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# Chapter 5

## Mispredicting Utility and the Political Process

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**I**NDIVIDUAL decisions involve difficult trade-offs between pursuing material wealth, status, and fame on the one hand and, on the other, investing in social relationships and choosing activities that provide autonomy and the experience of competence. There is an increasing belief that people systematically err in these decisions and spend too much time, effort, and money on goods, services, and activities with strong extrinsic attributes (Scitovsky 1976; Frank 1999; Easterlin 2003; Layard 2005).

We argue that this tendency is attributable to systematic misprediction of utility. When people make decisions, they mainly take salient extrinsic attributes of choice options into account. They thus overvalue characteristics relating to extrinsic desires such as income and status and underestimate those relating to intrinsic needs such as time spent with family and friends and on hobbies. It follows that they tend to underconsume goods and activities with strong intrinsic attributes. According to their own evaluations, people make distorted decisions when they choose between different options and obtain a lower utility level than they otherwise would. They find comparisons between attributes whose salience shifts over time difficult to make, so that learning is severely hampered.

People are, however, to some extent aware of their tendency to mispredict. They complain, for example, about their work-life imbalance and that they cannot manage it in their day-to-day decisions.

In this chapter, we analyze whether the political process helps people mitigate biased decisions attributable to misprediction or accentuates

them. Scholars dealing with biases in decision making related to the misprediction of utility usually disregard this aspect.

We distinguish among four types of government to study government reactions to people miscalculating utility. We then identify public discourse as the key to people's learning in the political process and to adopting precautionary policies. Possible policy interventions that reduce biases attributable to miscalculation are discussed as an input to the political discourse process. We then pose two sets of empirically testable propositions.

## Individual Decision Making when Utility Is Miscalculated

Standard economic theory assumes that individuals are able to compare future utilities provided by goods and activities consumed. They maximize the utility in a rational consumption decision. In certain cases, it has proved useful to distinguish between the various characteristics of goods and activities (Lancaster 1966; Becker 1965) or the attributes of options (for example, Keeney and Raiffa 1976). This differentiation is not, however, taken to affect the evaluation of future utility. The utility of a chosen combination is simply the sum of the weighted value of each characteristic

### *Options with Changing Salience of Attributes*

The standard economic model of consumer decisions is appropriate for most goods and activities, and for most situations. It is still appropriate when individuals make random prediction errors, or when the extent of miscalculation is the same for all goods and all activities. Here we depart from these assumptions to argue that there are systematic differences in miscalculations between two types of attributes characterizing different options.<sup>1</sup>

Attributes of the first type relate to intrinsic needs. Edward Deci and Richard Ryan's self-determination theory provides a comprehensive view of three main needs (2000). First, there is a need for relatedness, to feel connected to others by love and affection—that is, having a family and friends and being in a social setting. Second, there is a need for competence, to control the environment and experience oneself as capable and effective. Third, there is a desire for autonomy, the experience of being in charge of one's actions or being causal.<sup>2</sup> Intrinsic attributes are also characterized by providing "flow experience" (Csikszentmihalyi 1990), that is, when one is completely immersed in an activity, often a hobby.

The second type of attributes relates to extrinsic desires and serves peo-

ple's goals for material possessions, fame, status, or prestige. Income thus becomes one of the critical attributes of options in the choice set.

Each option, activity, and even good is multidimensional; in general, a particular choice alternative has both intrinsic and extrinsic attributes. But some goods and activities have a stronger intrinsic component (for example, time spent with friends),<sup>3</sup> others a stronger extrinsic component (such as most consumer articles, which go beyond basic material needs). Work is particularly interesting. Having work gives people a strong sense of self-determination, and being active at work provides flow experiences. Income from paid work, however, also serves extrinsic wants as it allows buying consumer items.

Systematic mistakes occur because, when individuals make decisions, the extrinsic attributes are more salient than the intrinsic attributes of different options. Therefore, individuals tend to undervalue intrinsic attributes when they decide and allocate their resources. When they experience the hedonic consequences of their choices, the intrinsic attributes get relatively more important and their ex ante negligence is reflected in lower utility. The distortion thus leads to a systematic inconsistency between predicted and experienced utility.<sup>4</sup>

### *Why Intrinsic Attributes Are Undervalued When Predicting Utility*

Certain major sources for underestimating future utility from intrinsic attributes, compared to extrinsic attributes of goods and activities, may be distinguished.

#### *Underestimating Adaptation*

There is convincing empirical evidence that individuals are not good at foreseeing how much utility they will derive from their future consumption (for example, Loewenstein and Adler 1995; for an extensive survey, see Wilson and Gilbert 2003).<sup>5</sup> Research on affective forecasting shows, for example, that people overestimate their reactions to specific events (because they are embedded within other daily life events that they are not actively aware of) or underestimate their ability to successfully cope with negative events.<sup>6</sup> The general insight is that people usually have biased expectations about the intensity and duration of emotions: the impact is less than predicted largely because people are more adaptive than they think they are.

We argue that adaptation is underestimated more for extrinsic than for intrinsic aspects. People adapt less to goods and activities with strong intrinsic components because the (positive) experience tends to be renewed with every consumption. Getting together with a good friend is always rewarding, and one does not "get used to it" in the sense of valuing this

experience progressively less. Similarly, many scholars have a flow experience when they immerse themselves in writing a paper or book they have always wanted to write. The corresponding utility does not wear off.

The differential effect on the intrinsic and extrinsic attributes of goods and activities is consistent with recent empirical evidence (for a survey, see Frederick and Loewenstein 1999). It has been found that individuals do not adapt their utility evaluation in the case of undesirable experiences that inhibit intrinsic need satisfaction. In particular, severe health problems—such as chronic illness or one that progressively worsens—reduce autonomy and lead to lasting reductions in reported subjective well-being (for example, Easterlin 2003). Widowers suffer, on average, for years (for example Stroebe, Stroebe, and Hansson 1993). Having a job is related to many aspects that provide flow experiences and satisfy intrinsic needs, such as being in the company of workmates and experiencing expertise and autonomy. Accordingly, being unemployed is repeatedly found to have high negative nonpecuniary effects on subjective well-being with little habituation (Clark 2002). By contrast, having a job with high autonomy, as is the case of self-employed people, is related to high job satisfaction. Frey and Benz (2002), for example, show that the self-employed derive more utility from their work than people employed by an organization regardless of income earned or hours worked. Moreover, they explain this difference with people's evaluation of initiative at the work place and satisfaction with the work itself (25). Intrinsic attributes also characterize the work of volunteers: those involved in volunteer work are more satisfied with their lives, even when the possibility of reverse causality is taken into account (Meier and Stutzer 2004).

In the case of goods and activities in which extrinsic aspects are dominant, empirical evidence indicates that individuals adapt to a considerable extent. This has been demonstrated, in particular, for income (van Praag 1993; Easterlin 2001; Stutzer 2004). After individuals experience a raise in income, their utility level initially rises as well. After a year or so, however, most of this beneficial effect has evaporated. It has been estimated (van Herwaarden, Kapteyn, and van Praag 1977) that around 60 percent of the utility increase due to an increase in household income disappears over time.

The evidence of little or no adaptation for goods and activities characterized by intrinsic aspects, and strong adaptation for those characterized by extrinsic aspects, suggests that individuals who underestimate adaptation, or even disregard it altogether, make a bigger mistake when predicting future utility from extrinsic than from intrinsic attributes.

### *Distorted Memory of Past Experiences*

When individuals make decisions about future consumption or allocation of time, and when information from current experience is inaccessi-

ble, they resort to experience in the past, whether specific or general (for a discussion, see Robinson and Clore 2002). If specific information is available, it has priority in people's judgment. Thereby, the more memorable moments of an experience disproportionately affect retrospective assessments of feelings (Kahneman 1999). What counts as "more memorable" tends to be the most intense moment (peak) and the most recent moment (end) of an emotional occurrence. This peak-end rule or duration neglect has been established in numerous studies (Kahneman 2003).

We propose that intrinsic attributes relate to long-term experiences of moderate but enduring positive feelings and that extrinsic attributes, by contrast, are related to short-term experiences, in particular peak emotions. Consequently, we argue that when people predict utility based in retrospect, they underestimate the intrinsic aspects of goods and activities related to duration (compared to their estimates on the extrinsic aspects related to peaks).

### *Rationalizing Decisions*

Individuals have a strong urge to justify their decisions, both to themselves and to others (for pre-decision justification, see Shafir, Simonson, and Tversky 1993). It is not only predicted consumption utility that affects the decision to buy something, for example, but also whether people think that they are getting a bargain (Thaler 1999). Findings reveal a general tendency to resist affective influences and to take rationalistic attributes into account when making decisions. Christopher Hsee and colleagues (2003) call this reason-based choice lay rationalism, finding in their experiments that people focus their decisions on absolute economic payoffs and play down noneconomic concerns. This implies, however, that they do not optimally consider various attributes of different options to maximize predicted utility.

We argue that for extrinsic and intrinsic attributes a similar inconsistency applies to decision making. It is much easier to provide rationalistic justifications for extrinsic than for intrinsic characteristics. Consider, for example, a job offer providing more income but less leisure time. Most people find it easier to justify why they should accept the job offer because the extrinsic monetary dimension is salient. It is difficult, however, to justify why the intrinsic characteristics provided by more leisure time (even when its hedonic utility might be correctly predicted) might be important enough to refuse the increase in money. As a result, goods and activities characterized by strong intrinsic attributes tend to have too little weight in decision-making compared to extrinsic components.

### *Intuitive Theories About the Sources of Future Utility*

People, of course, have diverse intuitive theories about what makes them happy (for a discussion, see Loewenstein and Schkade 1999). Such be-

beliefs in turn directly influence how people predict future utility and can cause them to make mistakes. Moreover, the beliefs play a significant role because they guide the reconstruction of past emotions and make them consistent with current self-conceptions (Ross 1989). Intuitive theories thus interact with the three discussed sources of misprediction.

An important belief refers to acquisition and possession as central goals on the path to happiness, that is, to materialism (see Tatzel 2002). It has been found that those with material (extrinsic) goals report lower self-esteem and satisfaction than those with intrinsic ones (for example, Kasser 2002; Sirgy 1997). This correlation is probably due in part to confounding unobserved personality traits such as neuroticism (McCrae 1990) and reversed causality, and in part to a compensatory reaction on the part of people with low subjective well-being. However, it might also indicate that people who believe intuitively in extrinsic attributes are prone to mispredict future utility. By contrast, those with intrinsic goals for personal growth, relationships, and community spirit apply intuitive theories emphasizing intrinsic attributes that in turn lead to few mispredictions in future utility. Our argument thus includes heterogeneity among individuals, which leads to additional testable predictions when combined with the three noted reasons for misprediction—underestimating adaptation, memory distortions, and rationalizing.

### *Commercialization*

The differential effect of misprediction between intrinsic and extrinsic aspects also depends on the extent to which the market is a factor. The monetarization of a good or activity induces individuals to focus more on extrinsic attributes than they otherwise would. This applies both to work and consumption. It has been argued that introducing pay for performance leads employees to regard those performance aspects, which are relevant for the compensation they receive, as dominant. By contrast, aspects of performance irrelevant for payment are crowded out (see Frey 1997 and, for a survey of empirical evidence, Frey and Jegen 2001). In the area of consumption, advertising is often directed to extrinsic aspects of the goods to be sold. By comparison, lobbies for intrinsic values tend to be weak and sometimes do not exist. To the extent to which commercialization occurs (see, for example, Lane 1991; Kuttner 1996; Bowles 1998), individuals are induced to make mispredictions of the future utility of goods. They are led to believe that the extrinsic characteristics will make them happier than intrinsic ones.

### *Mispredicting Utility and Individual Learning*

Systematically mispredicting future utilities, even if they differed between goods and activities, would be of little consequence for economics

if individuals learned quickly in repetitive choices.<sup>7</sup> Mispredicting would then be a disequilibrium phenomenon basically not affecting the notion of rational decision makers maximizing individual utility.

A large literature suggests, however, that learning is a complex process that does not necessarily lead to overcoming mispredictions. It is likely to be effective with regard to predictions only if multidimensional goods and activities are reduced to one dimension expressed in monetary terms. In that case, the individual can be assumed able to rectify mistakes to a greater degree within a short period. Standard economic models then fully apply, at least in equilibrium.

In the cases considered here, where the importance of various attributes differ between the time a decision is taken and consumption time, learning is much more difficult. Learning, when decisions about future consumption are concerned, must often be based on reconstructions of feelings. They are therefore subject to the same misperceptions as remembering the utility of past experiences (see earlier discussion on distorted memory). Learning is particularly hampered when episodic memories become too few and people rely to a large extent on intuitive theories (Robinson and Clore 2002). In consequence, remembered and predicted utility become similar and relatively independent of experienced utility. Terence Mitchell and colleagues (1997), for example, document this phenomenon in three survey studies about enjoyment predicted before, experienced during, and recollected after a trip to Europe, a Thanksgiving vacation, and a bicycle trip in California. Although participants enjoyed the actual trip less than predicted, they report enjoyment levels similar to those predicted after the trip when they recall the experience.

Learning is easier when people can access their feelings directly, that is, while experiencing a particular situation. It might even inspire them to adopt institutional preconditions to sustain optimal decisions after the event. Most readers will be familiar with the experience of not getting together with friends as much as one would like when reflecting about it immediately after the meeting. What inhibits most of us is that we often cannot recall the intensity of how enjoyable the experience was once we return to our daily routine. One of us experimented with trying to overcome this problem by fixing a date while still in the company of the friends and aware of that pleasure. The result was more frequent and equally enjoyable meetings. There are also moments of bliss and traumatic experiences that can abruptly change people's intuitive theories about what constitutes happiness.

In general, however, a more elaborate learning process is required. The individual must step back from actual decision making, where the extrinsic dominate the intrinsic characteristics. He or she should attempt to make an overall evaluation, including critical self-examination, or

should resort to what has been called double-loop learning (see Argyris and Schön 1978). Because such elaborate learning is more costly, and is in itself subject to error, individuals are not able to fully correct their mispredictions within a reasonably short time. In many cases, they are incapable of correcting to any degree, meaning that the misprediction of future utilities persists over time.<sup>8</sup>

Limited learning can well coexist with people's partial awareness of their or others' mispredicting utility.<sup>9</sup> Many people refer, for example, to difficulties and mistakes in balancing work and life. Yet still, on a case-by-case basis, they make decisions underestimating intrinsic relative to extrinsic attributes.<sup>10</sup>

## Consequences

The mispredictions of future utility from goods and activities, depending on their intrinsic and extrinsic attributes, have two immediate consequences. The first is that goods and activities with pronounced intrinsic attributes are underconsumed relative to those with pronounced extrinsic attributes. The second is that the systematic distortions in allocation due to utility misprediction reduce individuals' experienced utility according to their own best interests. These consequences and the discussed sources link up to various strands of literature where similar phenomena have been identified:

- The aspect of underestimated adaptation to new situations is neatly introduced in theoretical models of intertemporal decision making with habit formation (Loewenstein, O'Donoghue, and Rabin 2003). Based on their model of projection bias, various phenomena can be modeled, like the misguided purchase of durable goods or consumption profiles with too much consumption early in life. Misprediction of utility thus provides an alternative to seemingly irrational saving behavior that is usually addressed in a framework of individuals with self-control problems.<sup>11</sup> Interesting implications follow when people mispredict adaptation in situations where the endowment effect applies. The endowment effect is commonly understood as the result of people adapting to owning or not owning an object and people feeling higher utility losses in absolute terms when they give up the object than when they obtain it. Underestimating adaptation then leads to accentuated feelings of loss aversion and a much stronger endowment effect (Loewenstein, O'Donoghue, and Rabin 2003).
- It has been argued that the work-life balance of individuals today is distorted. People are induced to work too much, and to disregard

other aspects of life. This proposition has been forcefully put forward for the United States, where individuals are said to be overworked (Schor 1991). This is consistent with our hypothesis that individuals tend to focus too much on options characterized by strong extrinsic attributes, in particular income, compared to intrinsic attributes.<sup>12</sup>

- Competing for status involves negative externalities, and therefore too much effort is invested in gaining status and acquiring what are called positional goods (Frank 1985, 1999). Such goods are characterized by strong extrinsic attributes. The saying “keeping up with the Joneses” reveals that consumption is externally oriented. Thus misprediction of utility is likely to magnify the distortions of status competition in consumption.
- Procedural utility—that is, the satisfaction derived from the process rather than from its outcome—relates to innate needs. The utility derived from a particular process contributes to competence, relatedness, and autonomy, and is therefore closely related to the intrinsic attributes of goods and activities (see survey by Frey, Benz, and Stutzer 2004). Our propositions anticipate that typical decision making will underestimate sources of procedural utility. Consistent with this idea, it has been empirically shown (Tyler, Huo, and Lind 1999) that, when making decisions, individuals tend to prefer institutions promising favorable outcomes. But afterward they state that they would have preferred an institution putting more emphasis on (just) procedures.
- There is a long tradition in economics arguing that individuals tend to focus too much on material goods and disregard goods providing nonmaterial benefits (see Lebergott 1993; Lane 1991). Most important, Scitovsky (1976) claimed that comfort goods, compared to those providing stimulation, are overconsumed. The former have a strong extrinsic component, and the latter correspond closely to the intrinsic aspect, as stimulation renews the satisfaction denied.<sup>13</sup>
- An empirical test of people mispredicting utility analyzes people’s decisions for commuting longer or shorter hours (Frey and Stutzer 2003). The decision involves the trade-off between the salary or the quality of housing on the one hand and commuting time on the other. Rational utility maximizers commute only when they are compensated. However, when people overestimate utility from goods serving extrinsic wants, they are expected to opt for too much commuting and suffer lower utility. Findings indicate that commuting is by far not fully compensated and, on average, people who commute one hour one way would need an additional 40 percent of their monthly wage to be as satisfied as those who do not commute. There is, how-

ever, significant variation between people. Incomplete compensation is much stronger for those with strong extrinsic life goals.

## Mispredicting Utility and the Political Process

We speculate in our analysis how politics affects the utility losses incurred by individuals due to their misprediction of utility. In particular, does political intervention (that is the supply of public goods, services, and regulations) mitigate or accentuate the utility loss due to individual misprediction?

### *Government Reactions: Four Models*

We proceed by considering two ideal types of government implied by the classical welfare theoretic approach and by the (dominant) public choice approach. We then consider two more realistic models of government, one dictatorial and one democratic.

#### *Omniscient Benevolent Dictator*

The traditional social welfare approach implicitly and often explicitly assumes an omniscient benevolent dictator (see Brennan and Buchanan 1986; Buchanan 1991). The dictator has the power to put all political ideas into action. He is completely informed and has the best of intentions. He wants to help individuals to reach the highest utility possible according to their own evaluations.

The dictator offers many public goods with strong intrinsic attributes, despite the fact that the individuals do not value them highly when they learn about the dictator's decision. But the dictator knows that the individuals will value them more highly in the future. Because the dictator also knows individuals' discount rate, he is able to provide those public goods, producing maximum accumulated experienced utility over time. The public goods and services supplied promote personal interaction in a number of ways: by providing communal meeting places, by granting paid maternity leave, by regulating shopping hours or the maximum work week, by supporting the arts and sports, and so on. The applied policies foster people's self-determination by giving them a say in economic democracy and by providing full employment.

In contrast, the dictator offers few public goods with strong extrinsic attributes. He correctly foresees that the individuals get used to them and that they will reap lower utility in the future. These are public goods, services, and regulations, spurring growth in consumption such as subsidized mobility or the abandonment of employee protection.

An omniscient benevolent dictator thus does not mispredict the utility

people get from public goods in the future and may to some extent even correct people's mispredictions of their future utility derived from the consumption of goods and services in the private realm.

This approach is faced with fundamental problems (Buchanan and Tullock 1962; for a survey, see Frey 1983; Brennan and Buchanan 1986). No dictator has full discretionary power to undertake the benevolent policies. He is to some extent restricted by other actors, in particular by competing elites such as the military and other politicians. He has little incentive to become informed about the preferences of the people, and no incentives to correct their mispredictions about their future utility. Rather, a dictator pursues his own interests, consisting in creating a good life for himself, his family and his cronies, and securing his position.

The omniscient benevolent dictator, however, is indeed no more than an ideal.

### *Perfectly Competitive Parties in a Democracy*

The dominant approach in the economic theory of politics, or public choice, is what is called the median voter model, resulting from "perfectly competitive parties in a democracy" (Downs 1957; for a survey, see Mueller 2003). In this model, two parties exist with continuous elections and complete voter participation. Under these conditions, the policies undertaken converge to the preferences of the median voter. Because nothing is known about the distribution of preferences with regard to goods with different intensities of extrinsic and intrinsic attributes, a normal preference distribution can be assumed, so that the median voter is the average voter and citizen.

The party leaders are not fully informed, but seek to collect enough information to take care of the average voters' preferences. Neither of the parties have any discretionary leeway, but must aim at fulfilling the median voter's preference. At election time, the parties must offer policy bundles that please the voters. They offer public goods with strong extrinsic attributes, but whose future utility is overestimated. They cannot afford to supply public goods with strong intrinsic attributes, because the voters do not predict their higher future utility and vote strictly instrumentally. Income transfers, tax reductions, material goods, and policies spurring growth are thus preferred, and public goods with strong intrinsic attributes and policies favoring interaction and "good" processes are disregarded.

In a "perfectly competitive democratic system of party competition," individuals' mispredictions are carried forward in the provision of public goods and services, and individual biases might even be accentuated rather than corrected.<sup>14</sup>

This standard public choice model can be criticized from several per-

spectives. For a start, the situation of perfect political competition with strictly two parties exists nowhere. In every country there are more than two parties competing or potentially competing with each other, and with more than two parties, there is either no equilibrium (for three parties) or different or several equilibria (Selten 1971; Mueller 2003). Furthermore, the demand and supply side of the democratic process is full of imperfections. In particular, the incumbent party has great advantages over its contenders. Information about individuals' preferences is seriously limited. Moreover, people decide about candidates and issues after election and voting campaigns with widespread political debates, which partly form people's preferences.

The model of perfect party competition, like the benevolent dictator, is again an ideal. We will now discuss two more realistic types of government, one a paternalist government in an authoritarian system, the other a majority government in a democracy.

#### *Paternalist Government in an Authoritarian System*

The government has the discretionary power to undertake those policies it sees fit to implement, but is limited by other actors. The people's preferences, however, play only a small role because the probability of what is basically an authoritarian government being toppled by a popular uprising is small (see Tullock 1987). Nevertheless, the ruler pacifies the people, especially in the capital, by offering panem et circenses—that is, public goods with strongly extrinsic attributes and with low future utility. The authoritarian ruler needs to be concerned about a possible takeover by the military or police, or perhaps by the political or social elite. He therefore makes an effort to check such aspirations by providing both material benefits (such as a good income and easily exploitable monopolistic positions) and immaterial rewards such as titles and orders. At the same time, he threatens hard sanctions if anyone opposes him. The ruler's information is incomplete, though he makes a great effort to know what people think and what is going on in the country. The information he receives, however, is typically distorted. His underlings have learned that they do best when providing information that favors the ruler.

A paternalistic ruler tends to accentuate individual utility losses due to misprediction because he offers public goods with strong extrinsic attributes. But this effect is somewhat mitigated by the fact that the ruler may have a long-term view. The authoritarian German Democratic Republic, although economically inefficient, may have had one good side, namely fostering conditions that enabled community interactions such as volunteering (see Meier and Stutzer 2004).

*Majority Government in a Democracy*

To stay in power, a party in a democracy must be re-elected. The government has little discretionary room at election time if its re-election chances are low. In that case, it has an interest to cater to voters' short-term preferences. It supplies and promises public goods with marked extrinsic attributes expressly to please the voters. These are the well-known election presents consisting mainly of monetary transfers, and such policy aggravates individuals' utility losses due to misprediction. A majority government thus tends to discontinually accentuate individuals' losses due to misprediction. This is the best strategy, even if voters experience and realize after elections that the policies are suboptimal.

Many government parties, however, are reasonably confident of winning the next elections and are not forced to undertake policies aimed at producing short-term benefits. Moreover, once the elections are over, the party in power has considerable leeway to pursue a policy following its own ideological preferences (see the econometric models of government behavior and of the political business cycle in Frey and Schneider 1978a; 1978b). Depending on its ideology, public goods will be offered, which may accentuate or reduce individuals' utility losses due to misprediction. Before the fact, it is not known whether a move in the direction of extrinsic or intrinsic attributes will prevail.

*Extending Models of Politics: Learning by Individuals*

Political discourse is a critical factor of the political process in a democracy: "The definition of democracy as 'government by discussion' implies that individual values can and do change in the process of decision-making" (Buchanan 1954, 120). In addition, people's behavior in the political realm is strongly influenced by their motivation to express their values and views (Brennan and Lomasky 1993; for empirical evidence, see, for example, Copeland and Laband 2002). Both aspects potentially allow for political decisions not biased by misprediction of utility from publicly provided goods, services and regulation. It might even be possible to overcome some of the negative effects that misprediction produces in individual decision making in the private realm. Public discourse not only enables learning for individuals, it also creates an incentive for governments to respond to citizens' needs.<sup>15</sup>

The four psychological sources of misprediction analyzed earlier can be transformed in the process of political discourse and expressive voting. In political discussions, people bring in their ideas of what would be good for them in general. They are thus partly aware of their misprediction in day-to-day decisions. Examples are the debates about working-

time restrictions. At least some arguments hold that spending time with family and friends brings renewed pleasure, and that it is futile to accumulate more and more material goods.<sup>16</sup> That there are differences in the degree of adaptation thus realized. Individual decisions often have to rely on experience. Discussions, however, open the door for exchange with those experiencing a particular situation, such as being unemployed. Biases due to distorted memory or missing experiences are thus attenuated. As voters make a decision, which affects their fellow citizens as well, other reasons for rationalizing and justifying decisions are taken into account. Moreover, secret ballots make it not necessary to choose extrinsic attributes to facilitate justification toward other people. In the act of voting in favor of an issue, or voting for a candidate, the awareness of the problem can thus be expected to be expressed. The most fundamental contribution of political discussion is about changing intuitive theories of happiness. It can be expected that the more the discussion fulfills the normative criteria of a discourse free of constraints (in the sense of discourse ethics see, for example, Habermas 1993), the more likely existing beliefs about the sources of happiness are challenged and reconsidered.

Substantial evidence indicates that people base many of their opinions on what they discuss with others (see, for example, Huckfeldt and Sprague 1995; Walsh 2004). To learn about the ideas of other persons, the composition of the discussion group is relevant. To gain greater awareness of rationales for alternative perspectives, the extent to which the group includes people with opposing views is important (for example, Mutz 2002). Beyond its effect on political tolerance, discussion also affects behavior. In many laboratory experiments, the role of discussion in affecting individuals' decisions about contributing to public goods is clearly demonstrated (see, for example, Bohnet and Frey 1999).

The intensity and quality of political discussion depends, of course, on the type of democratic political institutions existing and the organization (or property structure) of the media. In a democratic system with proportional representation, a broader range of arguments is put forward than in a majoritarian system with what are often mainly two parties (see, for example, Karp and Banducci 2002; for New Zealand, a country that switched to proportional representation). In a democracy allowing for direct democratic participation in important policy areas, issues not discussed in an election campaign focusing on a limited range of topics are taken up and put to the vote. In an empirical study for Switzerland and the European Union, citizens' information about politics is related to the degree of direct democracy in Swiss cantons and whether national referendums about EU treaties were held (Benz and Stutzer 2004). Findings indicate that citizens know more and feel subjec-

tively better informed when they have a say in politics. This result is argued to be due to the public debates preceding and following referendums. Political discussion in public is more likely to involve and affect politicians when they are organized in relatively democratic party structures than in strict party hierarchies that can easily enforce faction discipline (Teorell 1999). Arguments discussed in the media, and free from political influence, are more likely to challenge individuals' beliefs about the sources of happiness than those put forward in the media and captured by special interests or monopolistic media moguls.<sup>17</sup> Media ownership structures vary widely across countries (Djankov et al. 2003). In many instances, strong government influence is related to less freedom of the press, fewer political rights for citizens, and inferior governance and health outcomes. Having free media does not necessarily mean that people are exposed to alternative perspectives and are prompted to reflect on the reasons for their beliefs. First, people might simply choose media content that reflects their beliefs. Second, exposure to contrary information can also strengthen existing attitudes, depending on how people cognitively respond to opposing views (Sieck and Yates 1997). All these aspects can potentially serve as empirically testable hypotheses about the extent to which misprediction is carried forward in decisions in the democratic process, or the extent to which political decisions can help to prevent wrong decisions on the individual level.

### *Inputs into the Discourse Process to Counteract Individuals' Misprediction of Utility*

Quite a number of proposals can be put forward in the discourse process to reduce individuals' misguided pursuit of status and material possessions and to make choices with strong intrinsic attributes, such as spending time with family and friends, relatively more attractive. Most straightforward from an economic perspective are proposals to tax consumption more heavily, whether by a consumption tax (Frank 1999) or by a high income tax (Layard 2005). Other proposals involve subsidies of goods that are underconsumed rather than taxation of goods that are overconsumed. Most prominent is Scitovsky (1976), who argues for government support of the arts, architecture, and education to bring about more stimulation than comfort in people's lives.

Another variety of government intervention is regulation, or setting defaults. Many specific areas allow for rules that make leisure time more attractive. This is addressed most directly by working-time regulation. Mandatory maximum working hours may help to coordinate on earning less money that can be spent for positional goods. Such regulations can, of course, be partly circumvented by holding a second job or working in the shadow economy. However, they may have a strong expressive com-

ponent. It becomes salient that working less, given the income level reached, would be good. The respective rule might help to justify working fewer hours and spending more time socializing. Policies for maternity and parental leave fall along the same lines (for an overview, see OECD 1998). These are promoted as family-friendly policies to help create a better balance between work and family life. Regulation of shopping hours is another regulation that might help coordinate leisure time and free people from negotiating a trade-off between time shopping and time working on the one hand, and meeting friends or pursuing a hobby on the other hand.

When people overestimate utility from consumption and form consumption habits, they might end up spending too much early in life and saving too little for retirement (Loewenstein, O'Donoghue, and Rabin 2003) or even accumulate debts from consumer credits. One possible reaction from the regulator is to restrict consumer credits (for example, by maximum interest rates) and, in the case of saving for retirement, to introduce mandatory pension schemes. However, these interventions might entail high costs for those less prone to misprediction because they cannot escape the regulations. An alternative is provided by regulations that apply what is known as asymmetric paternalism (Camerer et al. 2003), which permit opting out of contracts designed to help overcome biases in decision making. A pertinent example is savings plans that provide self-binding mechanisms. One possibility are plans for which employees are automatically enrolled (default option) when they start a job and need to actively opt out of when they no longer want to follow the savings plan. In another program, employees are asked to commit in advance that they contribute a fraction of their future salary increases into a savings account (Thaler and Benartzi 2004).

Misprediction is argued to have particularly marked effects when it coincides with the endowment effect. Many policy arrangements can be illustrated to mitigate mistakes in decision making. For example, when books and newspapers are sent to consumers without having been requested, the perception of succumbing to the endowment effect may be raised by facilitating comparison. For this purpose, comparative advertising by competing suppliers (which would, for example, point out the higher price charged) or by consumer agencies, may be encouraged or mandated. For striking a deal, the consent of both adult members of a household might be required by law. Self-commitment could be facilitated if people have the right to have all unsolicited goods and services automatically returned to the sender (at the sender's expense). In some cases, one could have the right to exclude oneself from being able to do business.<sup>18</sup> A further possibility is to make the right to withdraw from contracts mandatory for consumers.

### *Examples of Existing Policies*

Some of the policy proposals are in place in various countries. Whether the democratic systems in these countries are in fact characterized by institutions that facilitate an effective political discourse, however, needs to be left to future research. (We will formulate corresponding testable propositions shortly.)

Table 5.1 shows the adoption of policies affecting individuals' allocation of time for a range of developed countries with democratic governments. Column 1 reports on the provision of maternity leave. The indicator is the product of the number of weeks of maternity leave and the rate of pay during those weeks (OECD 2001, 144). Although there is no mandatory maternity leave provision in the United States, Australia, and New Zealand, the Scandinavian countries of Denmark, Finland, and Sweden have extended programs. All three guarantee an equivalent of thirty or more weeks of fully paid maternity leave. There are, of course, many differences in the national provisions not accounted for in the rough summary indicator.

The second policy brought into perspective is the legal maximum number of working hours per week (OECD 1998, 168). Despite many country specific rules, an overview is possible about whether working hours are a policy issue. Six developed countries portrayed in table 5.1 do not restrict the number of maximum working hours per week—namely, Canada, the United States, Japan, the United Kingdom, Australia, and New Zealand. The most restrictive arrangement is in Finland, setting a maximum of forty-five hours per week.

Data quality is worst for the regulation of shopping hours. In many countries, opening hours are at least partly regulated at the sub-federal level. As an indicator for opening policies, the maximum weekly opening hours between 8 a.m. and 12 p.m. are reported (Pilat 1997). Many countries do not restrict opening during this time frame, indicated by a number of 112 hours. At the other end of the range is The Netherlands, setting the maximum opening hours at fifty-five hours.

### *A Reconsideration of the "Enlightened" Policies*

The free public debate is not the only factor influencing government policy making. Besides the individual interests of the professional politicians, special interests come into play. These seek to influence the political process to get regulations that generate or maintain rents for them. Well-organized producer interests may well oppose many of the mentioned policies because they might reduce the returns on their invested capital (see, for example, the opposition against legislation that protects a woman's job during maternity leave). Producers of consumer items

Table 5.1 Legal Policies Affecting Work-Life Balance

	Maternity Leave Provision 1999 to 2001	Legal Maximum Weekly Working Hours 1990s	Legal Maximum Weekly Opening Hours (8 to 24 hours) 1990s
North America			
Canada	8.25	none	—
Mexico	12	57	—
United States	0	none	112
Asia			
Japan	8.4	none	—
South Korea	8.5	56	—
Europe			
Austria	16	50	—
Belgium	11.55	50	73
Czech Republic	19.32	51	—
Denmark	30	48	63.5
Finland	36.4	45	80
France	16	48	112
Germany	14	60	66.5
Greece	8	48	112
Hungary	24	52	—
Ireland	9.8	60	112
Italy	17.2	60	66
Luxembourg	16	48	—
Netherlands	16	60 (maximum average over 13 weeks is 48)	55
Norway	42	50	80
Poland	18	—	—
Portugal	24.3	54	112
Slovak Republic	25.2	—	—
Spain	16	47	112
Sweden	40.32	48 or 52	112
Switzerland	—	61 or 66	—
Turkey	7.92	—	—
United Kingdom	7.92	none	102
Oceania			
Australia	0	none	—
New Zealand	0	none	—

Sources: The index of national maternity leave provision is the product of the number of weeks of maternity leave and the rate of pay during those weeks. Data is from OECD *Employment Outlook 2001*, table 4.7, columns 4 and 5. Legal maximum weekly working hours data is from OECD *Employment Outlook 1998*, table 5.10, column 3. Data for legal maximum weekly opening hours of shops is from Filat (1997).

Note: — = data not available.

might even oppose the regulations mentioned because they benefit from people spending too much on their goods due to misprediction. Alternatively, well-intended policies are often influenced by special interests and misused for their rent seeking purposes (see the extensive debate about insider protection at the workplace at the expense of unemployed people, or the regulation of the retail sector to protect traditional suppliers from large new entrants).

### *Empirically Testable Propositions*

It is in the nature of the addressed anomaly that tests based on behavioral traces are difficult. Mispredicting utility involves behavioral consequences that seem optimal for predicted utility but lead to a lower level of experienced utility. Therefore, we propose tests that involve reported life satisfaction, happiness or other measures of subjective well-being as proxies for people's utility (for an introduction to happiness research in economics see Frey and Stutzer 2002a, 2002b). Happiness research is increasingly used in economics to test behavioral theories (for a discussion, see Frey and Stutzer 2005). Moreover, research on subjective well-being contributes significant insights into the sources of people mispredicting utility.

There are two sets of testable propositions that follow from the analysis. The first refers to the different predictions following from the four models of government. The second takes up the refined modeling of the political process, including political discourse and learning. These propositions are preliminary.

- Democracies typically show less bias in consumption. People therefore enjoy higher utility than in authoritarian and dictatorial countries because in democracies governments have less need to please the opposition with goods and services providing immediate gratification. This is consistent with first evidence in Inglehart and Klingemann (2000): "New evidence from the World Value Survey supports the hypothesis that a society's level of subjective well-being is closely linked with the flourishing of democratic institutions" (177). However, the prediction of the first proposition is difficult to disentangle from the positive incentives in democratic competition to heed citizen preferences.
- Benevolent authoritarian systems provide a less distorted set of public goods and therefore more happiness than nonbenevolent systems because they try to mitigate individual biases attributable to misprediction rather than exploit them. What is benevolent must be determined after the fact.
- Incumbent governments in a tight race for re-election produce a higher consumption bias and therefore lower happiness than majori-

tarian democracy governments with strong chances for re-election, because the former offer or promise goods for which citizens predict high utility.

- Re-election probabilities can be determined after the fact. Thus, reported subjective well-being is lower after a close election than after one with a clear confirmation of the incumbent party.
- Precautionary policies are more likely in countries characterized by institutions that foster public discourse (such as free media, proportional representation, referendums, democratic party structures). Proxy measures for involving people in discussions about politics are often included in public surveys. These measures can serve as intermediary variables. People in countries applying precautionary regulations are expected to be more satisfied with their lives.

## Conclusion

This chapter has pursued two goals. First, it introduces a decision framework with people mispredicting utility that leads to systematically sub-optimal behavior. Second, the consequences of this anomaly are studied for different characterizations of the political process.

Individuals are argued to systematically mispredict the future utility of goods consumed and activities undertaken. Goods and activities characterized by stronger intrinsic aspects (such as spending time with family and friends and pursuing hobbies) are undervalued compared to those characterized by stronger extrinsic aspects (such as income). Although people are partly aware of this anomaly, they err when making decisions on a case-by-case basis. Learning is slow and imperfect, meaning that the distorted decisions are preserved over time. Because of this, individuals obtain a lower utility level than if they were not subject to this systematic bias of misprediction.

The result that the individuals are worse off according to their own best interests distinguishes us from the more traditional consumption critique, according to which individuals are not able to choose what is best for them—but what is “best” is evaluated according to outside preferences.

Consequences of mispredicting utility are not restricted to the private realm, but also affect people’s behavior as citizens. Two modes can be differentiated. First, on a case-by-case basis in the current political process, citizens evaluate government policy, underestimating intrinsic attributes relative to extrinsic attributes. Second, however, the political process can also generate conditions such that citizens get a more detached view of their evaluation and become partly aware of their or others’ misprediction of utility.

In the first mode, the effects of mispredicting utility are carried forward or even accentuated in the political process. This mode might accurately describe government decision making in a perfectly competitive democratic system of party competition. The two parties cannot afford to deviate from the short-term evaluation of their program by the median voter and have to provide a policy bundle with strong extrinsic attributes. The model of perfect party competition is, however, an ideal type that doesn't exist. The analysis might, however, also hold in situations when the re-election chances of the incumbent government are low, and it starts giving presents to cater to voters' short-term preferences.

The first mode with immediate gratification is also characterizing the policy that has to be pursued by an authoritarian ruler. Offering *panem et circenses* is necessary to pacify the people, mainly in the capital, and providing material benefits to the elite is necessary to prevent a military or police takeover.

The second mode with citizens being at least partly aware of their anomalous day-to-day behavior is a more accurate description of modern democracies. There, the political discourse is the crucial mechanism that allows learning in the political process and provides incentives to the government to be responsive to citizens' long-term preferences. Although some institutional conditions are known that facilitate public debate, there are many other institutions for which only untested propositions are put forward.

Many policies can be put forward to mitigate the consequences of people mispredicting utility, but we are only beginning to understand whether they are also effective in correcting people's biases and thus increasing individuals' well-being, or whether they are mainly the result of rent-seeking activities.

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## Notes

1. We borrow these categories from a large literature in humanistic or value psychology (for example Maslow 1968, Rogers 1961).
2. The underlying theories are manifold, and comprise, for instance, people's urge to master their environment for its own sake (White 1959), of being an origin (DeCharms 1968), people's resistance to loss of control (Brehm 1966) and the reflection of perceived control in more effective behavior and higher positive affects (Bandura 1977; Seligman 1992).

3. When people spend time with friends because they are famous and important, the extrinsic dimension becomes more prevalent.
4. Both utility measures—predicted and experienced utility—diverge from traditional decision utility derived from individual behavior. Utility is rather understood as a hedonic experience (see Kahneman, Wakker, and Sarin 1997).
5. Standard research designs are prospective longitudinal studies on self-reported emotions. People are asked how happy they expect themselves to be after some event has happened or some option has been chosen. These predictions are then compared with reported subjective well-being after experiencing the new situation. There are several limits to this design. First, usually only predictions for changes in the near future are assessed. Second, the way in which scales of measurement are interpreted can change over time, due to maturation or a change in the anchor, for example. Third, predictions might also affect actual feelings or might even become self-fulfilling prophecies. Some of these problems can be eliminated by conducting studies between subjects, where one group's predictions are contrasted with a different group's actual reports.
6. Young academics might be particularly worried about life after a negative tenure decision. Daniel Gilbert and his colleagues (1998) asked assistant professors how happy they would be after a positive tenure decision and after a negative one. The answers were compared with reported subjective well-being of academics affected by a tenure decision made five or less years before. Although assistants predicted they would be less happy during the first five years after being turned down, there was no statistically significant difference between those who had and had not gotten tenure. Similarly, assistants also overestimated the positive impact of receiving tenure on their well-being.
7. In contrast, for choices made once-in-a-lifetime, learning is no option. Biased decisions can then well affect the life path. We believe that misprediction of utility matters a lot in such life decisions (like career choice) but we do not study them here.
8. A more fundamental reason for people's limited learning might lie in some advantage misprediction provides in the evolutionary process. Luis Rayo and Gary Becker (2003) model how humans' utility functions formed in order to maximize success in genetic replication. Their model rationalizes that people neglect adaptation (described as self-inflicted externality). In today's world, this utility function with an inbuilt misprediction, however, is no longer helpful to guarantee an optimal mix between experienced utility and motivation for success in society.
9. Systematic differences between self-evaluation and the assessment of others' decisions is likely due to overoptimism (Weinstein 1981). Thus people are overly confident about their own ability to make the right decisions, yet at the same time being aware that the average person mispredicts utility.
10. This argument is similar to the ones about sophisticated and naive people who are fully or not at all aware of their future self-control problem (for a discussion of self awareness, see O'Donoghue and Rabin 2003).
11. In Loewenstein, O'Donoghue, and Rabin (2003), however, there is no ex-

- PLICIT modeling of differences in adaptation across goods, attributes of different options or people.
12. There is an apparent paradox that working provides intrinsic benefits but that there can nevertheless be too much working due to mispredicting utility. The paradox vanishes when the two natures of work are taken into consideration. Although intrinsic work enjoyment and flow might in fact be undervalued in job choice decisions, people focus on the monetary compensation when trading off additional working time and time for leisure activities. For given intrinsic and extrinsic job attributes, this is hypothesized to lead to too long working days.
  13. One might argue that the over-consumption of comfort goods and related biased decisions are rather explained by agents having self-control problems (see, for example, Laibson 2005 on intertemporal decision making). These agents choose goods and activities providing short run gains and incurring long run costs. However, mispredicting utility rather portrays the other extreme of people. Individuals mispredicting utility may choose to work extra hours over a long period of time in order to buy some prestigious car in the end from which long lasting satisfaction is expected.
  14. We are aware that the median voter model has been further developed. Recent accounts include, for example, the problem of mobilizing voters, fundraising, party organization, and ideological capture by special interests. Future elaboration should take these extensions into account when analyzing how the misprediction of utility is transformed into policies.
  15. There is strong evidence that information through the mass media encourages political competition and increases government responsiveness to citizens' preferences (Besley and Burgess 2002; Stromberg 2004).
  16. In a national referendum held in Switzerland in 2002, people voted on a drastic reduction in the maximum number of legal working hours, as proposed in a popular initiative. One of the main arguments in favor, advanced by the initiative committee, emphasized an improved work-life balance: "Long working weeks and stress become a health risk for more and more people. Too much work makes people ill and work on demand is poison for family life. There is less and less time for social contacts, education, culture, sports or voluntary work. The initiative of the SGB stops this and brings working hours in line with health and allows for a better balance between family, job and leisure" (Federal Chancellery 2002, 19, our translation).
  17. For the role of the media in exposing citizens to cross-cutting political viewpoints, see, for example, Mutz and Martin (2001).
  18. In some casinos in Germany and gambling halls in the Canton of Zurich, Switzerland, one can officially request that one be denied access to these places.

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