

Less is more: The influence of aspirations and priming on well-being

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Abstract

If resource consumption is to be reduced through economic "de-growth", individuals in industrialized countries may have to accept a reduction in their consumption levels. In democratic societies, implementing this process requires the consent of a majority of the population. However, as long as people have high reference levels of consumption, lower consumption will induce feelings of loss, and hence evoke resistance. This paper summarizes recent experimental evidence on some of the factors that determine the utility costs involved in decreasing consumption. The results suggest that the acceptance of economic de-growth would be facilitated if people's material aspirations were moderated, and the extent to which material achievements are emphasized in our daily environment were reduced.

An analysis of the financial and economic crisis that developed during 2008 suggests that it will not contribute to either of these points. Rather, by increasing the public's focus on the economic sphere even beyond pre-crisis levels, it may lead to a further decrease in the acceptance of de-growth policies in the population.

Keywords: aspirations, reference states, experiments, economic crisis, de-growth

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1 Introduction

After many years of growth in material living standards, people in western industrialized countries have become used to aspiring for ever higher levels of consumption. Neither policy makers nor industry so far had reasons to counter this development, since people's working hard and consuming much is perceived as being the basis of our economic and social system (see, e.g., Fournier, 2008). Surveys show that people have even come to believe that successful environmental protection depends on rapid economic growth (BMU, 2008).

Recent reports on the state of the ecosystem have cast doubt on the future feasibility of constant growth in material output. The long-term consumption level that the resources on our planet can sustain for all its inhabitants may well be far below the current level in the western world, even if new technologies further increase the efficiency of resource use. This implies a need to reduce this level if sustainability and peace are to be achieved in the long-run.

The present paper discusses some aspects of the question how this reduction can be made less painful, and hence easier to accept, for people who are affected by it. First, it presents a lab experiment which analyzes the impact of high material aspirations on expected well-being. Second, it considers evidence from a classroom experiment on the influence of a focus on material achievements in people's daily environments. Experiments seem particularly suited to analyze these basic characteristics of people's preferences, since they provide a controlled environment where the effects of the variables of interest can be isolated from external influences.

The first experiment shows that aspirations continue to influence people's reference states even after their expectations have changed. This implies that initially aiming for high levels of consumption may lead to losses in well-being when aspirations are not fulfilled. These losses occur, first, when people have to lower their expectations regarding their consumption, and, second, when they actually receive the lower outcomes.

The second experiment provides evidence for the influence of priming on people's reference states. It shows that if people are exposed to statements that emphasize the importance of material achievements, their reference states regarding material outcomes increase. This implies that a given level of wealth or consumption will lead to lower well-being than when people are not exposed to such statements.

Although the results are clearly preliminary in that they are based on single experiments, they cast doubt on a basic consensus in many western democracies, namely the focus on consumption. As long as this focus persists and is present in many spheres of our daily lives, policies aiming at reducing our level of consumption in order to achieve sustainability must be expected to lead to strong feelings of loss and find little support.

Global political and economic events like the current economic crisis have a considerable impact on the focus on consumption, and on consumption levels in the short and medium run. The crisis started as a real-estate crisis in the U.S. in early 2008, but quickly developed into a global financial crisis with wide ranging effects on the real economy. In the short run, the crisis may lead to a decrease in average consumption levels by causing a worldwide recession. In the medium- to long-run, however, it may increase the focus on the economic sphere in general, and on consumption in

particular, and lead to increased resistance against a reduction in consumption levels in the industrialized countries. First, the excessive news coverage of the crisis with its emphasis on the implications for wealth and consumption must be expected to serve as a priming device. This priming increases people's reference states regarding material achievements and hence decreases their well-being at any given level of consumption. Second, the pronounced focus of policy makers and the media on economic issues strengthens the public's perception that economic development and consumption are the primary goals to strive for. This aggravates the downward adjustment of reference states regarding consumption and increases the perceived severity of losses if consumption levels decrease. In addition, it supports the view that environmental protection is a policy we can only afford to pursue in times of economic flourishing. Third, the persistent assertion by politicians and the media that people will experience large (material) losses in the near future makes them feel at a loss already at present (a loss in anticipatory utility), and induces fear of further losses.

Taken together, these effects increase people's focus on consumption and lead to a feeling of loss in this dimension. As a result, any policy that is not aimed at restoring economic growth and increasing consumption will receive only marginal support. The results of this process could already be observed at several climate change conferences of the EU and UN at the end of 2008, and continue to manifest themselves in the public discussion.

Sections 2 and 3 describe the experiments and discuss the implications in light of the current economic crisis. Section 4 concludes and briefly discusses alternative approaches.

2 The influence of aspirations

Throughout our lives we form aspirations regarding future outcomes. These aspirations are not always based on detailed information, but may derive from what we consider desirable or appropriate. For example, we may have a perception of our future wealth and consumption level. But we do not possess reliable information on the market conditions prevailing in the future, i.e., on the consumption level we are really going to achieve.

When we obtain better information or market conditions change, our aspirations may prove incorrect. We may learn that we will earn less than we thought, or that we will achieve a lower consumption level than we hoped for. How hard it is for us to accept these changes depends on how fast we adapt to new expectations. If we adapt relatively quickly, our initial aspirations do not significantly influence the well-being we derive from our outcomes: We do not mind earning and consuming less than we aspired for initially. If, however, we do not adapt quickly to new expectations, our well-being is affected. Then we keep on comparing our small flat to the villa we dreamed of: not meeting initial aspirations leaves us disappointed. In this case, forming high aspirations induces losses in well-being if expectations have to be reduced later on.

Matthey and Dwenger (2007) develop a theoretical model where we analyze the effects of aspirations on utility¹. There we distinguish between aspirations and expectations

¹I use the term utility and take it as a proxy for well-being. Although this is a simplification, it is used here to comply with the notation in the model.

in the following way. Aspirations are based on vague information and are potentially biased by factors like social comparison (see Stutzer, 2004), self-image (see Nauta et al., 1998; Bandura et al., 2001, Pinguart et al., 2004), wishful thinking (see Bryce and Olney, 1991) etc. Expectations, in contrast, are formed when detailed information becomes available. They are unbiased in the sense that they correctly reflect the available information. Utility in the model is defined according to prospect theory (Kahneman and Tversky, 1979), i.e., preferences are reference-dependent. This means that outcomes are not only evaluated in absolute terms, but experienced as gains and losses relative to a reference state. Whether aspirations influence well-being then depends on whether they influence reference states, and continue to do so once realistic expectations are formed.

The model shows that the net effect of aspirations on utility depends on one crucial factor: the adaptation of reference states to new expectations. If reference states adapt quickly, no costs of high aspirations must be expected. If they do not adapt quickly, negative effects on utility are possible.

Next, we conduct a laboratory experiment that tests this adaptation. Through analyzing observed behavior we can infer whether people adapt quickly to changes in expectations. The design of the experiment can be summarized as follows. Before the experiment begins, we assess the participants' aspirations regarding their payoffs from the experiment by asking them for the price for which they would be prepared to abstain from the experiment. Then we inform the participants about a lottery they are going to take part in. Half of the subjects participate in a lottery with high payoffs (10 and 12 Euro), the other half in a lottery with low payoffs (1 and 3 Euro). Once participants have received this information, they complete a different task, which takes about 10 minutes and allows them to get used to expecting their respective lottery. Next, this lottery is played out, with half of the subjects winning in their lottery (3 and 12 Euro), and half of the subjects losing (1 and 10 Euro). As the final step, we analyze subjects' risk attitudes by assessing their certainty equivalents for a subsequent lottery. To ensure comparability, this lottery is the same for all subjects.

The analysis of subjects' reference states is based on the result of prospect theory (Kahneman and Tversky, 1979) regarding the relation between feelings of loss and gain on one hand, and risk attitude on the other: people are risk averse for gains, but risk loving for losses. Observing subjects' risk attitudes in the final lottery, we can infer whether participants' reference-states depend only on their expectations, or whether they are still influenced by their initial aspirations. (See Matthey and Dwenger (2007) for a detailed description of the method.) In the former case, subjects' feelings of loss and gain, and hence their risk attitudes, should depend on whether they win or lose in their respective lottery. In the latter case, they should depend on the relation between subjects' initial aspirations and their payoff.

The results show that subjects' initial aspirations have a persistent influence on their risk attitudes, and hence on their reference states. In particular, subjects with higher initial aspirations show lower risk aversion at the end of the experiment, independent of whether they won or lost in their particular lottery. This suggests that they on average experience more losses than subjects with lower initial aspirations, and hence that they continue to have higher reference states. Of course, 10 minutes time for adaptation to new expectations are not much, even if only small amounts are concerned. Accordingly, the experiment does not allow (or attempt) inferences on the

final state of adaptation. What it shows clearly, however, is that adaptation requires non-trivial amounts of time. This means that the potential losses induced by high aspirations can be substantial. The higher people form aspirations regarding their future consumption the more they potentially suffer from a reduction in expected outcomes, and the more they will resist such a reduction. Hence, the results suggest that in order to facilitate the acceptance of a policy of de-growth, people's aspirations regarding wealth and consumption should be moderated.

A real world example of the scenario that the experiment attempts to reproduce in the simplified "microcosm" of the laboratory is the current financial and economic crisis. Until the emergence of the crisis in summer 2008, many people in the industrialized world aspired for a continuous increase in their material living standards. When the crisis developed they had to reduce their expectation regarding future consumption. As the experiment suggests, the utility that is derived from this consumption depends not only on its actual level, but also on the magnitude of people's aspirations and on how fast their reference states adjust to the lower expectation. The more moderate people's initial aspirations and the faster their reference states adjust, the smaller is the loss induced by lower consumption levels.

Unfortunately, no experimental or empirical evidence exists on the factors that determine the rate or extent of reference state adjustment. Nevertheless, some speculation on the qualitative influence of some factors is possible. First, the more often the "losing" dimension - material living standards and consumption in the case of the current crisis - is emphasized to have priority over other dimensions of life, the stronger a loss in this dimension will be experienced. Reducing the reference state becomes harder the higher a priority is assigned to the respective dimension. Second, the more often the reduction in consumption is emphasized in one's environment and framed as a "loss", the more likely it will be experienced as such. Both factors are present in the current crisis. Not only has the crisis been the leading news topic since its emergence, reducing most other issues to footnotes. The language that politicians, industry representatives and the media use to describe the state of the economy and expected future living standards is also teeming with negative superlatives.² This suggests that for many people the downward adjustment of their reference states will be difficult and may take considerable time, leading to strong feelings of loss when material living standards decline. The stronger the feelings of loss, the lower the willingness to accept costly measures of environmental protection.

Another result is interesting here. In an earlier experiment, Matthey (2008a) finds that not only the utility from realized outcomes is reference-dependent, but also the utility from expectations, i.e., anticipatory utility (Caplin and Leahy, 2001). This means that when people have to reduce their high initial aspirations to lower expectations they experience a loss in anticipatory utility: The joy of looking forward to high outcomes has to be reduced to looking forward to lower outcomes, which leads to disappointment. In order to avoid this disappointment, people will try to avoid a decrease in their expected consumption, and resist policies aiming in this direction.

This effect seems to have contributed to the stagnation or even reversion of many environmental protection measures at the end of 2008. The (expected) reduction in consumption due to the crisis is experienced as so strong a loss that further losses

²For example, check the archives of The New York Times (www.nytimes.com), The Guardian (www.guardian.co.uk), Süddeutsche (www.sueddeutsche.de) etc.

appear unacceptable. One example is the climate change deal that the EU signed in December 2008. Several countries, including Germany that before had presented itself as the leading force in CO₂ reduction, used the crisis as a reason - or excuse - to dilute the original deal. Similar arguments were made at the same time at the UN Climate Change Conference in Poznan. One comment nicely summarizes what many seem to feel: "It is time to slow down climate protection and concentrate on the essentials [..]" (Bieritz, 2008). In the public perception, the losses in the economic sphere seem to render all other issues negligible, including environmental protection.

3 The influence of priming

Matthey (2008b) conducts a simple experiment to test the influence of priming on people's reference states. Priming is a method that is frequently used in psychology, and is meant to activate certain concepts in the subjects' minds without drawing their attention to this activation (see, e.g., Vohs et al, 2006). Participants in this experiment had to form 20 meaningful phrases from a group of five words per phrase. Ten of these phrases were neutral and the same across groups. The other ten referred to either material achievements (e.g., "Smart investors become rich."), social contents (e.g., "Children help their parents.") or neutral contents. This task took about 5 minutes. It was intended to activate social vs. material concepts in the subjects' minds. Then participants were given an endowment of 5 Euro and had to decide how much of it to invest in a lottery. In this lottery they would either triple or lose the invested amount with equal probability. The non-invested amounts could be kept for sure.

As the next step, subjects' risk attitudes were inferred from their observed investment decisions. Using the same method as described above (see Matthey, 2008b, for details), these risk attitudes were then used to infer differences in subjects' reference states regarding monetary outcomes.

The results show that activating the material rather than the social concept led to higher investments of on average 60 Cents, or approximately half a standard deviation (difference significant at 1%, average investments 3.84 vs. 3.23 Euro). The subjects in the material treatment had lower risk aversion and hence higher reference states regarding material outcomes than those in the social treatment. This suggests that even such a brief priming exercise in a classroom environment is sufficient to significantly influence people's reference states. It gives an indication on how strongly people's reference states may depend on the "priming" they are exposed to in their every day life. The stronger the focus and emphasis on consumption and material achievements, the higher reference states must be expected in this dimension. In turn, the higher the reference states, the higher a loss in utility will people experience when their consumption levels decrease, and the more negative they will perceive policies that may have this effect.

This result has implications for the long-term effects of the current crisis. As mentioned above, since the emergence of the crisis economic issues play a dominant role in the public discussion. This excessive coverage must be expected to work as a strong priming device of the material dimension. The experimental results would then predict a further rise in reference states regarding material standards, leading to strong feelings of loss when actual consumption levels decrease.

In addition, policy makers have made it clear that the best way for the population to help ease the crisis is to go shopping. Several countries, like Germany and France, even discussed the issue of consumption vouchers to boost domestic demand. Whatever the direct effect of this strategy on the economy, it cannot be expected to ease the emphasis on consumption or help in the reduction of reference states and the associated feelings of loss. Again, the stronger the losses people experience or expect to experience, the lower the support of measures that do not aim at restoring economic growth and increasing consumption.

4 Conclusion

The experiments described in this paper show that the effect of a decrease in consumption on well-being does not only depend on the absolute size of this decrease. It also depends on the individual's aspirations, and on how strongly the environment "primes" the individual towards focusing on material achievements. If de-growth is to be brought about through a democratic process, these effects must be taken into account.

The results have implications for the expected impact of the 2008/09 economic crisis on individual utility, and on measures of environmental protection to be taken in the future. Already before the crisis a survey in Germany showed an interesting phenomenon: People are well aware of the necessity of environmental protection, and of the power that consumers have to support it. They also express a willingness to contribute to changes. However, the majority is unwilling to accept reductions in their material living standards in order to bring these changes about (61%, see BMU 2008). This effect may even strengthen in the course of the crisis, as was shown in sections 2 and 3. With people already feeling at a loss in material living standards, their willingness to accept measures that moderate consumption decreases further.

In addition, even before the crisis people did not associate environmental protection with economic de-growth, but with rapid economic growth. In the above mentioned survey, 76% of the subjects agreed with the statement "In order to cope with climate change and other environmental problems, we primarily need rapid economic growth, because the necessary measures cost a lot of money.". This attitude, too, must be expected to strengthen as a result of the current extreme focus on economic issues. Bringing about moderation and de-growth will not be easier during or after the crisis than it was before. Given this situation, the World Wide Fund For Nature's (WWF) warning that "The ecological crisis will hit us several times harder than the current financial crisis, and will sooner or later jeopardize the well-being and development of all nations." (Heinrich, 2008) must be suspected to fall on deaf ears.

In the light of the experimental results discussed in this paper, what could be alternative ways to deal with the crisis? Two main points result from the above discussion: First, rather than focusing completely on the economic dimension, the importance of non-material dimensions should be emphasized (e.g., social relations). On one hand, this may make it easier to reduce reference states regarding material achievements. On the other, it may help in reducing the general weight of material living standards in the utility function, which would increase well-being in times of lower consumption.

Second, rather than focusing solely on the losses that the crisis may induce, its possible gains should be emphasized, e.g., the opportunity for reforms and the room

it offers for new ideas and approaches. Instead of framing it as a time we have to endure in order to get back to where we were before, it could be presented as a chance for a new beginning, contributing to an atmosphere of change and awakening rather than collapse and loss.

It should be noted that the experiments referred to in this paper are only a first step, and more research is needed to substantiate their results before any final conclusions can be drawn or policy recommendations made.

Regarding the first experiment, the factors governing the process of reference state formation and adjustment are still little understood. This is largely due to the non-observability of reference states, which makes a quantitative description of reference formation difficult. However, such a description is necessary to assess the net effect of different influences on the reference state, and evaluate the tradeoffs faced by economic policy.

Regarding the second experiment, future research would have to leave the lab and analyze the influence of priming on reference states in a field experiment, that is, when different priming sources are present in a more natural environment. Unfortunately, such an environment necessarily leads to a loss of control, which may only be advisable if more laboratory experiments have deepened our understanding of the underlying process.

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