

Happiness, Meaning of Life and Income

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Abstract

The paper explores the non-material determinants of happiness. We go beyond the well-established result that individual 'religiousness' is positively correlated with happiness and look at a broader spiritual activity - time spent thinking about the meaning and purpose of life (MPL). We study the determinants of this activity and its potential role in explaining happiness. Using World Values Survey 1994-2007 data for 85 countries in an ordered logit model, we find that the educated, the religious, females and the middle aged are more likely to spend time thinking about the MPL. The correlation between happiness and thinking about the MPL depends on a country's income: it is negative in high income countries and positive in low income countries.

Key-words: Happiness, life satisfaction, meaning of life, religion.

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1. Introduction

The idea that increases in income must lead to increased happiness is about as central to an economist's thinking that we can get. However, (some) economists, and many researchers in other social sciences, have known for some time that a sense of well-being can be profoundly influenced by non-material factors. Notably, attendance of religious services and importance of God in one's life have been found to have a high correlation with happiness (Clark and Lelkes 2005, Lelkes 2006, and Dolan *et al* 2008). In this paper, we take a step further and look at a broader spiritual activity - time spent thinking about the meaning and purpose of life (MPL) and its potential role in explaining happiness. Why should we look at this activity? First and foremost, we think that concentrating solely on variables relating to 'religiousness' (which we define as an affiliation to a particular denomination) leaves aside a large group of people who ask themselves different spiritual or philosophical questions (e.g. who we are and why we think we are alive) but do not describe themselves as strictly religious or believers in God. Table 1, based on data from the World Values Survey, provides support for this argument. It shows that 33% of people for whom religion is not at all important and 41% of people who never attend religious services say that they often think about the MPL. Further, 34% of people who say that religion is not at all important for them *and* who never attend religious services, often think about the MPL.

Table 1. Thinking about MPL, importance of religion and attendance or religious services (in %)

Thinking about MPL	Importance of religion			
	Very important	Rather important	Not very important	Not at all important
Never	3.68	3.74	4.47	7.73
Rarely	9.67	14.62	18.26	21.04
Sometimes	31.79	37.64	41.68	38.3
Often	54.85	44.00	35.59	32.92

Thinking about MPL	Attendance of religious services				***
	Once a week	Once a month	Once a year	Never	
Never	3.22	3.52	3.74	6.76	8.85
Rarely	9.45	12.63	15.38	16.48	20.97
Sometimes	31.78	36.81	38.17	35.75	36.19
Often	55.55	47.04	42.71	41.01	33.98

Note: Data from the World Values Survey (waves 3, 4 and 5). *** - Importance of religion: "not at all important" & attendance of religious services: "never"

The first question we ask ourselves is who are the people who think about the MPL? Are they the old, the young, the rich, the impoverished or the religious? What factors determine the frequency of thinking about the MPL?

Second, we want to find out whether the thinkers-about-the-meaning-of-life would report higher levels of happiness? It is quite possible that individuals, who spend time thinking about the MPL, are *more* able to adequately explain events and feel that their lives have purpose. This would make them happier compared to those who do not think about the MPL, and we would observe a positive

association between thinking about MPL and happiness. However, it is also possible that thinking about MPL makes us feel sad – and unhappy. Or, when we feel sad, dissatisfied or unhappy, we may start thinking about the MPL. In both latter cases, the association between thinking about the MPL and happiness would be negative.

Our empirical analysis is based on the World Values Survey data, covering a period from 1994 to 2008 and comprising a range of 85 developed and developing countries. We apply an ordered logit model to find the correlates of the frequency of thinking about the MPL, and explore the link between thinking about the MPL and happiness. Our results suggest that the religious, the middle-aged, the more educated, those belonging to upper middle class and females are more likely to think frequently about the MPL. The link between happiness and thinking about the MPL seems to depend on the respondent's country level of income: it is positive in low income countries and negative in high income countries.

The remainder of the paper is organised as follows. Section 2 briefly reviews the literature on the determinants of happiness. Section 3 presents the hypotheses. Section 4 provides the description of data, variables and empirical methodology. Section 5 presents and explains the results, followed by the conclusion.

2. Related literature

Frey and Stutzer (2002) make a strong case as to why economists should consider happiness research, among them the implications for policy, to understand the formation of subjective well-being and, not least, to challenge views economists have considered as standard. The abundant literature developed by economists and other social scientists informs us about the positive associations between happiness, on the one hand, and income, education, good health and being married, on the other (Clark *et al.*, 2007; Alesina *et al.*, 2004; Blanchflower and Oswald, 2004). A U-shaped relationship is typically observed between happiness and age, with the young and the old being the happiest (Blanchflower and Oswald 2004). Furthermore, higher levels of happiness are usually associated with stronger friendship, family and community ties (Lelkes, 2006; Haller and Hadler, 2006; Helliwell and Putnam, 2004).

Among the non-material influences, happiness and life satisfaction have been shown to be intertwined with mental health (Murphy and Athanasou, 1999), personality dispositions and life circumstances (Diener *et al.*, 2003), and, in particular, religion. In one of the early studies, Ellison (1991) demonstrated that a range of indicators of religious commitment, including feelings of closeness to a divine entity and certainty of belief, contribute to increased life satisfaction. Helliwell (2003) finds that people who frequently attended church and made God important in their lives report higher levels of life satisfaction. Cohen (2002) and Ferriss (2002) single out different aspects of faith and religiosity and show that they positively correlate with life satisfaction and happiness. Haller and Hadler (2006) find that people participating in religious activities are significantly happier than those outside these activities. Clark and Lelkes (2005) demonstrate that the religious people from all religious denominations suffer less psychological harm from unemployment than do the non-religious.

While the literature suggests that religious people tend to be happier, not all findings suggest that there the link is strictly linear. Mochon *et al.* (2010) point at a more complex relationship between the

two variables finding that people with weaker beliefs are actually less happy than those who do not believe at all.

Turning to the link between thinking about the MPL and happiness, the only study looking at the relationship between the two variables is Haller and Hadler (2006). They hypothesise that people who often think about the meaning of life are also more reflexive and should therefore be more satisfied with life. However, they also admit that the thinking about MPL might be explained by high ethical-moral standards or personal problems. Using World Values Survey data for 1995-1997 (wave 3) covering 41 countries around the world, Haller and Hadler find no statistically significant relationship between thinking about the MPL and happiness. In our study, which adopts an empirical strategy similar to that of Haller and Hadler, we take a step further. Instead of pooling all countries of the world together, we examine the link between thinking about the MPL and happiness in countries with different income levels. In addition, we focus on a longer time period (1994-2007), and want to find out what determines the frequency of thinking about the MPL in the first place.

3. Hypotheses

What possible relationships could exist between thinking about MPL and happiness? At least two channels can be identified. First, thinking about MPL could have a *direct influence* on happiness. This could work both positively and negatively on happiness. Searching for life's purpose is an activity *in itself* that could produce more meaning in one's life, thus contributing to higher levels of happiness. The correlation between thinking about MPL and happiness would then be positive. This channel is similar to the effect that person's religiousness and church attendance have on happiness in that the religious can be said to take comfort from believing in a deeper meaning of life. By contrast, searching for life's purpose is an activity *in itself* that could produce less meaning, more frustration and depression. In this case we would observe a negative association between thinking about the MPL and happiness.

Thinking about the MPL could also have an *indirect influence* on happiness. Again, this could work both positively and negatively on happiness. Sources of unhappiness such as divorce and unemployment are also the issues that prompt thinking about the MPL. In this case we would observe a negative association between thinking about MPL and happiness. By contrast, known sources of happiness – a good marriage, education and income – could likewise prompt thinking about the MPL. In this case we would observe a positive association.

Thus, we see at least four different channels. On the one hand, there can be direct influences on happiness, positive and negative, from thinking about the MPL. On the other hand, there can be third party factors that indirectly influence happiness and thinking about the MPL, resulting in positive or negative association between the two variables. Which channel dominates becomes an empirical question which we address in the next section.

4. Data, Variables and Empirical Methodology.

For our empirical analysis we use data from the World Values Survey (WVS), a publically available dataset on political, social and cultural values in different parts of the world. The first wave of the WVS (1981-1984) covered 10 countries, with more countries participating in subsequent waves: 18 in

1989-1993; 54 in 1994-1999; 40 in 1999-2004; and 57 in 2005-2007. Given incomplete data for certain variables, which we consider important for our analysis, in the first two waves of the WVS,³ we concentrate on the three last waves of the WVS. The sample we work with thus covers the time period 1994 to 2007.

The aim of our empirical work is twofold. First, we want to find out what factors – material and non-material - contribute to an individual’s tendency to think about the MPL (Model 1). Second, we want to determine whether a relationship exists between happiness and time spent on thinking about MPL (Model 2). In both models, we are particularly interested in isolating the potential effects of religiousness from the potential effects of other variables. In a simplified form the two models can be presented as follows:

Model 1:

$$\textit{Thinking about MPL} = f(\textit{socio-demographic characteristics, religiousness})$$

Model 2:

$$\textit{Happiness} = f(\textit{thinking MPL, religiousness, socio-demographic characteristics})$$

The variable of primary interest for this study should capture the time spent thinking about meaning and purpose of life. To construct it, we use the WVS question “How often, if at all, do you think about the meaning and purpose of life?” with possible answers “Never”, “Rarely”, “Sometimes” and “Often”. The variable is assigned values from 1 (Never) to 4 (Often). This variable is what we will refer to as the frequency of thinking about the meaning and purpose of life.

To capture an individual’s level of happiness, we use the following WVS question: 1) “Taking all things together, would you say you are: very happy, quite happy, not very happy, not at all happy.” The newly formed variable “happiness” takes values 1 for “not at all happy”, 2 for “not very happy”, 3 for quite happy” and 4 for “very happy”.

The set of individual-level socio-demographic characteristics consists of the following variables: age; age squared; dummy variables for gender; marital status (married/living with a partner, divorced widowed); having at least one child; a variable describing individual’s relative income level (ten income bands: taking value 1 for the lowest band, ..., 10 for the highest band) and its squared term; dummy variables for three education levels (primary, secondary, tertiary); 15 job categories (employer/manager of establishment with 10 or more employed, employer/manager of establishment less than 10 employed, professional worker, middle-level non-manual office worker, supervisory non-manual office worker, junior level non-manual worker, non-manual office worker, foreman and supervisor, skilled manual worker, unskilled worker, farmer having own farm, agricultural worker, member of armed forces, never had a job, other); working part-time; self-employed; retired; housewife; student; unemployed; subjective social class (upper, upper-middle, lower middle, working, lower); and a variable capturing individual’s subjective evaluation of health status (taking value 1 for very poor, 2 for poor, 3 for fair, 4 for good and 5 for very good).

³ Education variable is one example. In the first wave the respondents were asked only about the age at which they completed education, with 28% of respondents providing no answer, 44% of the respondents did not provide an answer to the same question in the second wave, and 53% of the respondents did not provide an answer to the additional question “What is your highest educational level attained?”

To capture individual's religiousness, we construct two control variables: "attendance of religious services" and "importance of religion". The first variable describes formal attachment to the church and is based on the question "How often do you attend religious services?" with possible answers "More than once a week", "Once a week", "Once a month", "Only on special holy days/ Christmas/ Easter", "On other specific holy days", "Once a year", "Less often than once a year" and "Never/practically never". Combining different answer categories, we create 4 dummy variables for attending religious services: "at least once a week", "once a month", "once a year, less than once a year or on holy days", and "never". The second variable relating to religiousness is based on the question "How important is religion in your life?" with possible answers "Very important", "Rather important", "Not very important" and "Not at all important". Four dummy variables are created, capturing each of the four answers.

In both models, we include a set of country-year fixed effects – dummy variables for each country-year (wave) pair. The fixed effects will capture all (also unobserved or unaccountable) country-level factors that influence happiness or time spent on thinking about meaning of life in a country, including time specific country-level events. Examples are a nation's mentality, a country's climate, a recession affecting a particular country at a particular time, and winning a football World Cup. Isolating all country-level influences and time trend effects, the fixed effects will allow us to concentrate on the relationship between happiness and thinking about the meaning of life, on the one hand, and their individual-level predictors, on the other, *within* each country-year pair.

Our database includes countries at different level of economic development. This allows us to estimate the relationship between happiness and thinking about the MPL for high income, upper-middle income, lower-middle income and low income countries (see Appendix for country lists).⁴ In addition, we interact the variable "thinking about MPL" with the logarithm of the Gross National Income of the country where the respondent lives. Further robustness and sensitivity checks will include model estimations for females and males and replacing the happiness variable with a variable capturing respondent's life satisfaction.

Given the qualitative and ordered nature of answers to the meaning of life and happiness questions, we estimate both models with ordered logit. As a robustness check, we have used the OLS and ordered probit approaches. The results are consistent with ordered logit and are available on request. In both models, we correct standard errors for heteroscedasticity and apply the original country weightings.

5. Results

The correlates of thinking about the MPL

We start our discussion of the results by looking at the correlates of the time spent thinking about MPL (see specification [1.1] of table 2). We find that, other things being equal, age has an inverted U-shaped relationship with the activity, with an implied turning point corresponding to the age of 44.

⁴ We use the World Bank classification for 2005 (World Bank, 2005), according to which low income countries in 2005 had a Gross National Income of less than 876 USD, lower-middle income countries – 876-3,465 USD, upper-middle income countries – 3,466-10,725, and high income countries of more than 10,725 USD.

Thus, it is middle aged people who think most frequently about the meaning and purpose of life. A possible explanation is that middle age is more likely to bring about the conditions for reflection, such as a home and a range of life experiences to draw on.

Other things being equal, females tend to think more about the meaning and purpose of life, while those married or living with a partner and the widowed all think less about the MPL.

Education is important: compared to respondents with secondary education, those with primary education are less likely, and those with tertiary education more likely, to think about MPL. More education tends to broaden horizons, provide frameworks for thought and alternative paradigms, all of which might provide greater conditions for meaning-making.

Compared to people describing themselves as belonging to lower middle social class, people from higher middle class are more likely, and people from lower class less likely, to think about MPL. Interestingly, the coefficient of those describing themselves as belonging to the higher social class is insignificant. It is possible that those in the higher middle class groups, may be people who have opportunities to experience great beauty and awe-inspiring creations in architecture, music, arts and the natural world, which they may value in a different way compared to the highest social class who may experience these things on a more regular basis. Finally, religiousness is strongly correlated with time spent thinking about MPL: those regularly attending religious services and those thinking that religion in their life is very important also tend to think more about MPL.

To conclude, this research suggests that females, the middle-aged, the educated, the single, the religious and those describing themselves as belonging to higher middle class are likely to frequently think about MPL.

The link between thinking about MPL and happiness

Next, we report the results of model 2, where thinking about meaning and purpose of life is included as an explanatory variable of happiness (see specification [2.1] of table 2). The coefficients of the standard determinants of happiness largely conform to the literature: we find the young and the old, married/living with a partner, females, healthier respondents and the religious are happier, while the unemployed, divorced and separated, and those belonging to lower social classes are unhappier. Happiness increases with income, albeit at a declining rate, and is lower for the respondents with tertiary education.

What about time spent on thinking about purpose and meaning of life? We find that for the whole sample its coefficient is positive and statistically significant. This means that, when other factors including the variables capturing individual's religiousness are kept constant, people who think more frequently about MPL tend to be happier.

However, is this relationship the same across different country groups? To provide an answer, we first estimate the model for low income, lower-middle income, upper-middle income and high income countries. The results, reported in columns 2.2-2.5 of table 2, suggest that the correlation between happiness and frequent thinking about MPL is positive and significant in low and lower-middle income countries and negative and significant in high income countries. Thus, in relatively poor countries frequent thinkers about MPL tend to be happier, while in rich countries – unhappier.

The result is confirmed by specification 2.6 (table 3) where the thinking about MPL variable is interacted with the logarithm of the respondent's country Gross National Income per capita in 2005. Here we obtain a positive and significant coefficient of the thinking about the MPL variable and a negative and significant coefficient of the interaction term. This implies that the correlation between happiness and time spent on thinking about MPL shifts from positive to negative as GNI per capita increases. The sign shift occurs at the GNI per capita of around \$10,400 – corresponding to the 2005 GNI per capita in Hungary.

To check the robustness of our results, we estimate model 2 (with interaction term) for males and females (specification 2.7 and 2.8 of table 3) and find virtually the same relationship between happiness and the frequency of thinking about MPL as for the whole sample (specification 2.6). Next, we estimate the model 2 (with and without interaction term) with the dependent variable capturing individual's life satisfaction rather than happiness (specifications 2.9 and 2.10). In the model without the interaction term, the coefficient of the time spent on thinking about MPL is positive but insignificant. However, when the interaction term is included, the correlation between the two variables turns from positive to negative as GNI per capita increases – similarly to the case where 'happiness' is the dependent variable. However, the shift in the case of life satisfaction now occurs at lower level of 2005 GNI per capita – around \$5,200 – corresponding to the income level of Malaysia.

The research confirms that the frequency of thinking about the MPL is linked to the individual level of happiness. In relatively poor countries, a person frequently thinking about the MPL will have a greater likelihood of reporting a high level of happiness. It is possible that people relatively poorer people may already have had a culture of thinking about MPL. This may have been built into their lives and used as a way of coping with their everyday circumstances. Therefore it may be that they tend not to associate this activity with being unhappy. It is possible that they rely on this practice and it gives them support and meaning. The finding supports the first hypothesis, which emphasises that the causality runs from thinking about the MPL to happiness.

In relatively rich countries, a person frequently thinking about the MPL will have a greater likelihood of reporting a low level of happiness. It is possible that people from high income households may not have had a culture of thinking about MPL. They may not have needed to develop this activity as a way of coping given their material advantages. It is possible that when something unpleasant does occur in their lives, they are forced to be reflective and it may be for that reason that they then associate thinking about MPL with being unhappy. These findings would lend support to the second hypothesis, emphasising indirect link between thinking about the MPL and happiness.

Table 2. Correlates of thinking about MPL and happiness, ordered probit coefficients.

	Dependent variable					
	Thinking about purpose and meaning of life	Happiness				
		Whole sample	Low income countries	Lower middle income countries	Upper middle income countries	High income countries
	Model 1	Model 2				
[1.1]	[2.1]	[2.2]	[2.3]	[2.4]	[2.5]	
Thinking about MPL		0.035***	0.188***	0.027**	0.007	-0.051***
Attendance of religious services						
<i>At least once a week</i>	0.212***	0.145***	-0.096**	0.129***	0.333***	0.140***
<i>At least once a month</i>	0.046**	0.039*	-0.234***	0.071*	0.213***	-0.066
<i>Less often than once a month</i>	0.004	0.015	-0.131***	0.030	0.083**	0.009
<i>Never</i>	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Importance of religion						
<i>Very important</i>	0.713***	0.413***	0.416***	0.325***	0.360***	0.557***
<i>Rather important</i>	0.395***	0.077***	0.137*	-0.012	0.030	0.191***
<i>Not very important</i>	0.172***	0.009	0.077	0.022	-0.047	0.031
<i>Not important at all</i>	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
Age	0.021***	-0.038***	-0.026***	-0.037***	-0.040***	-0.043***
Age squared/ 100	-0.024***	0.042***	0.032***	0.043***	0.043***	0.043***
Female	0.169***	0.109***	0.032	0.104***	0.107***	0.187***
Married/ lives with a partner	-0.079***	0.445***	0.224***	0.439***	0.444***	0.653***
Widowed	-0.092***	-0.113***	-0.089	-0.099*	-0.164***	-0.064
Divorced	0.053	-0.177***	-0.472***	-0.177**	-0.219***	-0.064
Has at least one child	0.007	-0.036*	-0.106**	0.015	-0.018	-0.024
Income band	-0.015	0.091***	-0.029	0.109***	0.079***	0.125***
Income band squared/ 100	0.037	-0.261***	0.961***	-0.325*	-0.091	-0.734***
Education						
<i>Primary</i>	-0.270***	-0.022	-0.005	-0.061**	0.004	0.005
<i>Secondary</i>	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
<i>Tertiary</i>	0.221***	-0.077***	-0.116***	-0.057**	-0.083**	-0.065**
Retired	0.068***	0.120***	0.148*	-0.083*	0.138***	0.270***
Housewife	-0.122***	0.102***	0.183***	0.072*	0.087*	0.120***
Student	0.032	0.108***	0.118*	0.091*	0.086	0.185***
Unemployed	0.069***	-0.205***	-0.063	-0.158***	-0.316***	-0.300***
Subjective social class						
<i>Upper</i>	0.047	0.442***	0.205**	0.371***	0.477***	0.756***
<i>Upper middle</i>	0.074***	0.174***	0.131***	0.209***	0.161***	0.211***
<i>Lower middle</i>	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
<i>Working</i>	0.001	-0.128***	-0.165***	-0.194***	-0.094***	-0.074**
<i>Lower</i>	-0.135***	-0.526***	-0.345***	-0.559***	-0.616***	-0.493***
Health	0.008	0.823***	0.859***	0.801***	0.809***	0.853***
Observations	165,207	163,747	28,662	51,605	41,939	41,541
Pseudo R ²	0.0506	0.145	0.134	0.139	0.149	0.131
Chi ²	16044	37292	6488	13085	9098	7443
Prob>Chi ²	0.000	0.000	0.000	0.000	0.000	0.000

Notes: * denotes significance at 10% level, ** - 5%, *** - 1%. Robust standard errors used to calculate the coefficients' level of significance. The standard errors and the coefficients of dummies for country-waves, 15 job categories and missing answers for the 'Attendance of religious services', 'Importance of religion' and 'Subjective social class' variables are not reported for space saving purposes'. Complete econometric output is available from authors upon request.

Table 3. Correlates of happiness and life satisfaction – robustness checks

	Dependent variable				
	Happiness			Life satisfaction	
	Whole sample	Females	Males		
Model 2					
	[2.6]	[2.7]	[2.8]	[2.9]	[2.10]
Thinking about MPL	0.407***	0.392***	0.439***	0.008	0.342***
Thinking about MPL* ln(GNI)	-0.044***	-0.043***	-0.048***		-0.040***
Observations	163,747	82,813	80,934	163,855	163,855
Pseudo R ²	0.145	0.153	0.140	0.0826	0.0828
Chi ²	37367	20128	18064	49632	49777
Prob>Chi ²	0.000	0.000	0.000	0.000	0.000

Notes: * denotes significance at 10% level, ** - 5%, *** - 1%. All specifications include the same set of explanatory variables as in Table 2; they are not reported for space saving purposes. See notes of table 2 which also apply here.

Concluding remarks

Most happiness studies tell us that individual religiousness – measured, for example, by the attendance of religious services or the importance of religion in one’s life - is a strong indicator of happiness and life satisfaction. These studies, however, tend to ignore an important group of people, those who do not feel religious or affiliated with a particular church, but are nevertheless reflecting on various existential and philosophical questions. In this study, we have tried to find out whether thinking about the meaning and purpose of life – a broad spiritual activity which can be undertaken by both the affiliated and the non-affiliated - is correlated with individual happiness.

The World Values Survey database allows us to disentangle the correlation between thinking about the MPL and happiness from the correlation between religiousness-related variables and happiness. While the latter conforms with the literature and is a positive relationship, the link between frequent thinking about the MPL and happiness appears to be dependent on the respondent’s country level of income. Controlling for individual’s religiousness and keeping other things equal, those reflecting on the meaning and purpose of life tend to be happier in low income countries and unhappier in high income countries.

At a theoretical level, one can easily advance channels through which thinking about the MPL may influence happiness (and vice versa). Establishing causal effects in practice is more challenging. The lack of instrumental variables and a proper panel dimension of data, where the same individuals would be interviewed over time,⁵ does not allow us to deal with the problems of endogeneity. Dealing with such problems is therefore one direction of future research. Another avenue of future inquiry is a better understanding of what makes people think about the meaning and purpose of life in the first place. In the empirical part of this study, for example, we have been able to account for some (e.g. divorce and unemployment) but not all concerns which might have made the respondent both unhappier (or happier) and more likely to think about MPL. In this respect, insights from qualitative studies, with a particular focus on countries with different level of economic development, and richer quantitative data, capturing distressing events in individual’s life, would be useful.

⁵ Given that these were not the same respondents who were interviewed in different waves, the data we use are best described as (repeated) country cross sections.

Another avenue for future research includes finding out how people in different economic, social, cultural and geographical contexts interpret the question about thinking about the purpose and meaning of life is. Is it possible that this activity has a positive connotation in some places and negative in others? Further, is the link between individual happiness and the frequency of thinking about the MPL different across geographical, religious and cultural spaces?

Finally, the focus of this paper was on the individual level determinants of the frequency of thinking about MPL and happiness and its possible effects on individual level happiness; all country level effects were accounted for by country-wave fixed effects. However, it would also be interesting to see what determines the frequency of thinking about the MPL at country (rather than individual) level. Could such country level variables as income level, inequality level, unemployment rate, poverty rate, political regime and instability, climate etc. explain why people in some countries on average more often think about the MPL than in others?

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Appendix.

List of countries included in the analysis, World Bank income level classification for 2005

Low income:

Bangladesh, Burkina Faso, Ethiopia, Ghana, India, Iraq, Kyrgyzstan, Mali, Nigeria, Pakistan, Rwanda, Tanzania, Uganda, Vietnam, Zambia, Zimbabwe

Lower middle income:

Albania, Algeria, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, China, Colombia, Dominican Republic, Egypt, El Salvador, Georgia, Guatemala, Indonesia, Iran, Jordan, Macedonia, Moldova, Morocco, Peru, Philippines, Thailand, Ukraine

Higher middle income:

Argentina, Brazil, Bulgaria, Chile, Croatia, Estonia, Hungary, Latvia, Lithuania, Malaysia, Mexico, Poland, Romania, Russian federation, Serbia/Serbia and Montenegro, South Africa, Trinidad and Tobago, Turkey, Uruguay, Venezuela

High income:

Andorra, Australia, Canada, Cyprus, Czech Republic, Finland, France, Germany, Great Britain, Hong Kong, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Puerto Rico, Saudi Arabia, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, United States