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Do People Seek to Maximize Their Subjective Well-Being?

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Abstract

In a new survey we ask respondents, after a standard Subjective Well-Being (SWB) question, if they can think of changes in their lives that would improve their SWB score. If the SWB score is just one argument among others in the respondents' goals in life, they should easily find ways to improve it, at the expense of other dimensions they care about. Our results suggest that close to 90% of the respondents actually seek to maximize their SWB. The life satisfaction question appears the best contender as the "maximand" in the contest, before the ladder-of-life question and felt happiness. Among the other goals that people pursue and for which they are willing to sacrifice some of their SWB, the prominent appear to be about their relatives and about their future self.

1 Introduction

There is a growing interest in economics and in policy circles for subjective well-being (SWB) surveys which elicit people's feelings and sense of satisfaction with their life (see, e.g., Kahneman et al. 2004, Stiglitz et al. 2009, and the newly created World Happiness Report). There is much hope that such data can provide new insights into well-being, but they have also generated controversy. While some specialists advocate that they provide a reliable measure of utility and should be used directly by policy-makers (Layard 2005, Dolan and Fujiwara 2016), others consider that these data are largely irrelevant for policy (e.g., Nussbaum 2008), or may be useful as a proxy for objective measures of well-being (Deaton 2010), or may provide ordinal information about people's preferences without being comparable across time and space (Fleurbaey and Blanchet 2013).

These controversies bear on many different issues, such as reliability, multidimensionality, comparability. In this paper we focus on one particular question, namely, whether SWB data track what respondents care about in their lives. In the literature, subjective well-being is treated by some authors (Rayo and Becker 2007, Benjamin et al. 2012) as not more than an argument in individuals' utility function, along many other arguments. Other authors (Layard et al. 2008, Decancq et al. 2015), on the contrary, postulate that the SWB answers provided in the questionnaires are consistent with people's preferences (Layard et al. even assume they are cardinally congruent with people's utility).

One complication is that there are different SWB questions, some being about satisfaction with life, others being about emotions and feelings. It is possible, for instance, that emotions are just one aspect of life for most people whereas their satisfaction with life is an all-encompassing judgment. Therefore, in addition to examining whether SWB data capture people's values and preferences, we also explore if some SWB questions fare better than others in this respect. We study three classical questions: a standard satisfaction question (from the World Values Survey), the ladder-of-life question (from the Gallup World Poll), and a standard set of questions about emotions in the past week (a subset of the Center for Epidemiologic Studies Depression scale).

In a new survey, we ask respondents, after a standard SWB question, if they can think of changes in their lives that would improve their SWB score. The reasoning behind this question is the following. If the SWB score is just one argument among others in the respondents' goals in life, they should easily find ways to improve it, at the expense of other dimensions they care about. Likewise, a consumer can easily increase his expenses on food, but at the cost of reducing expenses on other items. But it is impossible for a consumer to increase his overall satisfaction with the full consumption bundle. We therefore think that if a SWB question is such that respondents can hardly find ways to raise their score, it is because they already seek to "maximize" it, meaning that the SWB is a good representation of their goals in life. And these results can be compared across SWB questions, pointing to the ones which are closer to people's goals.

Obviously, such results do not tell us if people really maximize their SWB. They can make mistakes and have imperfect information about what is really good for them. But at least the results give an indication about what people seek to maximize, or believe that they maximize. Moreover, we ask them to tell us what sort of change they can think of, what obstacles prevent them from implementing these changes, and what other values they have in life which conflict with pursuing their SWB.

Our main results are the following. First of all, about 40% of the respondents can think of easy changes that would raise their SWB. Therefore only a small majority think that they currently maximize their SWB. However, only about 10-15% would refrain from implementing these changes because they pursue other goals, suggesting that close to 90% of the respondents actually seek to maximize their SWB.

The second main result is that the life satisfaction question appears the best contender as the "maximand" in the contest, before the ladder-of-life and the emotion question. The fact that the emotion question comes last is well in line with the idea that emotions are an important part of life but not everything, whereas the most general "satisfaction with life" question is the most promising in terms of encouraging respondents to give a global assessment of their situation.

The third main result is that among the other goals that people pursue and for which they are willing to sacrifice some of their SWB, the prominent appear to be about their relatives (mostly their family) and about their future self (especially for young respondents). In other words, one could conjecture that people pursue goals that include the well-being of others and a long-term vision of their personal well-being. If that is the case, it does not necessarily disqualify SWB questions provided that the analyst uses them for the evaluation of personal situations (as opposed to family situations) in a time-slice perspective (rather than a lifetime perspective).

We also observe interesting differences between groups differing by age, education, employment, and religion. In a nutshell, SWB is more relevant for the elderly than for young and middle-aged respondents who "sacrifice" part of their SWB to a great extent for their future self and for family members.And emotions are less important than satisfaction with life for middle-aged, educated, employed, and religious respondents, but similarly important as satisfaction for the other groups.

Our findings, though relying on a different methodology, are well in line with those of Benjamin et al. (2012, 2014), who also study if respondents maximize their SWB in their choices. In the first paper, they confront respondents with hypothetical choices and compare what respondents think would be better for their SWB with what respondents would actually choose, and they find that the congruence between the two kinds of questions is not perfect but generally high, with satisfaction faring better than emotions. In the second paper, they compare actual choices of residency made by medical students with what they predicted would be better for their SWB, and again find a significant but small discrepancy, which is often explained by considerations relative to the respondent's partner. Our approach is closer to the latter in the sense that we deal with actual rather than hypothetical situations. However, instead of focusing on a very specific choice, we shed light on the general assessment respondents make about whether they do succeed in maximizing their SWB, as well as on the nature of the changes they would like to make to improve their SWB, and the other values they pursue in life in general.

The paper is structured as follows. The next section offers some clarifications about our theoretical framework. The survey is described in section 3, and the results are presented in section 4. We discuss the meaning and the implications of our results for SWB studies and for public policy in section 5.

2 Theoretical framework

Suppose that a respondent i has an objective function in life that contains many arguments:

$$U_i(a, b, \dots).$$

When asked a SWB question, the respondent will use the same arguments but possibly in a different way, as well as, perhaps, other considerations:

$$S_i(a, b, \dots, x, y, \dots).$$

We say that SWB tracks the respondents goals in life ordinally if there is an increasing function f_i such that

$$S_i(a, b, \dots, x, y, \dots) = f_i\big(U_i(a, b, \dots)\big),$$

and that it tracks the respondent's utility cardinally if there are coefficients $\alpha_i > 0, \beta_i$ such that

$$S_i(a, b, \dots, x, y, \dots) = \alpha_i U_i(a, b, \dots) + \beta_i.$$

We do not think that the model that is adopted explicitly in Rayo and Becker (2007) and implicitly in Benjamin et al. (2012), and in which S_i is an argument of U_i, is satisfactory. It is unlikely that the specific answer to a particular SWB question is something that people care about spontaneously. They form their SWB score on the spot, when confronted with the questionnaire. It is therefore more realistic and more general to consider that this is a new function, in which they use the elements that matter to them in their life, possibly with new weights, and possibly among other ingredients. It is only for emotions that it is more plausible to consider them as arguments of U_i, but even then, given the multiplicity of emotions, it is unlikely that the synthetic emotional scores constructed by analysts coincide with what people care about in their own emotions.

In this paper, we are only interested in the ordinal question. Notice that, for S_i to ordinally track U_i, these two functions must generally have the same arguments. But when dealing with a given person at different moments in time (as in a panel survey), ordinal tracking is still possible when the arguments differ between the two functions, provided that the arguments that do not belong to both functions do not change over the time of the survey. Of course, the survey is then uninformative about the role of these stable arguments in any of these functions.

When dealing with cross-section data, using SWB data to ordinally track U_i requires many assumptions. First, the various respondents must have ordinally equivalent U_i functions, and they must be transformed by the f_i functions in a way that produces the same S_i function for all of them. This is a tall order. It is in particular likely that, even if people have similar U_i functions, they form their SWB answers in different ways because they use heterogeneous references. In this case, trying to retrieve the ordering represented by their common U_i from their heterogeneous S_i functions is hard in absence of information about their various "scaling functions" f_i.

These remarks show that, even if our results suggest that most respondents see their SWB as a faithful reflection of how their goals are achieved, this does not imply that SWB data can be used easily to retrieve information about individuals' goals and preferences. Moreover, even if SWB tracks people's preferences and an empirical method makes it possible to estimate the ordinal ranking underlying the various U_i functions for different socio-demographic subgroups, there is no guarantee that SWB is comparable across subgroups in the same way as U_i is (assuming that U_i is the correct input for a social welfare function). These issues will be examined again in the last section.

Our survey explores if each respondent *believes* that the way she pursues her goals is in line with her SWB. If the answer is positive, this is tantamount to saying that the respondent believes that SWB ordinally tracks her objectives.

Consider a respondent who maximizes under constraint:

$$\max U_i(a, b, \ldots) \text{ such that } (a, b, \ldots) \in B_i,$$

where B_i is the set representing what is possible for her.

If S_i is ordinally equivalent to U_i, then the choice of $(a, b, \ldots)$ made by i also maximizes S_i, and the respondent cannot think of ways to improve S_i. In contrast, if it is possible to change $(a, b, \ldots)$ under the constraints to improve S_i, this implies that S_i is not ordinally equivalent to U_i, unless the respondent had some lapse that prevented her from doing what she wanted (or just found out about new possibilities and did not have the time to adjust). We can be sure that S_i is not ordinally equivalent to U_i only if the respondent does not want to implement such changes because this would conflict with her true goals (as she perceives them, perhaps mistakenly of course).

When the respondent cannot think of ways to improve SWB, it does not necessarily imply that SWB ordinally tracks her goals, because another possible reason is that the optimum choice of $(a, b, \ldots)$ for S_i happens to coincide with the optimum choice for U_i even if the two functions are ordinally different. This means that one should interpret the results of our survey based on possible changes as providing only an upper bound on the fraction of respondents for which ordinal tracking occurs.

It may also be, of course, that the respondent cannot find changes that would raise her SWB because she lacks imagination or does not consider the issue with sufficient care. This is why we took great pains in the survey to encourage respondents to think hard about possible changes in their lives. As we will explain in the next section, in the end a large majority of respondents could think of changes although, eventually, few of these changes were really feasible and acceptable to them.

There is a specific complication in our survey when we deal with emotions, which appear in our survey as a list (feeling happy, depressed, sad, enjoying life). We do not construct a synthetic score in the questionnaire itself, and only ask respondents if they could improve their emotions in at least one dimension without deteriorating other dimensions. It may of course happen that one of these emotions tracks U_i but not the others. If respondents can think of some changes that would improve some of these emotional scores (but not the one that tracks U_i) and refuse to implement them because of other objectives, this still means that any synthetic score based on all these emotions (with positive weight for each of them) would fail to track U_i ordinally.

3 Survey

Our evidence is based on an online survey which we conducted in May 2014 using a sample provided by Survey Sampling Incorporated (SSI). The sample is selected to be representative of the US population and respondents are incentivized by a quarterly lottery provided by SSI. The overall idea of the survey is to explore whether people can think of possible changes in their lives that would improve their SWB, and would not conflict with the main goals in life.

At the beginning of the survey, respondents are asked to rate their SWB. In order to compare different alternative SWB measures, respondents are randomly assigned to one of the following three SWB questions.

1. Life satisfaction:

 "*All things considered, how satisfied are you with your life as a whole these days?Please give a number between 0 (extremely dissatisfied) and 10 (extremely satisfied).*"

The life satisfaction question is a standard SWB measure that is used in many surveys (including SOEP, World Value Survey, [add more here]).

2. Life ladder ranking:

"Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time? Please give a number between 0 (bottom of the ladder) and 10 (top of the ladder)"

The life ladder ranking has been developed by Hadley Cantril and seeks an objective self-evaluation of people's living circumstances. It is most prominently used in the Gallup World Poll.

3. Felt happiness / recent emotions:

"Would you say that much of the past week, you
- were happy? (yes/no)
- enjoyed life? (yes/no)
- felt depressed? (yes/no)
- felt sad? (yes/no)"

The four questions on felt happiness / recent emotions (in the following referred to as "happiness") are a subset of the Center for Epidemiologic Studies Depression (CES-D) scale. The original CES-D scale consists of 20 items designed to assess the level of depressive symptomatology in epidemiologic studies of various populations. The four questions we include provide a shortened version of the CES-D, following other surveys such as the Health and Retirement Study (HRS).

After the respondents answer the respective SWB question they are asked whether they can think of changes in their life that they *"could implement now"* and that would raise their SWB rating. Regardless of their answer to that question, respondents are then presented with a list of different life domains (such as their health, family or job; see the Table 3 for the detailed list) and asked to think again of any feasible changes that would improve their SWB rating.Respondents who state that there are possible changes in either question are asked to describe these changes in open-ended answers.If respondents do not come up with possible changes in any of the two questions they are directed to the end of the survey where they are asked about their socio-economic characteristics*.*

For those respondents who can think of feasible changes we ask whether at least some of these changes are indeed easy to implement. The initial question about changesthat "*could [be implemented]now"* already implies that changes should be easy to implement but this question allows to double check that people actually think of feasible changes rather than listing constraints that they face in their life. We further ask respondents to describe the feasible changes they are having in mind, which allows us to objectively assess the feasibility of the envisioned changes.

If respondents state that at least some of the SWB-improving changes are easy to implement we continue to ask why they have not implemented these changes already. One option people can choose is that they wanted to implement these changes but until recently they could not. The second option is that other goals are more importantwhich elicits that respondents are willingly not maximizing their SWB. Respondents choosing this second option are then asked to describe these goals and categorize the life domains these goals relate to. We further objectively categorize goals based on respondents' description.

In the last section of the survey, all respondents are asked about their socio-economic characteristics (such as sex, age, education, employment status and religiosity). Finally, respondents are asked to add any comments they wanted on the survey.

The main purpose of this survey is to test the hypothesis that people seek to maximize their SWB. This hypothesis is rejected if respondents can think of possible changes in their lives which would increase their SWB but which are not implemented because other goals are more important. Consequently, we would reject too little if respondents do not put enough effort to imagine possible changes.We would reject too often, on the other hand, if respondents come up with changes which actually could not be implemented (i.e. confusing preferences with constraints).

The survey is designed to push respondents to come up with as many potential SWB-improving changes as possible while ensuring that these changes do not reflect constraints but can actually be implemented. Respondents are asked twice about possible changes and they are provided a list of life domains these changes may relate to. At the same time, it is not only emphasized that changes should be implementable but we explicitly ask respondents who come up with possible changes whether at least some changes are easy to implement. Furthermore, we ask respondents to describe possible changes in open-ended answers which we then objectively categorize according to their feasibility. This categorization allows us to compare the objective feasibility with respondents' own assessment of whether changes are possible to implement.

4 Results

Our sample consists of 2,632 complete responses. Table 1 shows the means of socio-demographic variables in column (1) and in column (2) the respective means from the 2014 Current Population Survey, a representative survey of the US population. Compared to the overall population, our sample isslightly older, more likely to be retired or unemployed, more educated and more likely to be female while the fraction of white respondents is relatively similar. Table 2 shows summary statistics for the three SWB measures. The random assignment of respondents to different SWB measures results in fairly balanced subsamples, with 864 to 893 respondents in each group.

Figure 1 shows the fraction of respondents who can think of changes in their life that would improve their SWB rating. When first asked about it, 53 to 67 percent can think of some changes. This share increases to 65 to 78 percent when we provide respondents with different life domains and ask them again to list changes. Interestingly the share of respondents who can think of changes is significantly smaller for the happiness treatment than for the life satisfaction and the ladder treatment. One potential explanation is that people put less effort to come up with potential changes in the happiness treatment because responding to the happiness questions at the beginning of the survey takes longer than for the other two SWB measures.Another possible issue in the happiness treatment is greater complexity. Indeed, multiple dimensions in the space of feelings may make it seem more complicated for the respondent to think of changes in life that would be good for several dimensions. Our question, to avoid grammatical clumsiness, referred to changes that "would make [the respondent] more often feel happy and enjoy life, or feel less often depressed and sad", therefore joining together the positive feelings in one cluster and the negative feelings in another, but leaving it possible for a change to improve things for only one of these clusters.

The third group of bars in Figure 1 shows the fraction of people stating that at least some of the changes they are thinking about are actually easy to implement. Our initial question about potential SWB-improving changes already asked explicitly for changes that the respondent could

"implement now". However, we then induce respondents to come up with as many changes as possible. That is why it is important to check whether at least some of these changes are actually implementable. As Figure 1 shows the fraction of people who state that at least some changes are easy to implement is 34 to 39 percent -- much lower than the fraction of people who can think of any changes, and not significantly different across SWB measures. This suggests that we have successfully induced respondents to come up with as many changes as possible so that in many cases they came up with changes that are not implementable. Moreover, that is also true for the happiness treatment with a gap of more than 25 percentage points between the fraction of respondents with potential changes and the fraction with at least some easy changes. Hence, even if respondents in the happiness treatment put less effort or had a harder time to come up with potential changes than for the other SWB measures they are still strongly "overshooting", coming up with changes that are not easy to implement almost half of the time.

We also ask respondents to describe the potential changes in their own words. This allows us to objectively assess whether these changes are possible or whether they cannot be implemented because they reflect constraints in the respondent's life. The fraction of objectively coded possible changes is shown in the fourth group in Figure 1 and it is not significantly different from respondents' subjective assessment of whether changes are easy to implement. This shows that even though people "overshoot" and come up with changes that are not feasible in some cases they understand what we are asking for when we double-check if changes can be implemented.

In what kind of life domains do people envision possible changes that would increase their SWB? To answer this question we categorize respondents' open-ended description of possible changes and divide them in different categories (Table 3). The by far most common domain is health. About 42 percent of envisioned feasible SWB-enhancing changes relate to health issues, such as exercising more. The second most common category, with 28 percent of all changes relating to it (a given change might relate to more than one category), is people's job, followed by finances, family, hobbies, personal development and the partner. Interestingly, not a single respondent thinks that changes related to morality could improve her or his SWB, though this may be due to the fact that it would imply admitting some immoral deeds.

The central question of our analysis is, why dopeople not implement those changes that are feasible and that would increase their SWB. One possibility is that they have not been feasible until recently, e.g, due to budget constraints that only got relaxed recently or due to information frictions. On the other hand, if the SWB score is just one argument among others in the respondents' goals in life they might intentionally refrain from implementing these changes because they care more about other goals. As Table 4 shows, about two thirds of the 36 percent who can think of SWB-enhancing changes that are feasible (25 percent of the overall sample) state that they actually wanted to implement the changes but could not until recently. The leading restrictions are money and time, followed by self-discipline issues such that the respondents "couldn't stick to it" or "haven't cared enough about it". Only one third of those with possible changes, or about 12 percent in the overall sample, state that other goals are more important. This is the group of respondents who apparently do not maximize SWB (in the following referred to as *non-maximizers*). These people could find ways to improve their SWB, but they don't choose these ways because they would come at the expense of other dimensions of their life they care about. The other way around, these resultssuggestthat close to 90% of the respondents actually seek to maximize their SWB.

Figure 2 shows the fraction of non-maximizersby SWB measure. For comparability the figure also reproduces the fractions of respondents with any SWB-enhancing change and with feasible changes as shown in Figure 1. The fraction of non-maximizers is largest for the happiness measure (13.3 percent), slightly smaller for the ladder (11.7 percent) and significantly smaller for life satisfaction (10.6 percent). In other words, respondents are more likely to seek the maximization of life satisfaction than the maximization of happiness. This ranking of SWB measures is robust to different coding specifications and observable across most subgroups that we analyze in the following.

In Figure 3 we show how alternative ways to specify the group of respondents with feasible changes affects the fraction of non-maximizers across measures. The first group of bars shows the baseline specification for which we include all respondents who subjectively state that at least some changes are feasible. The second group of bars shows a specification for which we reassign those with subjectively feasible but objectively unfeasible changes to the group without feasible changes. In other words, if a respondent states that she could increase her SWB with a life change which in the open-ended description clearly classifies as unfeasible we assign that respondent to the group of SWB maximizers. In the third group of bars we exclude all cases with conflicting subjective and objective assessments of the feasibility of changes. All three specifications result in the same ordering of SWB measures. The difference between life satisfaction and happiness is significant at the 10 percent level in all cases. Notice that the fraction of non-maximizers is largest in the baseline specification, for all three SWB measures. In turn, this specification provides us with the most conservative estimate of the share of respondents who seek to maximize SWB.

Which are the kind of goals that are so important to non-maximizers that they sacrifice part of their SWB to achieve them? Table 5 shows that a third of SWB-dominating goals mentioned by non-maximizers are related to their family relations. Appendix Table A1 provides a list of open-ended descriptions which respondents came up with to describe these family related goals. It shows that these goals cover all parts of the family: grandchildren, children, spouse, parents, and parents-in-law. Interestingly, in some cases these descriptions explicitly mention the SWB of other family members. In these cases respondents sacrifice their own SWB in order to increase the SWB of those they care about.

The second and third most common life domain SWB-dominating goals relate to are respondents' jobs and their financial situation (Table 5). Each of them is mentioned in about a fifth of all cases. Goals related to respondents' health are mentioned only in 7 percent of the cases, even though health is a central life domain. One explanation might be that health is an important component of people's SWB so that goals relating to respondents' health would not come at the costs of their SWB. In line with this idea, Table 3 shows that health is the leading life domain where respondents can envision feasible changes that would increase their SWB.For a similar reason very few SWB-dominating goals relate to leisure and hobbies (1.1 percent, Table 5) even though this domain is mentioned in 15.4 percent of cases when people describe feasible SWB-enhancing life changes (Table 3). Leisure and hobbies are usually thought of as directly feeding intoSWB. It is more surprising that similarly few SWB-dominating goals relate to religion, morality, activism and volunteering. These are domains one might expect people to sacrifice part of their SWB for. One explanation could be that respondents gain sufficient gratification from activities related to these life domains so that sacrifices of time or money for these goals are fully compensated in respect to their

effects on SWB. Appendix Table A2 shows in detail which feasible SWB-enhancing changes are dominated by which goals. Goals related to family, job and financial situation appear to block changes in the various domains in similar ways.

How does the fraction of non-maximizers vary across different subgroups? Figure 4 shows that the pattern across SWB measures is very similar across gender. There are no significant differences between men and women and the ranking within gender is the same. The same is not true if we split the sample by age groups. The fraction of non-maximizers strongly decreases with age. It is around 16 percent among those of age 18-39, 10 to 15 percent for those aged 40-59, and a mere 5.6 to 8 percent in the oldest age group (60 to 89).

Table 6 shows that respondents in the youngest age group are most likely to sacrifice their SWB for family related issues (about a third among non-maximizers or 5 percent in the overall sample), followed by job and financial issues. Personal development ranks fourth. Since these respondents are in a phase of their lives in which they invest into their careers and their personal development while starting their own family, this ordering is not surprising. These findings suggestthat among the goals that young adults pursue and for which they are willing to sacrifice some of their SWB, the most prominent appear to be about their family and about their future self.

For those of age 40-59 family issues become if anything more important, as in this age group people might not only have to take care of their children but also of their parents. The fraction mentioning job issues and personal development drops by one third and two thirds, respectively, perhaps because at that age respondents' investments in their careers have been largely completed. Financial issues remain similarly important as a source of goals for which respondents might sacrifice their SWB.

Among the oldest group, those of age 60 and above, the share of respondents who sacrifice SWB for family relations vanishes almost entirely. At that age your own parents might have already died while your children are fully independent. To the extent that grandparents might take care of their grand children this seems not to come at a cost to their SWB. Similarly, their job and personal development vanishes as a source of SWB-dominating goals and only the financial situation remains a life domain of significant relevance. This finding might provide an explanation for the age U-shape in wellbeing (Schwandt 2015). The elderly might have relatively high SWB because they have few obligations or opportunities to sacrifice their SWB for their family or for their future self.

Figures 6 and 7 show the shares of non-maximizers across education and income. Those with higher education and higher income are more likely to sacrifice part of their SWB for other goals, but the gap is largest for happiness and not significantly different for life satisfaction. Those with more human capital might have more opportunities to give up their own wellbeing for their relatives or to invest in their future self, but this comes mostly at the expense of happiness while it seems to be mostly internalized in life satisfaction. This suggests life satisfaction might capture better people's goals in particular when comparing different socio-economic groups.

Figure 8 divides the sample by employment status. The pattern across SWB measures among the employed is similar to those with college education or high incomes in the previous figures, while it is dramatically shifted downwards for the relatively small subsample of unemployed. In this subgroup on average only about 7.5 percent do not maximize their SWB, an average level that is

similarly low as in the oldest age group in Figure 5. For both the elderly and the unemployed, goals are in accordance with SWB maximization. However, while the elderly do not have the opportunity to sacrifice their SWB for family members or their future self, the unemployed lack the means to accomplish goals that would either increase their own SWB or that of their relatives. Table 7 shows that the fraction of respondents sacrificing their SWB for their family is indeed particularly low among the unemployed and it is the highest among those with high income. The fraction mentioning personal development as a SWB-dominating goal is relatively high among the unemployed, unsurprisingly, as they are likely to suffer from unpleasant time and effort investments in job search.

5 Discussion

Our results can be summarized as follows.

1. It is not difficult to make people think of changes that would improve their SWB, but most of these changes are not really feasible. In the end, only about 35-40% of the sample can think of changes that are feasible. This proportion is similar across SWB measures (life satisfaction, ladder, happiness).
2. Even less, around 10-13% of the sample, would actually refuse to implement those feasible changes on the grounds that they have other goals in life that conflict with maximizing their SWB. This means that for close to 90% of the respondents, either they (believe they) do maximize their SWB, or they happen to follow goals that put them in a situation in which their SWB appears maximized to them.
3. When people invoke other goals, they generally relate either to family and relatives, for which people are willing to sacrifice their personal SWB, or to the future, for which people are willing to invest.
4. There are no significant gender differences, but age groups and unemployed people exhibit specific patterns. Young and middle-age respondents have more family responsibilities and future-oriented plans, whereas elderly people seem to have greater leisure to maximize their own SWB –a phenomenon which might contribute to explaining the greater declared SWB of elderly people in many surveys. Unemployed respondents also seem to be more like SWB maximizers, which can perhaps be explained in several ways: a) they may have less opportunities to invest for others or their own future; b) their reduced self-esteem may reduce their ability to look beyond their present personal situation; c) a reverse causation may induce those who strive for their families and their future self to be less vulnerable to unemployment.
5. Education and income groups show no significant differences for the satisfaction and ladder answers, but do differ with respect to happiness, with the more advantaged groups being more willing to sacrifice their happiness to other goals.
6. When asked directly if their goals in life are in line with their SWB, people see a greater congruence than in the indirect questioning involving changes in life. They even see a greater congruence with happiness than with satisfaction or ladder. This result remains true across education and income groups (true? I am guessing), which suggests that many people are deluding themselves about the positive association between their choices in life and their emotional well-being.

Our results, overall, suggest that SWB is indeed maximized by most people in the population, with important exceptions: some of the young and middle-aged sacrifice their SWB for the sake of their family and their own future, and some of the "achievers" sacrifice their emotional well-being. It is noteworthy that, even for the respondents who have other goals than their SWB, these other goals have mostly to do with the well-being of their relatives or their own future well-being. If that is the case, even the non-maximizers in our survey do not undermine the relevance of SWB as a relevant indicator of present, personal well-being.

Our survey suffers from limitations. First, the relatively small size of the sample may have hidden some additional significant differences between socio-demographic groups. Second, the survey strongly relies on people's own perceptions of their situation and the possible changes they could make, and therefore is more about what people believe than about whether they actually maximize their SWB. However, our indirect strategy appears to go deeper than a simple direct question.

For applications to public policy, it is worth emphasizing that the usefulness of SWB questions depends more on whether people believe the SWB question is close to their goals in life than whether they do actually maximize it. Indeed, if people mistakenly pursue lifestyles that actually harm their SWB, the relevance of the SWB measure is not undermined. The challenge is then only to help people figure out what actions and lifestyles are good for their SWB, not to push them toward the actual goal that they mistakenly pursue. To illustrate this point, consider the problem of consumerism. Suppose that people believe that the consumerist lifestyle is good for their SWB, which they want to maximize, whereas it is not. One can reconcile their goals and their actions either by showing them the deleterious SWB consequences of consumerism, or by converting them away from SWB and toward more materialistic consumeristic goals. Obviously, the former appears more respectful of their true goals.

As explained in the beginning of this paper, the fact that life satisfaction questions appear to track present, personal well-being for most respondents (even many of the "non-maximizers") does not imply that the satisfaction responses can be used immediately like "utility" indicators. Especially, interpersonal comparisons may require additional filtering referring to people's objective situation. Even the use of satisfaction data in regressions seeking to estimate the determinants of SWB relies on some degree of interpersonal comparability. Our paper is not meant to solve this issue. Our more limited goal was to test if SWB questions are close to people's goals in life. For satisfaction questions, at least, the results seem reassuring.

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Tables and Figures

Figure 1: Fraction of respondents who can think of changes to improve SWB.
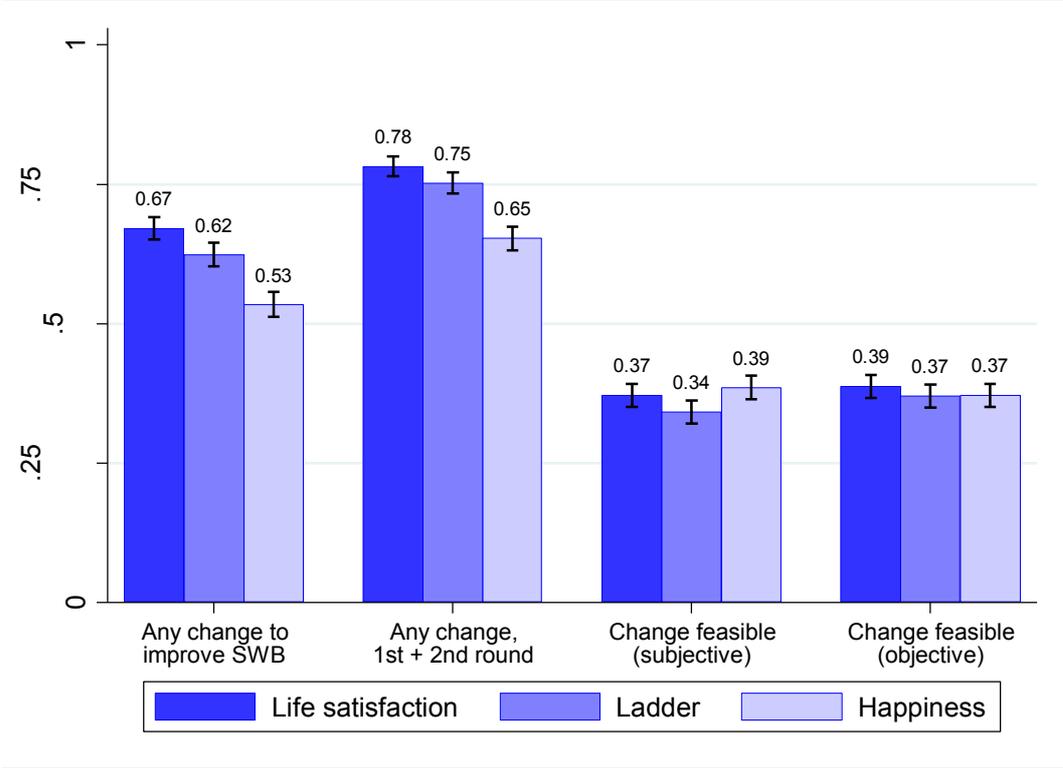
Notes: N[Life satisfaction]=893; N[Ladder]=875; N[Happiness]=864.90% confidence intervals are displayed.

Figure 2: Fraction of respondents with any SWB-improving changes, with possible changes and with other goals that are more important than SWB.
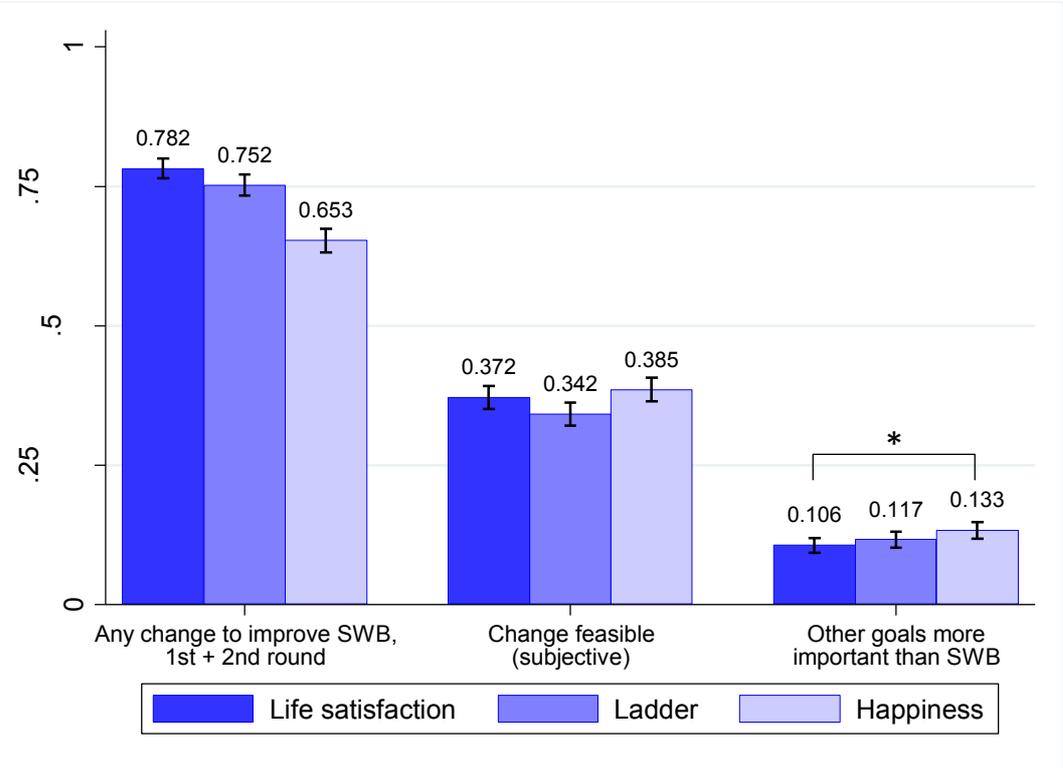
Notes: N[Life satisfaction]=893; N[Ladder]=875; N[Happiness]=864. The first two groups of bar graphs replicate groups 2 and 4 from the previous graph. 90% confidence intervals are displayed. (*) fractions are significantly different with p<.1.

Figure 3: Fraction of non-maximizers, alternative coding of changes which opposing feasibility in the subjective and the objective feasibility assessment.
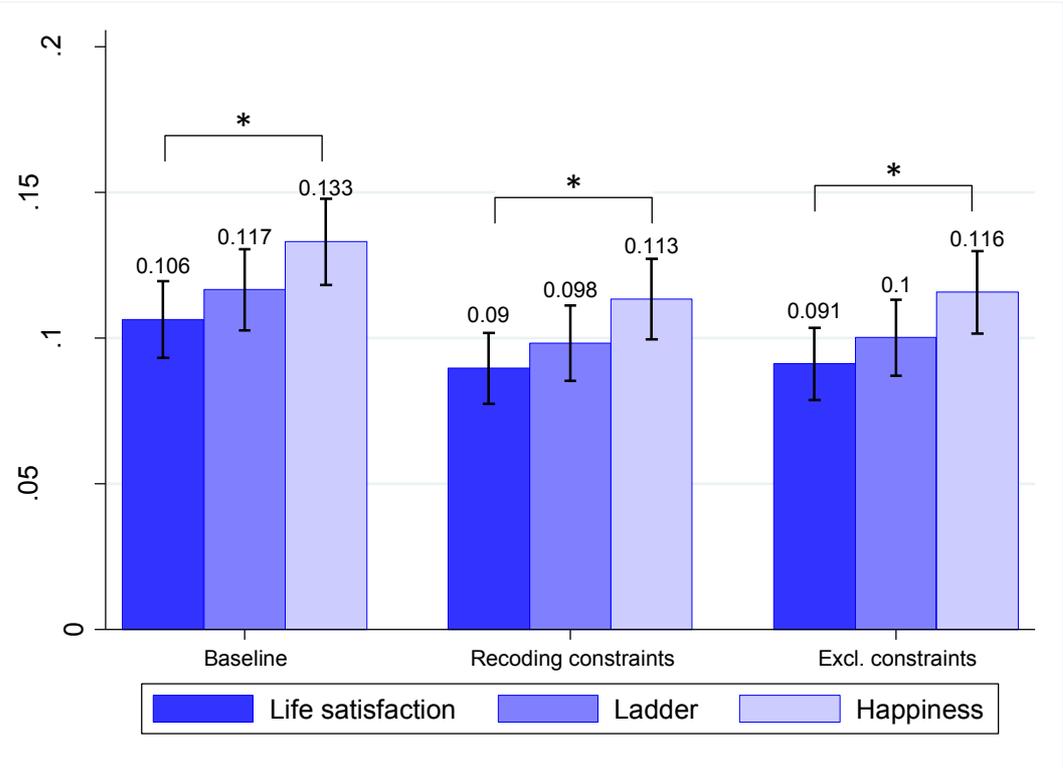
Notes: N[Life satisfaction]=893; N[Ladder]=875; N[Happiness]=864. There are 48 cases in which respondents state a change is easy even though it appears difficult / impossible to implement in the open-ended questions (and hence rather reflecting a constraint). In the baseline specification these cases are included as possible changes and hence included in "other goals more important" if that is stated. In the second specification "Recoding constraints" we recode these cases as a constraint so that they cannot be counted as a possible change which is dominated by "other goals". In the third specification we exclude these ambiguous cases. Since we want to test whether people maximize their SWB we choose as baseline the specification which results in the highest fraction of SWB non-maximizers.90% confidence intervals are displayed. (*) fractions are significantly different with p<.1.

Figure 4: Fraction of non-maximizers, by GENDER.
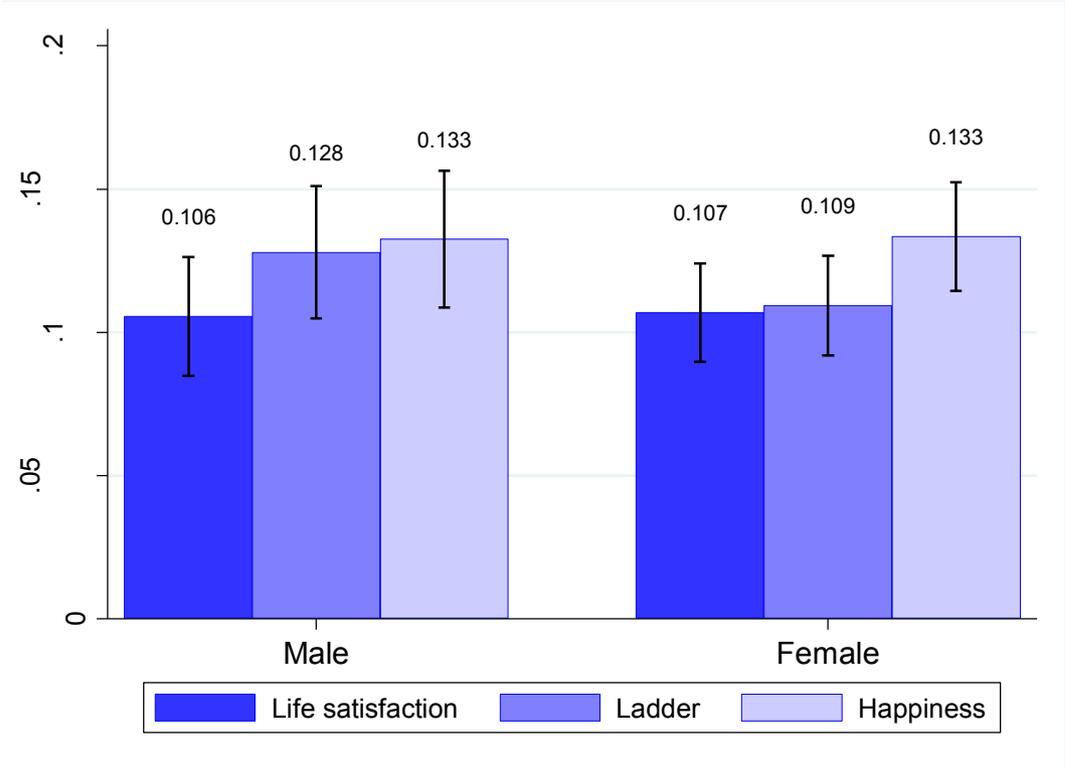
Notes: N[female]=1,432; N[male]=1,036. 90% confidence intervals are displayed.

Figure 5: Fraction of non-maximizers, by AGE.
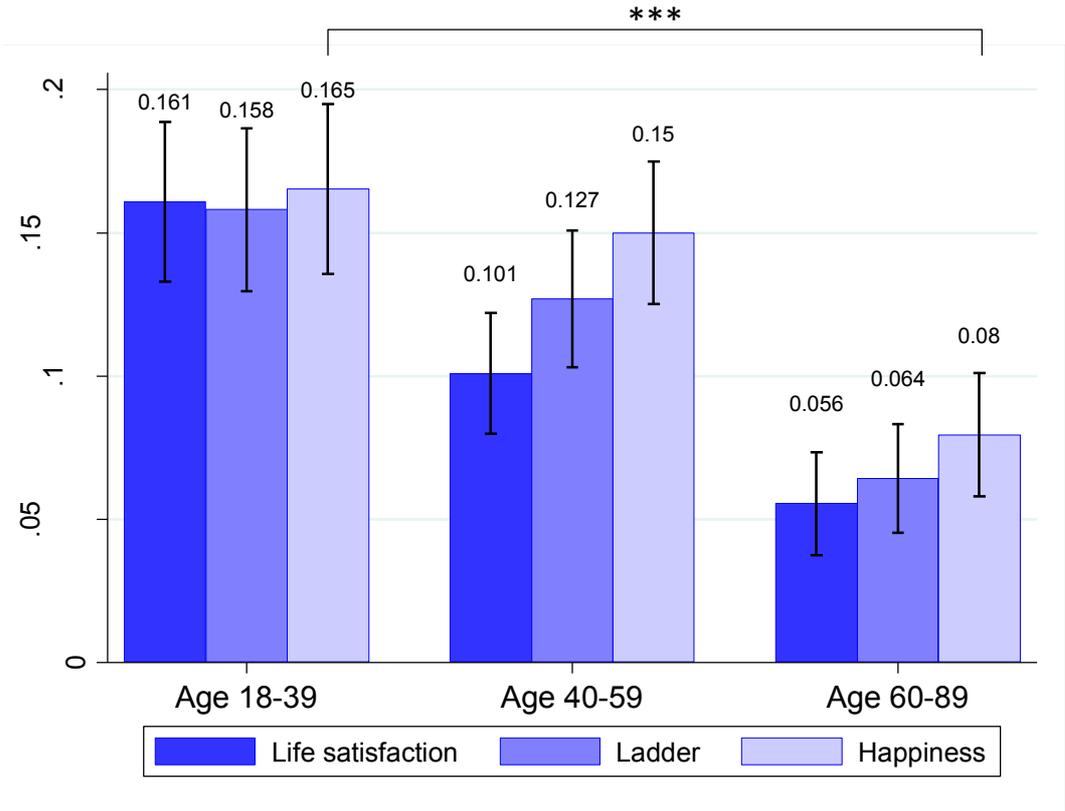
Notes: N[age 18-39]=818; N[40-59]=1,000; N[60-89]=814. 90% confidence intervals are displayed. 90% confidence intervals are displayed. (***) p<0.01.

Figure 6: Fraction of non-maximizers, by EDUCATION.
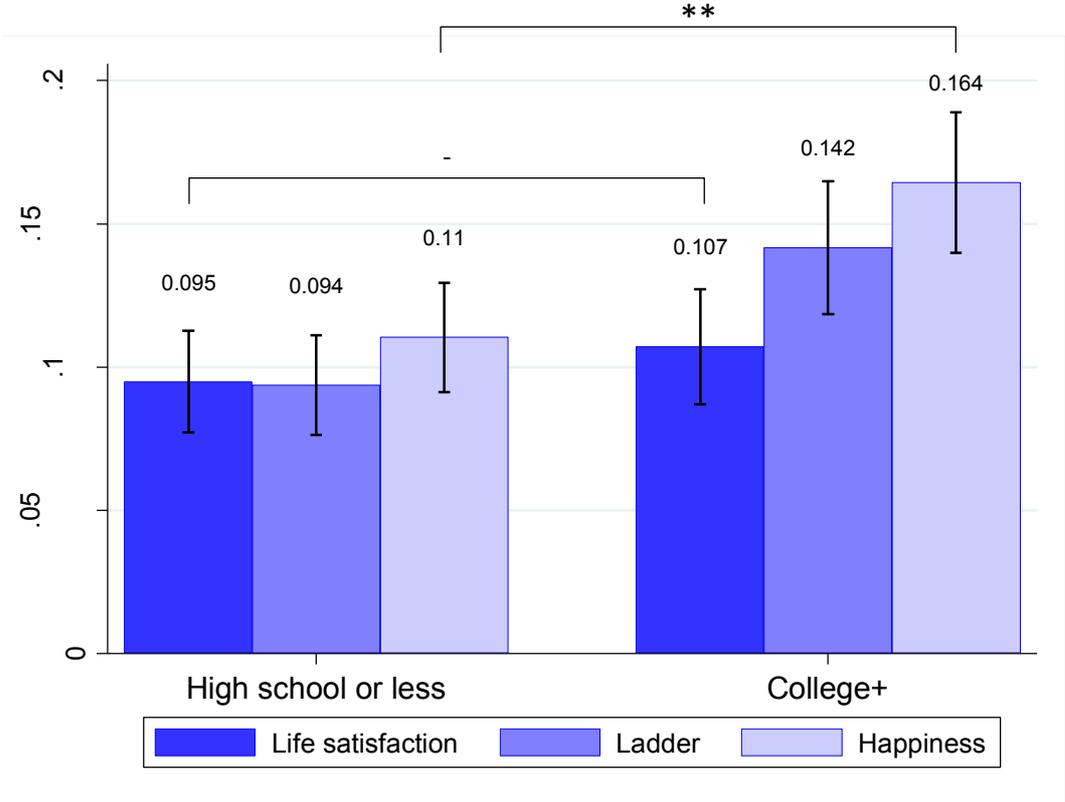
Notes: N[HS or less]=1,356 ; N[College+]=1,143. Respondents below age 25 are excluded. 90% confidence intervals are displayed. (**) p<0.05; (-) p>.1.

Figure 7: Fraction of non-maximizers, by INCOME.
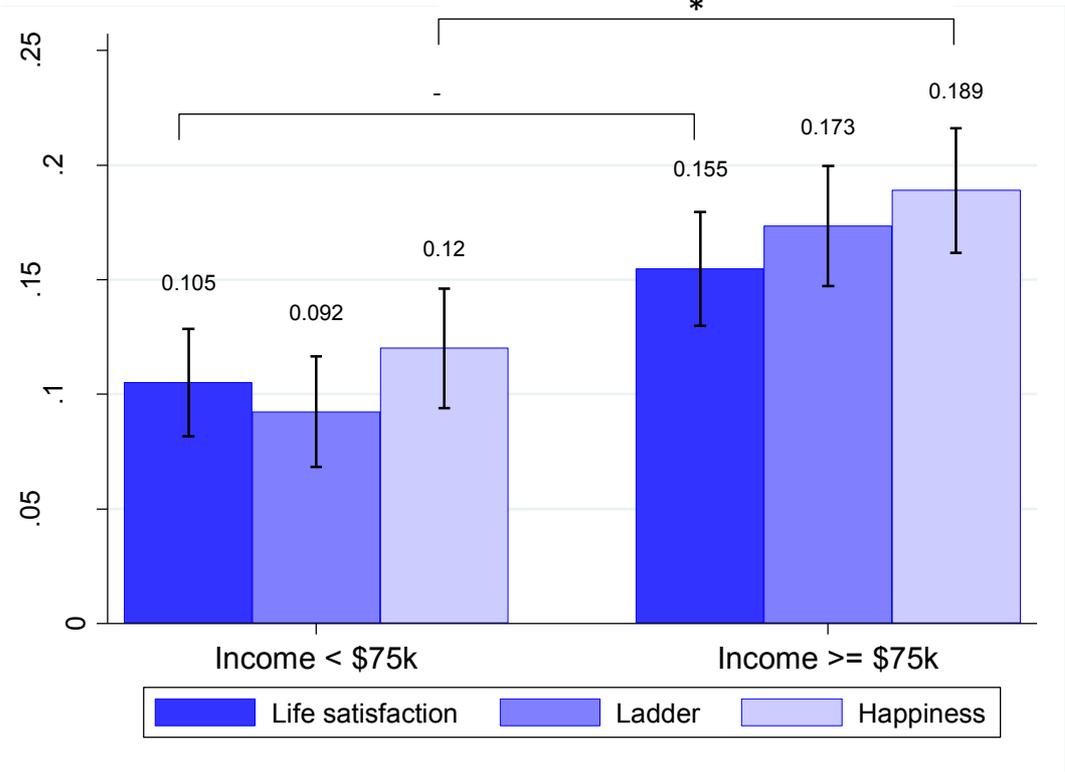
Notes: N[Income<$75k]=781; N[Income>=$75k]=1,039. Retired respondents and those above age 64 are excluded. 90% confidence intervals are displayed. (*) p<0.1; (-) p>.1.

Figure 8: Fraction of non-maximizers, by EMPLOYMENT STATUS.
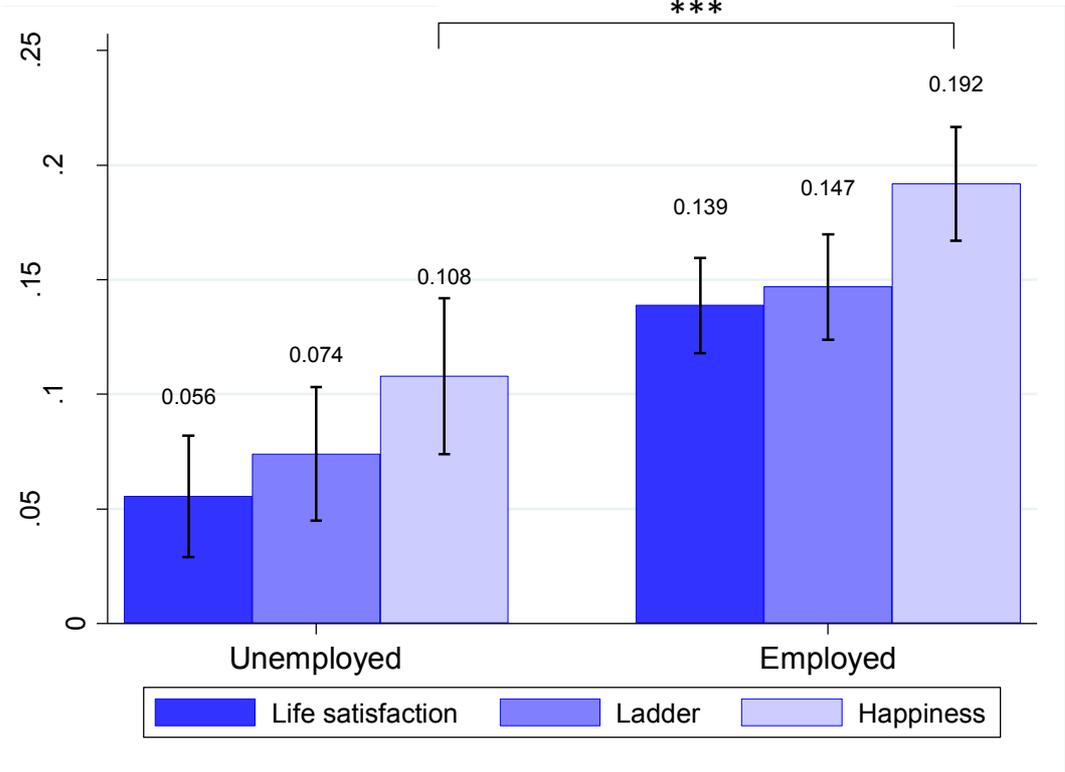
Notes: N[not employed]=400; N[employed]=1,266. 90% confidence intervals are displayed. (***) p<0.01.

Table 1: Means of demographic variables, SWB survey vs. CPS 2014.

Sample: Age 18+	SWB Survey May 2014 (1)	Current Population Survey March 2014 (2)
Age (mean)	48.0	46.8
Age (std. dev.)	15.4	17.9
Male, %	39.4	48.4
White, %	76.1	79.1
College degree, %	44.5	38.6
Employed, %	48.1	60.2
Unemployed, %	9.0	4.3
Retired, %	18.9	15.7
N	2,632	100,633

Table 2: Descriptive statistics of SWB measures.

SWB measure	N	Mean	Std. Dev.
Life Satisfaction (0-10)	893	6.820	2.128
Life Ladder (0-10)	875	6.627	2.011
Happiness (0-4)	864	3.102	1.453

Notes: Happiness is the sum of positive answers to four questions about emotions experienced in the previous week. The happiness score refers to the sum of affirmative answers to the positive emotions and negating answers to negative emotions. See Section 3 for further details on the different SWB measures.

Table 3: Categorization of possible SWB-enhancing changes.

Feasible changes to improve SWB are related to…	Percent	SE(Mean)
1. Health issues	41.07	1.69
2. Job	28.05	1.51
3. Financial situation	19.78	1.34
4. Family	17.96	1.28
5. Leisure and hobbies	15.44	1.23
6. Personal development	14.53	1.16
7. Partner	13.62	1.09
8. Friends	10.19	0.97
9. Education and learning	7.06	0.84
10. Religion	6.56	0.80
11. Consumption (incl. home)	6.46	0.81
12. Volunteering activity	5.65	0.75
13. Location/ neighborhood related	4.64	0.68
14. Politics, activism	0.30	0.17
15. Morality	0.00	0.00

Notes: The sample consists of respondents whocan think of changes that are possible to implement and that would increase their SWB (N=964). Shares sum up to more than 100 percent as respondents may report more than one possible changeand a given change may fall into more than one category. SE(Mean) is the standard error of the mean.

Table 4: Reasons why feasible SWB-enhancing changes not yet implemented.

SWB-enhancing change is feasible	36.63
Reason why possible change not (yet) made, in percent	
(1) Other goals are more important	11.85
(2) I wanted to but until recently I could not (incl. 'I don't know')	24.77
Subcategories of (2):	
I didn't have the money	5.85
I didn't have the time	4.41
I just couldn't stick to it	3.91
I haven't cared enough about it	2.36
I had not thought about it	1.37
I wasn't allowed to	0.91
It was against moral / religious / social norms	0.23
I don't know	9.50

Notes: The subcategories of (2) sum up to more than 21.35 percent as respondents may report more than one than one subcategory.

Table 5: Categorization of goals that dominate feasible SWB-enhancing changes.

Goals that dominate possible SWB-enhancing changes relate to…	Mean	SE(Mean)
[in percent of non-maximizers]		
1. Family relations issues	34.09	2.92
2. Job	19.32	2.43
3. Financial situation	18.56	2.40
4. Health issues	7.20	1.59
5. Partner/ romantic relations	6.82	1.55
6. Personal development	4.92	1.33
7. Education	4.17	1.23
8. Consumption (incl. home)	3.79	1.18
9. Friends	3.41	1.12
10. Religion	1.52	0.75
11. Location/ neighborhood related	1.14	0.65
12. Leisure and hobbies	1.14	0.65
13. Morality	0.76	0.53
14. Politics, activism	0.38	0.38
15. Volunteering activity	0.38	0.38

Notes: The sample consists of respondents who report that SWB-enhancing changes are not implemented because "other goals are more important" and for whom these other goals can be categorizedunambiguously (N=234). Shares sum up to more than 100 percent as respondents may report more than one goal.

Table 6: Categorization of goals that dominate feasible SWB-enhancing changes, by age group.

Goals that dominate possible SWB-enhancing changes relate to…	Age group		
	Age 18-39	Age 40-59	Age 60-89
[in percent of all respondents in respective group]			
1. Family relations issues	5.01	5.30	0.86
2. Job	3.30	2.00	0.86
3. Financial situation	2.44	2.30	1.23
4. Personal development	1.10	0.30	0.37
5. Partner/ romantic relations	0.98	0.90	0.37
6. Education	0.86	0.60	0.00
7. Health issues	0.73	0.80	0.86
8. Consumption (incl. home)	0.49	0.50	0.12
9. Friends	0.49	0.40	0.12
10. Location/ neighborhood related	0.24	0.10	0.12
11. Leisure and hobbies	0.12	0.00	0.25
12. Morality	0.12	0.00	0.12
13. Volunteering activity	0.12	0.00	0.00
14. Religion	0.12	0.10	0.25
15. Politics, activism	0.00	0.10	0.00
N	818	1000	814

Notes: The sample consists of all respondents. Percentages are rescaled to sum up to 100 in every column in order to facilitate comparisons.

Table 7: Categorization of goals that dominate feasible SWB-enhancing changes, by income and employment.

Goals that dominate possible SWB-enhancing changes relate to…	Income		Employment	
	<$75k	>=$75k	Unemployed	Employed
	(1)	(2)	(3)	(4)
	[in percent of all respondents in respective group]			
1. Family relations issues	3.33	6.83	0.75	5.45
2. Job	2.05	3.46	0.50	3.71
3. Financial situation	1.79	2.89	0.25	3.16
4. Health issues	0.51	0.96	0.00	1.11
5. Partner/ romantic relations	0.77	1.15	0.25	1.03
6. Friends	0.26	0.96	0.75	0.55
7. Personal development	0.90	0.77	1.00	0.71
8. Consumption (incl. home)	0.38	0.58	0.50	0.32
9. Education	0.64	0.29	0.00	0.71
10. Location/ neighborhood related	0.26	0.10	0.00	0.24
11. Leisure and hobbies	0.13	0.10	0.25	0.08
12. Religion	0.00	0.10	0.00	0.08
13. Politics, activism	0.00	0.10	0.00	0.08
14. Morality	0.13	0.10	0.00	0.16
15. Volunteering activity	0.13	0.00	0.00	0.00
N	781	1039	400	1266

Notes: The sample consists of all respondents. Further, respondents above age 64 and retirees are excluded in column (1) and (2). Percentages are rescaled to sum up to 100 in every column in order to facilitate comparisons.

Appendix

Table A1: Example goals related to family relations issues.

Answers to the question "*What are these other goals that you pursue in life and that conflict with what's best for your [SWB]?*"that relate to family relation issues.

Having a special needs daughter, I have had to put her health and appointments above taking time out for schooling.

Raising my child

Retting a job, making parents happy

Taking care of my family finacially

The welfare of my family

Raising my children & making sure they are happy & healthy

Helping others achieve their life satisfaction

Making my kids goals come true

Taking care of ill family member going thru radiation treatment

Making sure my kids, are well taken care of.

All of our money goes to our 5 kids first.

My son has a speech delay and we spend more time trying to help him

Watching my granddaughter after school and taking care of my handicapped wife.

Taking care of my father who had a severe stroke.

Helping my wife care for her mother and waiting for the point in time when my wife decides to retire.

Making my children happy.

Table A2: Detailed cross-table of goals and changes.

Goals dominating feasible SWB-enhancing changes relate to…	Overall	Health	Job	Financial situation	Family	Leisure/ hobbies	Personal develop.	Partner	Friends	Educ./ learning	Religion	Consump. (&home)	Volun- teering	Location/ neighborh.	Politics, activism	Morality
							Feasible SWB-enhancing changes that are dominated									
[in percent]																
1. Family relations issues	34.09	13.3	9.1	8.0	3.8	7.2	6.1	4.2	1.9	3.0	1.5	3.8	1.5	1.1	0.0	0.0
2. Job	19.32	7.6	4.5	1.9	3.8	4.2	3.4	1.5	1.9	1.1	0.8	0.4	0.8	0.8	0.0	0.0
3. Financial situation	18.56	6.1	4.2	4.5	3.4	4.2	3.8	1.1	2.3	3.0	1.5	3.0	1.5	0.4	0.0	0.0
4. Health issues	7.20	1.9	1.9	2.3	1.1	1.1	1.1	1.1	0.8	0.0	0.4	0.8	0.8	0.4	0.0	0.4
5. Partner/ romantic relations	6.82	1.9	2.3	1.1	1.1	1.9	0.8	0.8	0.8	0.8	0.0	0.4	0.4	1.1	0.0	0.4
6. Personal development	4.92	1.9	2.3	0.8	1.1	1.1	0.8	0.4	0.8	0.4	0.0	0.4	0.8	0.0	0.0	0.0
7. Education	4.17	1.5	1.5	0.8	1.1	0.8	0.4	0.8	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
8. Consumption (incl. home)	3.79	1.1	0.8	0.0	0.8	1.9	0.8	0.4	0.4	0.8	0.0	0.8	0.0	0.0	0.0	0.0
9. Friends	3.41	1.1	1.5	0.4	0.4	0.8	1.1	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
10. Religion	1.52	0.0	0.4	0.4	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11. Location/ neighborhood	1.14	0.4	0.8	0.0	0.8	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.0	0.4	0.0	0.0
12. Leisure and hobbies	1.14	0.0	0.8	0.0	0.0	0.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
13. Morality	0.76	0.0	0.4	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14. Politics, activism	0.38	0.4	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0
15. Volunteering activity	0.38	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0

Notes: The sample consists of respondents who report that SWB-enhancing changes are not implemented because "other goals are more important" (N=264). Shares sum up to more than 100 percent as respondents may report more than one goal / more than one possible change.

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