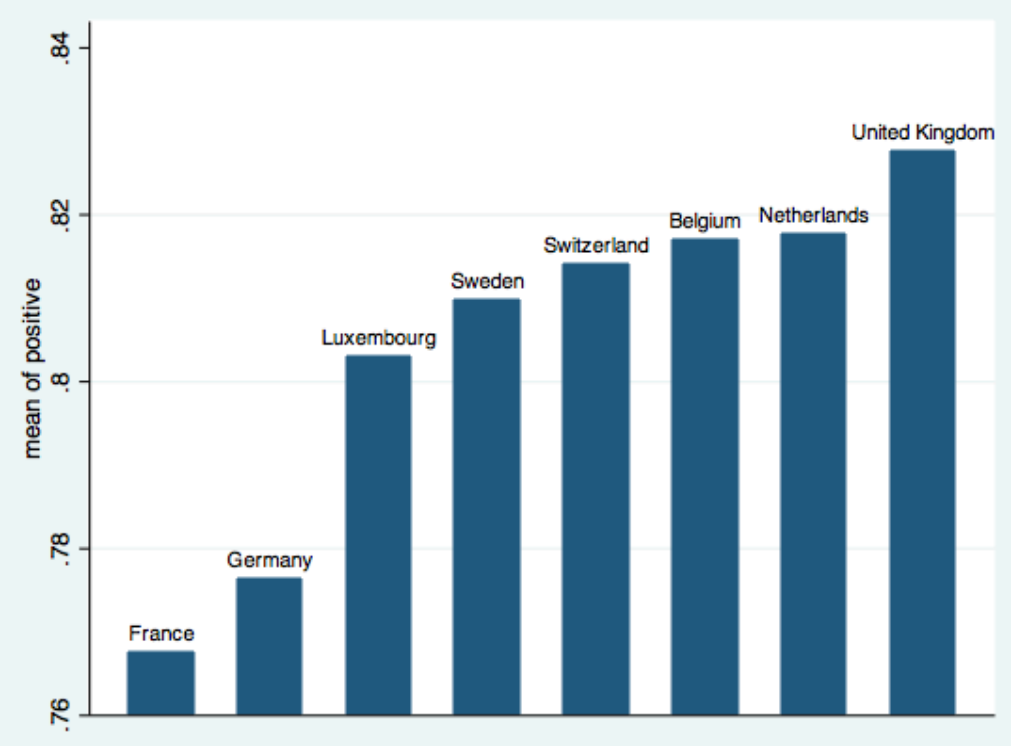
Other controls: year fixed-effects, ethnic group, employment status, education.
Source: World values Survey, years: 2000 and 2006.

Figure 4.A Mean Frequency of Negative Emotions by Country



Source: Gallup World Poll (2007-2009). Negative emotions yesterday: worry, sadness, anger, stress. Yes/No answers. Country averages.

Figure 4.B Mean Frequency of Positive Emotions by Country



Source: Gallup World Poll (2007-2009). Positive emotions yesterday: enjoyment, smile, happiness. Yes/No answers. Country averages.

Appendix

Descriptive Statistics of the Regression Sample

(ESS, waves 1-4, 2002-2008)

Table A1. Composition of Countries by Migration Status of Inhabitants

Country	*Natives*	*Immigrants*	of which:			*Total*
			First generation immigrants	*Second generation immigrants*	*1.5 generation immigrants*	
Belgium	4905	714	501	213	372	5991
Switzerland	3857	1336	1093	243	590	5783
Germany	7485	924	717	207	535	8944
France	5091	739	489	250	488	6318
Great-Britain	5849	783	607	176	383	7015
Netherlands	5741	664	553	111	321	6726
Sweden	5491	837	685	152	480	6808
Total	38419	5997	4645	1352	3169	47585

Table A2. Region of Origin of Immigrants in Europe (only 1st and 2nd generation immigrants)

Destination →	*BE*	*CH*	*DE*	*FR*	*GB*	*NL*	*SE*	*Total*
Origin ↓								
Europe	409	1039	433	290	239	178	536	3124
Africa	180	60	23	363	150	111	39	926
Asia-Australasia	109	148	452	54	304	238	209	1514
North America	3	25	6	4	31	5	5	79
Latin America & Carribean	13	64	10	28	59	132	48	354
Total	714	1336	924	739	783	664	837	5997

Table A3. Descriptive Statistics of the Variables of Interest in the Regression Sample

	Variable	*Obs*	*Mean*	*Std. Dev.*	*Min*	*Max*
log(household income in Euro)	hinctnt (linearized)	44416	7,85	0,72	4,62	9,62
Age	age	44416	42,32	13,15	16	65
Male	male	44416	0,49	0,50	0	1
Marital Status						
single	single	44416	0,30	0,46	0	1
married	married	44416	0,58	0,49	0	1
divorced	divorced	44416	0,11	0,31	0	1
widowed	widowed	44416	0,02	0,14	0	1
How happy are you?	happy	44416	7,61	1,67	0	10
Depressiveness score[1]	depressed	8362	2,33	6,64	-13	39
How satisfied with present state of economy in country	stfeco	43957	4,76	2,25	0	10
How satisfied with the national government	stfgov	43578	4,46	2,22	0	10
How satisfied with the way democracy works in country	stfdem	43699	5,59	2,30	0	10
State of education in country nowadays	stfedu	43228	5,52	2,15	0	10
State of health services in country nowadays	stfhlth	44187	5,76	2,25	0	10
Feeling about household's income nowadays	hincfel (recoded)	42382	3,25	0,77	1	4
Interest in politics	polintr (recoded to 0-1)	44416	0,56	0,50	0	1
Trust in institutions[2]	trustinst	44400	5,00	1,71	0	10
Member of a trade-union	mbtru (recoded to 0-1)	44416	0,41	0,49	0	1
Difficult to have hope for the future of the world	hope_world	9019	3,19	1,07	-2	5
For most people in country life is getting worse	life_worse	8369	3,41	1,01	1	5
Feel close to people in local area	close_local	8419	3,36	0,97	1	5
Member of an association[3]	assoc	7604	1,89	1,68	0	12
People in local area help one another	pplahlp	8280	3,46	1,53	0	6
Most people can be trusted or you can't be too careful	ppltrst	44373	5,37	2,21	0	10
Most people try to take advantage of you. or try to be fair	pplfair	44325	6,01	2,01	0	10

[1] Average score of depressiveness symptoms (how often last week: *Felt depressed; Felt everything did as effort; Sleep was restless, Felt lonely, Felt sad, Could not get going, Felt anxious, Felt tired, Felt bored, Felt rested when woke up in morning, Seldom time to do things I really enjoy, Little chance to show how capable I am, Feel accomplishment from what I do, In general feel very positive about myself, Always optimistic about my future, At times feel as if I am a failure*. Variables recoded in ascending order when necessary.
[2] Average score of trust in the following: the country's parliament, the legal system, the police, politicians, political parties, the European parliament, the United-Nations.
[3] Average score of membership in a voluntary organization or club including sports, cultural, trade-union, professional, consumer, humanitarian, environmental-peace-animal, religious, political, science-education, social, other. Only available in wave 1 (2002).
When relevant, variables have been recoded in ascending order.
Weighted statistics.

Table A4. World Values Survey, Canadian sample (2000, 2006)

Variable	*Observations*	*Mean*	*Std. Dev.*	*Min*	*Max*
Happy	3461	3.41	0.59	1.00	4.00
Age	3461	47.20	17.32	16.00	95.00
Male	3460	42%			
Interview language					
English	3440	74%			
French	3440	26%			
Other	3440	0%			
Home language					
Other	3461	5%			
English	3461	68%			
French	3461	26%			

Source: http://www.worldvaluessurvey.org/

Table A.5 Country Mean Frequency of Affects

	Smile	*Enjoy*	*Worry*	*Sad*	*Stress*	*Angry*	*Happy*
Belgium	0,83	0,81	0,32	0,18	0,33	0,20	0,81
France	0,78	0,76	0,33	0,19	0,36	0,33	0,76
Germany	0,76	0,74	0,28	0,19	0,38	0,14	0,87
Netherlands	0,80	0,84	0,35	0,16	0,20	0,09	0,82
Sweden	0,79	0,87	0,22	0,14	0,28	0,14	0,76
Switzerland	0,76	0,83	0,30	0,16	0,37	0,14	0,86
United Kingdom	0,80	0,83	0,29	0,21	0,35	0,16	0,87

Source: Gallup World Poll (2007-2009). Yes/No answers. Country averages.

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