

Psychological barriers to de-growth: values mediate the relationship between well-being and income

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Abstract

Sustainability and the limits of the planet – terms that many people see as remote from their everyday lives and that some refuse to accept at all. Moreover, the underlying message that we all need to consume less stands in direct opposition to a dominant myth in Western society, namely that more consumption is the route to greater happiness.

In fact, a good deal of recent research has shown that subjective well-being is relatively insensitive to changes in income and consumption, yet much more sensitive to various social and personal factors (even when wealth is controlled for). Moreover, a consistent finding is that holding a broadly materialistic outlook depresses happiness and leads to higher levels of dissatisfaction and anxiety. In other words, individuals who consume more are not necessarily happier and focusing on consumption at the expense of other things may in fact be constraining their well-being.

The argument that consumption growth can be detrimental to well-being in some key respects provides a new and powerful motivation for changing to a de-growth model. However, despite empirical evidence to the contrary, the fact remains that many people perceive that a de-growth economy would be bad for their well-being. In this paper we will consider the mechanisms through which psychological well-being is achieved and maintained. In doing so, we will also explore some of the most significant psychological “barriers” to the personal and social changes that would accompany de-growth. These include a variety of cognitive biases (e.g. loss aversion, endowment effects) and problems of affective forecasting, the role played by social norms and values in construing self identity, and the difficulties posed by mass action problems.

The enticing vision of low-consumption, high well-being lifestyles can be realised only to the extent that these psychological barriers can be overcome. We will therefore argue that whilst legislation, coercion or need (e.g. poverty) may help to instigate behaviour change, the well-being benefits of such changes will depend on the individual being able to internalise the motivation such that they value their new lifestyle for its own sake. In other words, we must persuade people that de-growth is both necessary and – crucially – in their own best interests.

1. Introduction

“There is no crime greater than having too many desires; There is no disaster greater than not being content;” Lau Tzu, *Tao Te Ching* 46

Throughout history, across widely different cultures, people have recognised the dangers of an excessive focus on wealth and material possessions. Viewed in this wider historical context, our current Western fixation with the pursuit of individual gain as *the* route to happiness appears anomalous. And yet, we live in an age in which the pursuit of individual wealth and national growth have risen beyond mere social acceptability to become virtually synonymous with “aspiration”, “development” and even, in some quarters, touted as a moral good in themselves (for a stout defence of economic growth and its attendant personal aspirations in moral terms, see Friedman, 2005).

It has become unfashionable to promote restraint and contentment as virtues. However, the wisdom of centuries stacks-up well against the findings of modern experimental psychology. In recent decades, great strides have been made in uncovering the factors that give rise to individual happiness. The results are strikingly consistent, if unsurprising. In most reasonably developed countries, material circumstances such as wealth and possessions play only a small role in determining levels of happiness – some psychologists estimate that they explain only around ten per cent of variation in happiness at the aggregate level (Lyubomirsky, Sheldon & Schkade, 2005). Much more significant are factors relating to individual differences in outlook and to the kinds of activities that people engage in: socialising, participating in cultural life, having meaningful and challenging work and so on.

These findings are extremely significant for the burgeoning de-growth movement. The need for a de-growth economy has usually been framed in terms of environmental sustainability and the limits of the planet – terms that many people see as remote from their everyday lives and that some refuse to accept at all. Moreover, the underlying message that we all need to consume less stands in direct opposition to a dominant belief in Western society, namely that more consumption is the route to greater happiness. Consuming less is seen to be a sacrifice. Given that, under virtually any plausible de-growth scenario, real incomes for many in the rich West are likely to remain static or even decline, and with them levels of personal consumption, persuading people that de-growth is somehow in their own best interests seems likely to be difficult. Quite apart from the economic and political challenges, this represents a very significant *psychological* barrier to instigating a de-growth policy.

2. Income and life satisfaction

In this context, understanding the functional relationship between income and subjective well-being is of particular interest. Over the last 40 years, some economists have begun to explore this issue by using self-reported measures of happiness and satisfaction to represent utility within econometric models, rather than simply regarding income as a direct proxy for it. If people are really experiencing increased utility as they become wealthier, the argument runs, we would expect to find them reporting greater satisfaction with their lives as a consequence. A considerable amount of research using large, cross-sectional data sets has settled broadly on the conclusion that aggregate life satisfaction and income are monotonically

but non-linearly related. Past a certain level of income, marginal increases in life satisfaction decrease rapidly as income rises (for a recent review of this research, see Clark, Frijters and Shields, 2008).

The term “double dividend” has often been used to encompass the general argument that there may be benefits to individual well-being from living lower-consumption lifestyles (Jackson, 2005).¹ For proponents of de-growth, the non-linear relationship between life satisfaction implies an enticing double dividend; perhaps the process of de-growth could be accompanied by a net gain – or, at the very least, no net loss – in experienced well-being at the aggregate level. After all, if having more money has an increasingly negligible impact on happiness once an acceptable level of income has been reached, then it seems possible that those whose income exceeds this level could, *ceteris paribus*, be more or less as happy with lower incomes. It has sometimes been argued further that the process of *striving* for more money can lead to factors such as increased stress, “time poverty” and strain on personal relationships, which are for many people actively detrimental to well-being. Perhaps, then, some people could be *even happier* with less if their decrease in income were accompanied by changes to other aspects of their lifestyles.

This argument seems to offer a way of overcoming the psychological barrier to de-growth discussed above; namely, the overriding belief that consumption is the route to happiness and the concomitant fear that reducing consumption would inevitably impact negatively on quality of life. Were it to be accepted by the general public, it could dramatically change consumption patterns.

3. The role of values

But does the argument hold? Do these results *really* imply that de-growth would feel less painful than people intuitively assume? Research on the relationship between experienced well-being and income is extensive (for a comprehensive recent overview, see Eid & Larsen, 2008). For the purpose of understanding the psychological impact of income on well-being, however, we will concentrate on just one aspect, namely the relation between income, well-being and the broader value orientations that people hold.

An extensive body of research work in psychology has argued that values and aspirations play a key role determining how people evaluate their material circumstances (see, e.g. Ryan & Deci, 2000). Specifically, Kasser and Ryan (1993, 1996, 2001) have drawn a distinction between goals and aspirations that are intrinsic and extrinsic. Intrinsic goals are those that are inherently rewarding and do not depend on external validation. Extrinsic goals, by contrast, are typically pursued as a means to some external reward, for instance financial success, image or popularity/status. Empirical analyses of goal structures across 15 nations (Grouzet, Kasser, Ahuvia, Fernández, Kim, Lau, Ryan, Saunders, Schmuck & Sheldon, 2005) has given rise to a so-called circumplex

model of motivations (see figure 1). This model shows that intrinsic and extrinsic goals are in opposition to one another, such that an individual who is more intrinsically focussed will be, by necessity, *less* extrinsically focused and vice versa.

The extent to which intrinsic or extrinsic values dominate for an individual has been found to be a significant predictor of well-being. Across a range of indicators including self-esteem, depressive symptoms, drug and alcohol abuse, self-actualisation and self-reported life satisfaction, individuals who are more extrinsically motivated show lower well-being relative to those who are more intrinsically motivated (Kasser & Ryan, 1993, 1996, 2001; Sheldon & Kasser, 1995; Sheldon, Ryan, Deci & Kasser, 2004). This central finding, which we shall refer to as the “values dividend”, has been corroborated both by those working in other laboratories (e.g. Carver & Baird, 1998) and other paradigms (e.g. Sagiv & Schwartz, 2000).

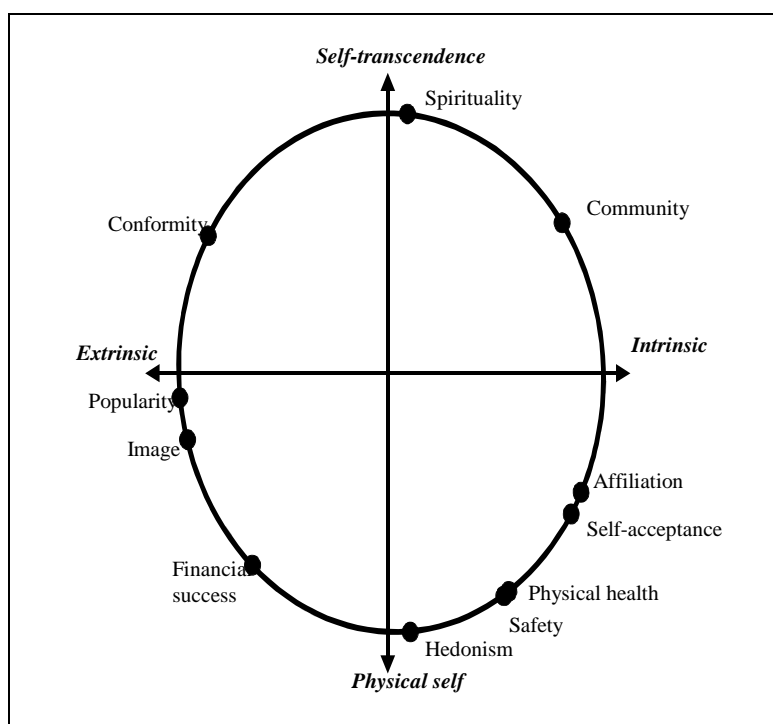


Figure 1: Circumplex model (Grouzet *et al.*, 2005) – Reproduced with permission from Tim Kasser

4. Do values and income interact?

In itself, the suggestion that individuals who hold more intrinsic value orientations are likely to have higher well-being overall is interesting, but says little about how a change in income under a de-growth scenario might impact on people’s lives. However, there are reasons to hypothesise an interaction between the values people hold and their material circumstances.

Kahneman, Krueger, Schkade, Schwarz and Stone (2006) suggest that when people consider how satisfied with they are with their lives overall, they tend to think about “conventional status-bearing achievements” – their income, their home, whether or not they have a good job and so on. They note that these kinds of factors are significant because, in Western society, they function as a means of

¹ Although it was coined in relation to the more specific claim that a “double dividend” of welfare and environmental benefits could (in theory) be gained from increased use of environmental taxation.

signalling relative social position. To the extent that individuals have more income they are likely to have more of these “status-bearing” goods and achievements; hence, even when absolute consumption needs have been comfortably met there remains a moderately positive relationship between income and life satisfaction attributable to the beneficial impact of relative status.

Clearly, however, some people – those with relatively extrinsic value orientations – simply *care more* about status than others. It is already known (as discussed above) that people whose value orientation is relatively intrinsic are more satisfied at a lower level of income than those whose value orientation is relatively extrinsic, *ceteris paribus*, since extrinsic goals are inherently less satisfying of basic psychological needs (Kasser & Ryan, 2001). However, if the relative balance of intrinsic and extrinsic values shapes the extent to which status effects influence a person’s well-being, we would expect to find that the aggregate functional form of the relationship between life satisfaction and income should be mediated (in part) by values. In other words, we would hypothesise the existence of a significant interaction effect between values and income, such that income plays a more important role in determining subjective well-being for those with a more extrinsic value orientation, whereas values play a more important role in determining subjective well-being for those at lower incomes. However, consistent with previous research, we would not expect the values dividend to disappear entirely, even at higher income levels.

The aim of the present study was to test these hypotheses with a large representative sample. Further, we sought to quantify the life satisfaction changes one might expect as a result of widespread value changes, and compare them in scale with life satisfaction changes resulting from changes in income.

5. Methods

Data source

Data were drawn from the third wave of the European Social Survey (ESS), a biennial household survey of social attitudes across Europe with a statistically representative sample of N = 1-2000 in each country surveyed.² This provides data at the individual level on all three of the variables of interest in this study – subjective well-being (operationalised as life satisfaction), income and values orientation, across the 16 European states from which the ESS had complete data.³ To enhance the power of our statistical analyses, we pooled data across Europe.

Operationalisation of variables

The ESS does not explicitly operationalise the intrinsic-extrinsic discussed above. Instead, it uses a 21-item Portrait Values Questionnaire based on Schwartz’s theory of 10 human values (Schwartz, Melech, Lehmann, Burgess, Harris & Owens, 2001). Sagiv and Schwartz (2000) suggest that intrinsic goals correspond to Schwartz’s values of self-

direction, benevolence and universalism; whilst extrinsic goals correspond to Schwartz’s value of power. Communication with Kasser (personal communication, 2008) suggested that Schwartz’s achievement value may also be considered to map onto extrinsic goals. Lastly, we also treated Schwartz’s value of conformity as an extrinsic goal, given that conformity is also a construct in Kasser & Ryan’s model and that it falls on the extrinsic side of the circumplex model.

Figure 2 shows how we have translated Schwartz’s model of values onto Kasser & Ryan’s intrinsic-extrinsic dimension.

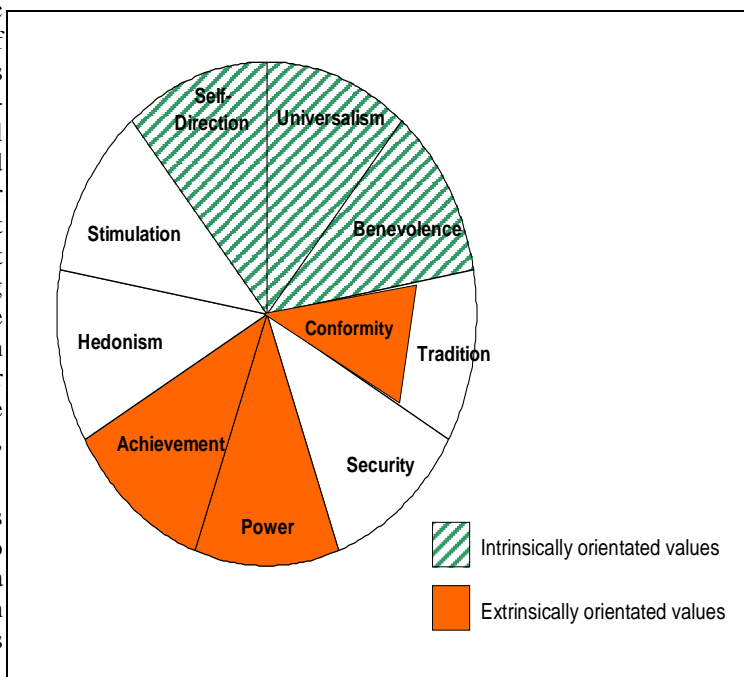


Figure 2: Schwartz model of values, with values used to operationalise intrinsic and extrinsic motivations highlighted (adapted from the ESS Edunet website: <http://essedunet.nsd.uib.no/cms/topics/1/1/2.html>)

The table below illustrates the operationalisation of extrinsic and intrinsic values. In both cases the overall score for the orientation was taken to be the unweighted average of the scores for each relevant Schwartz value, which in turn was taken to be the unweighted average of the scores for the questions purporting to tap that value.

Recognising the conflicting nature of values, as outlined in the circumplex model, we created a single intrinsic-extrinsic dimension by subtracting the mean for one orientation from the other. The more positive the final score, the more intrinsically orientated is an individual, and vice-versa.

Subjective well-being was operationalised as the answer to a single life satisfaction question, on a scale from 0-10:

“All things considered, how satisfied are you with your life as a whole nowadays? Please answer using this card, where 0 means extremely dissatisfied and 10 means extremely satisfied.”

Intrinsic	Extrinsic
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² www.europeansocialsurvey.org

³ The 16 countries are: Belgium, Bulgaria, Cyprus, Denmark, Finland, France, Germany, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

Schwartz Value	Question	Schwartz value	Question
Self-Direction	Important to think new ideas and being creative	Power	Important to be rich, have money and expensive things
	Important to make own decisions and be free		Important to get respect from others
Universalism	Important that people are treated equally and have equal opportunities	Achievement	Important to show abilities and be admired
	Important to understand different people		Important to be successful and that people recognise achievements
	Important to care for nature and environment	Conformity	Important to behave properly
Benevolence	Important to be loyal to friends and devote to people close		Important to do what is told and follow rules
	Important to help people and care for others well-being		

Income was assessed in the survey with a question allowing respondents to be put into one of twelve bands according to net household income (i.e. after tax).⁴ The household income for a given respondent was estimated to be the half-way point in the range covered by the income band within which they fell, defined in Euros. This figure was then converted into a purchasing power income based on the purchasing power parity (PPP) conversion factors for the respondent's country of residence.⁵

Analysis

Our main analysis (Method 1) was a two-stage OLS regression model, performed in SPSS v14.0, with life satisfaction as the dependent variable and income, extrinsic/intrinsic value orientation and an interaction term as independent variables.⁶ Given evidence that the relationship between income and life satisfaction within developed countries is typically logarithmic (e.g. Layard, Mayraz & Nickell, in press), income was entered as a natural logarithm term.⁷ Value orientation was entered as

⁴ Precise wording: "Using this card, if you add up the income from all sources, which letter describes your household's total net income? If you don't know the exact figure, please give an estimate. Use the part of the card that you know best: weekly, monthly or annual income."

⁵ Downloaded, on 09/05/08, from the World Bank's World Development Indicator website (<http://publications.worldbank.org/subscriptions/WDI>)

⁶ Appropriate weightings, as provided in the European Social Survey dataset were used throughout.

⁷ We did explore entering a linear term in addition to a logarithmic term for income. This did prove to be significant, but as a negative term. In other words, the function predicted that, at very high levels of income, life satisfaction would actually start to

decline with income. This was achieved using SPSS's visual bander function. We specified cutpoints so as to divide the respondents into 33% groups according to value orientation. Of course, given that many individuals would have the same scores on value orientations, including at the cutpoints themselves, this prevents the groups from being exactly equal in size.

calculated above (positive values indicating a more intrinsic orientation). The interaction term was a simple multiplication of the value orientation score and the logarithmic income function.

In the first stage of the regression analysis, we entered income and value orientation as predictive terms. In the second stage we used a stepwise methodology to test whether the interaction term would enter the equation, with a threshold of $p < 0.05$.

Using the beta values from this regression methodology to produce estimated life satisfaction scores, it is possible to predict the effect that changes in values would have across Europe overall, for different countries, and at different levels of income. Looking at it another way, one can predict how changes in income might affect people with different value orientations. One can also estimate the changes in values that, assuming a static model, would produce the same changes in life satisfaction as a given change in income. For example, what change in values would compensate for a 20% decrease in income?

In parallel with the regressions incorporating interaction terms, we also developed another approach for assessing the mediating effect of value orientation on the income-life satisfaction relationship (Method 2). Rather than creating a single regression model for all respondents, we divided them into three roughly equally-sized groups according to their scores on the intrinsic-extrinsic dimension: relatively intrinsic, relatively extrinsic, and medium.⁸ We performed separate regressions for both the relatively intrinsic and relatively extrinsic groups and used the estimated functions to plot best-fit lines, allowing a visual assessment of how the relationship between life satisfaction and income differed. This also allowed us to check whether the difference in life satisfaction between relatively intrinsically and extrinsically motivated individuals exists across the income spectrum, as would be expected by Kasser & Ryan (2001).

6. Results

Method 1

After entering income, the natural logarithm of income and the intrinsic-extrinsic dimension, both interaction terms still entered the regression with significant beta coefficients, as shown in the table below:

	Unstandar dised B	Standardis ed Beta	t- value	p
ln (income)	0.765	0.289	28.6	<0.001
value orientatio n	0.850	0.333	4.4	<0.001

decline with income.

⁸ This was achieved using SPSS's visual bander function. We specified cutpoints so as to divide the respondents into 33% groups according to value orientation. Of course, given that many individuals would have the same scores on value orientations, including at the cutpoints themselves, this prevents the groups from being exactly equal in size.

value	x			
ln(income)		-0.074	-0.293	-3.8
)				<0.001

All three terms proved to be highly significant, including the interaction term. The negative sign indicates that, for more intrinsically motivated individuals, increasing income has a milder impact on life satisfaction as predicted. In other words, values are important in determining life satisfaction, but the magnitude of the value dividend diminishes as income increases.

It should not be forgotten that there are many other factors that determine life satisfaction, and that this model does not have exceptional predictive power ($R^2 = 0.07$). However, the inclusion of the interaction term significantly improves the model (F of change = 14.4, $p < 0.001$).

Method 2

Dividing respondents into relatively extrinsically and relatively intrinsically motivated groups, allows us to visualise the interaction better and provides the further degree of freedom required to explore what happens to the value dividend across the income spectrum. As shown in Figure 3 the gap in life satisfaction between the more intrinsic group and the more extrinsic group is widest at low

motivated individuals are still marginally happier than those more extrinsically motivated. It would be hard to argue that this is because they have been unable to meet their extrinsic goals.⁹ As shown in Figure 4, across the income range taken in the survey there is no point at which the value-dividend disappears altogether (at about €150,000 per year PPP it drops to below 0.1 on the life satisfaction scale).

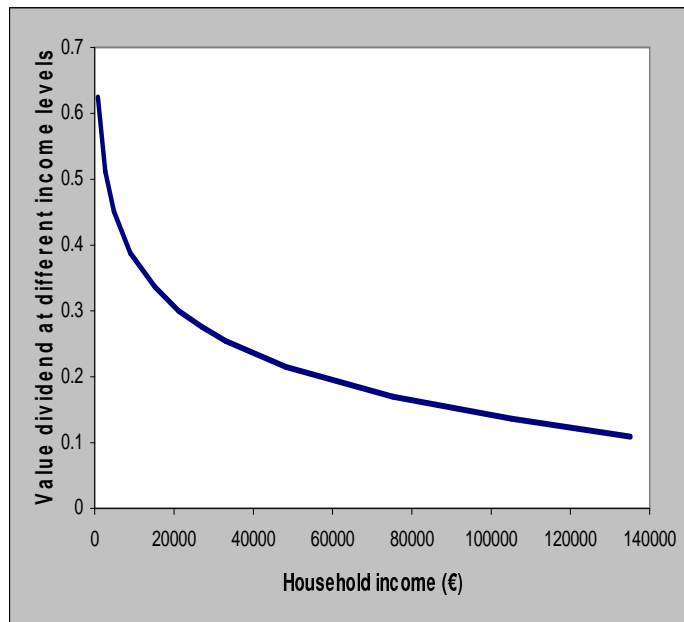


Figure 4: Estimated value dividend across income.

It should be acknowledged that these effects are not huge at any income level. Nevertheless, given the difficulty in predicting life satisfaction with *any* independent variable, they are noteworthy.

Estimated effects at country level

The regression in Method 1 allowed us to project what might happen to a given individual's well-being should their value orientation shift by a fixed amount. Using the regression function, we calculated projected life satisfaction scores for each respondent should value orientation shift towards the intrinsic by 2 standard deviations. We then explored what this shift would do for the distribution of life satisfaction within each country – specifically the percentage of individuals with a life satisfaction of 5 or lower. Figure 5 shows the results of this analysis.

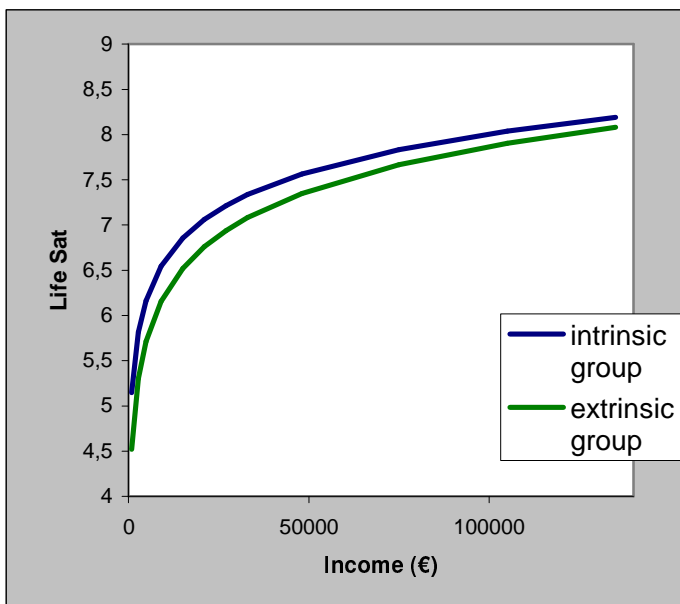


Figure 3: Separate income – life satisfaction functions for relatively intrinsically motivated and relatively extrinsically motivated groups. incomes (0.51 at a household income of €2700 per year PPP), but reduces with higher incomes (0.22 at a household income of €48,000 per year PPP). The distinction between the two groups is supported by the lower R value for the predictive regression for the intrinsic group compared to the extrinsic group (R^2 of 0.046 vs. 0.079), indicating that income is simply a poorer predictor of life satisfaction for that group.

Importantly, the two curves do not meet within the income range studied, supporting the claim that intrinsic values remain inherently more positive for subjective well-being than extrinsic across the income spectrum. It seems that, even at incomes of over €100,000 per year, intrinsically

⁹ It may well be that whilst they may have met some extrinsic goals, this is never sufficient. Anecdotal evidence suggests that extremely wealthy individuals seem to constantly set their targets higher as they attain greater wealth (Kasser, 2003).

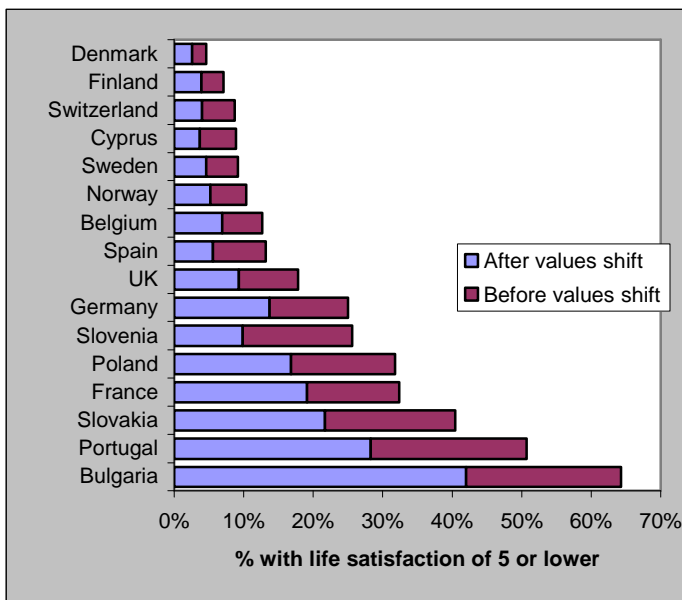


Figure 5: Projected reduction in proportions of population with low life satisfaction following a 2 standard deviation shift towards intrinsic values.

Unsurprisingly, in absolute terms, this chart predicts larger dividends of a values shift in countries where mean PPP income is lower. However in terms of the proportion of individuals moved beyond life satisfaction levels of 5 or lower, the benefits are quite widely spread. Interestingly, this quite substantial shift at the lower end of the life satisfaction distribution is roughly equivalent to that which would be predicted by a universal increase of annual household income of €5000 PPP.

Estimated effect across Europe

At the mean PPP annual household income for the countries in the ESS dataset (around €27,000), a 1 standard deviation change towards intrinsic values corresponds with the increase in life satisfaction seen with a 12.5% increase in income (to approximately €30,500). Looking the other way, with de-growth in mind, a 20% drop in income (from €27,000 to €22,000) would theoretically be compensated for by a shift towards intrinsic values of 1.6 standard deviations.

6. Discussion and conclusions

This study represents the first attempt to replicate the well-evidenced relationship between values and life satisfaction using representative national samples. More importantly, it demonstrates that the interaction between relatively intrinsic/extrinsic value orientations and income is significant for subjective well-being, such that income plays a more important role for individuals with more extrinsic value orientations. This supports the finding in Rojas (2007) that the regression equation relating income to life satisfaction has more predictive power for people classified as having outer-facing ‘philosophies’ of happiness, than those having inner-facing philosophies. However, it does not deny that values play a role in determining well-being across the income spectrum.

The regression models we have developed allow one to quantify the impact values have on life satisfaction. It must be acknowledged that the impact is typically marginal; however, it is statistically significant and not small compared to that of income. For example, a shift in values of 1 standard deviation, at mean income, equates to a change in income of 12.5%. Similarly, a highly extrinsically orientated individual (2 standard deviations more extrinsic than the mean) would require a net household income of over €28,000 per year to achieve an acceptable level of life satisfaction of 7.0. On the other hand, a highly intrinsically orientated individual (2 standard deviations more *intrinsic* than the mean) would achieve this level of life satisfaction at €16,000 per year. Lastly, such an extrinsically motivated individual, suffering a substantial income drop (from €75,000 to €21,000 per year) would suffer a life satisfaction drop of 1.04, whereas an intrinsically motivated individual suffering the same income drop would only suffer a life satisfaction drop of 0.70.

It is important to recognise that the projections we have performed here are based on a single cross-section rather than on longitudinal panel data. As result, our model should be regarded as static rather than dynamic, in the sense that it can not take account of the effects of *transition* from one level of income or values to another. Nor does it attempt to model the causal interactions between values and income. Nonetheless, these findings imply that decreases in real income likely to be associated with de-growth could in principle be compensated for by changes in values, so long as any negative transition effects are not permanent and that it proves possible in practice for intrinsic values to increase even as real incomes decline.

From the perspective of overcoming the psychological barrier to de-growth represented by fears of loss to well-being from decreasing income, these findings suggest that consideration of values may be an important component. Despite the static nature of the model, we feel confident in arguing that instigating a widespread shift in value orientations would at least prove helpful in increasing the acceptability of the de-growth argument and, indeed, in weakening the perceived link between income and life satisfaction that is prevalent in Western society. Precisely how such a shift in values might be facilitated is another matter. Research by Matthey & Dwenger (2008) and Vohs, Mead and Goode (2006) suggests that individuals’ motivations and level of aspirations of can be altered in the short-term by simple priming. However, transferring this effect from the laboratory to real life is another matter. We call on researchers interested in de-growth to commit to a greater understanding of the sociological and psychological processes involved in transforming values.

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