Chapter 11

Protected values and economic decision-making

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Values in economic decision-making

The concepts of “economic value” and economic decision-making

In economics, the term value is primarily associated with goods and services and describes their economic benefit. Yet, this economic benefit has more than one origin. Indeed, ever since Adam Smith (1776, book 1, ch. 4, p 28), in a famous passage from the “Wealth of Nations,” two meanings of value have been distinguished: the term “value in use” refers to the usefulness, the utility, or the “desiredness” of a given good (Bowley 1973), while the term “value in exchange” refers to the idea that the value of goods or services depends on their ability to be exchanged for a given price on the market. Importantly, as Edgeworth would write: “The value in use of a certain quantity of commodity corresponds to its total utility; the value in exchange to its marginal utility (multiplied by the quantity). The former is greater than the latter, since the utility of the final increment of commodity is less than that of every other increment” (Edgeworth 1899: 602). From there, one of the core aspects of market pricing is that any set of goods can be compared—based on their values in exchange—and that tradeoffs between competing goods are always feasible.

Besides the values-in-exchange paradigm, the standard economic choice model of the homo oeconomicus additionally rests on the related assumption that individuals make choices simply by comparing the utility—or expected discounted utility under uncertainty—of the outcomes (generally payoffs) associated with various alternatives. This paradigm underlying most economic choice modeling has had widespread applications to consumer, investor, worker, and other economic agents’ decisions. It has also been widely used to derive social welfare implications. However, the standard economic choice model has, since its inception, also been subject to a number of technical and conceptual criticisms. First, economists have ever since the 1930s questioned whether utility can be cardinally or simply ordinally measured and whether interpersonal utilities could be compared. Second, and more importantly for the purpose of this chapter, the standard economic choice model is essentially consequentialist in that it only focuses on the outcomes (payoffs) associated with the various alternatives and abstracts from any notion of

rightness or wrongness associated with the process leading to those various alternatives. The process by which an outcome is chosen is deemed irrelevant to the decision-making and thus makes this model ill-suited to choices involving cheating, fraud, injustice, or other immoral behaviors to generate higher payoffs. Third, in its simplest version this model offers a reductionist vision of human character in which economic agents act solely based on their self-interest and only care about their own utility irrespective of the consequences of their choices for others.

The moral foundations of economic decision-making

Do the above considerations imply that the standard economic choice model only provides a selfish and instrumental perspective of human nature (the traditional perspective) and thus is “value-neutral,” a term chosen by Sandel (2013: 122), or, alternatively, that one can nevertheless reconcile this model with a more elevated sense of morality? We attempt below to provide an answer to this delicate question.

According to the Oxford dictionaries, a moral act is “concerned with the principles of right and wrong behavior.” Thus, one may wonder how a choice model that is based on self-interest and on extrinsic motivations, as claimed by the traditional perspective, can bear a moral dimension. In order to identify the latter one, we have to remember that economists have been, since the eighteenth century, concerned with the implications of that standard choice model for aggregate wealth allocation purposes.

Economics has been, and remains, under the influence of utilitarian moral and political philosophies, which have been defined by Riley (2008) as considering “general utility or social welfare as the sole ethical value or good to be maximized.” Early utilitarians assumed that this maximization of general utility would take place in an orderly society governed by certain rights. For Bentham, these legal rights “must include among others, a right to subsistence and, consistently with that, rights to keep or trade the fruits of one own labor and saving so as to foster abundance” (Riley 2008). Mill saw the importance of the role of justice and, as Riley (2008) points out, for him, “this complex feeling of security can be fully experienced only by cooperating with others in terms of an optimal code that distributes equal rights and correlative duties among individuals.” Thus, utilitarians early on recognized the need for some basic or fundamental rights that would discipline humans’ selfishness and provide for some redistribution of wealth in the economy.

More than 200 years later, the debate about the nature of the morality surrounding economics and markets is still open. Philosophers, like Sandel (2013), argue that markets are not “value-neutral” but may affect—through the “crowding out”¹ of humans’ intrinsic motivations—and corrupt nonmarket norms as soon as some originally non-tradable goods or services—for instance, blood giving—become marketable. Sandel (2013: 139) thus invites modern economics to reconnect with “its origins in moral and political

¹ In economics, crowding out occurs when increased government borrowing, a kind of expansionary fiscal policy, reduces investment spending. The increased borrowing “crowds out” or “forces out” private investing.

philosophy.” Others, like Bruni and Sugden, (2013) shed a more optimistic light on the morality of economics. Indeed, the latter authors use the methods of “virtue ethics” to show that the ultimate goal of the markets is to “facilitate mutually beneficial exchange.” They further argue that in the process of accomplishing this mission, markets do possess certain fundamental virtues such as “universality, enterprise and alertness, trust and trustworthiness, acceptance of competition, self-help, non-rivalry, and reward stoicism.” They conclude by asserting that these market virtues “do not, as some moral critics of the market might have expected, merely normalize egoism and instrumentality: they are genuine virtues that can be upheld with authenticity.”

In parallel to this philosophical debate about the moral foundations of economics, behavioral and experimental economists and psychologists have since more than two decades, enriched the standard economic choice model, by introducing “social preferences” into the standard utility based decision-making framework. Ernst Fehr and others were pioneers who recognized that consequences for (and thus payoffs to) others also matter in terms of how individuals make individual choices; in particular, if they display a concern for altruism (Fehr and Fischbacher 2003), for reciprocity (Fehr et al. 1993), and for fairness (Fehr and Schmidt 1999; Güth et al. 1982; Kahneman et al. 1986). Decision models relying on social preferences have found support in numerous laboratory games and field experiments, and it is widely accepted nowadays that choice models relying only on pure self-interest are too simple and reductionist in that they abstract from the fact that individuals are fundamentally social and heterogeneous in terms of their pro-social concerns.

More recently, other moral dimensions of economic decision-making, in particular the interest and recognition of humans’ propensity to cheat or lie, entered and transformed the standard economic choice model. Indeed, several authors (Erat and Gneezy 2012; Gibson et al 2013; Gneezy 2005; Sanchez-Pagès and Vorsatz 2007; among others) recognized that some individuals are averse to lying per se and thus incur lying costs that may counteract the monetary benefits associated with the lying or cheating option. The origin of the lying costs referred to in these “extended preferences” choice models is still hard to identify and in particular it remains an open debate whether the desire to act honestly is rooted in self-ish (such as signaling one’s self-image) or in unselfish motivations (such as valuing truth in and of itself). This is perhaps a focus area where economics can learn a lot from the deontological foundations to morality recognized early on in philosophy and more recently in psychology.

The next section reviews research in psychology focusing on the role of deontological considerations in decision-making with a special emphasis on the features of so-called “protected values.” The section titled “Honesty as an important example of moral values” starts by examining a specific moral value, namely honesty, and discusses how the literature in psychology and in economics has explained the determinants of honesty. The section next describes our own experimental evidence of the role of protected values for honesty in economic decision-making. The section titled “Some speculative thoughts on policy relevance and implications for finance professionals” offers some speculative thoughts on the relevance of research on moral—and more specifically on protected values—for

various business policies. Finally, the section titled “Conclusion: some open issues in research on honesty and economic decision-making” surveys some open research topics regarding the role of moral values in economic decision-making.

Deontology and protected values

While traditional research on judgment and decision-making has predominantly focused on the role of consequences, the field of normative ethics centuries ago considered deontology as another basic moral orientation in moral decision-making. Unlike consequentialism, deontology, from the Greek word *deon*, or duty, emphasizes the desirability of obligations, principles, or rights, irrespective of the consequences. It refers to morally mandated actions or prohibitions, such as the duty to keep promises or the duty not to lie. Influential examples of deontological rules are the Ten Commandments or Kant’s categorical imperative (Kant 1797). It is only recently that the role of deontological orientation has also become a subject of interest in (descriptive) decision-making research (Greene 2007). In this section, we draw on a recent research line in social and cognitive psychology that reflects deontological orientations and provides evidence for values that challenges some principles of rational choice theory.

This research line has proposed that people sometimes endorse *protected values* (Baron and Spranca 1997; Ritov and Baron 1999), also called *sacred values* (Atran et al. 2007; Fiske and Tetlock 1997; Tetlock et al. 2000) or *taboo values* (Lichtenstein et al. 2007). They refer to objects or behavioral standards that people believe ought to be absolute and protected from (utilitarian) tradeoffs because they tap into moral or ethical principles or are central to one’s moral identity. Such values are treated as non-compensatory, incommensurable and “not for sale.” What counts as protected values, however, varies across social groups, culture, and historical periods. Importantly, protected or sacred values possess specific characteristics that go beyond simply attributing importance to specific values. We review here a few of their main features.

Tradeoff reluctance

Protected values are often associated with enhanced or even absolute *tradeoff reluctance*—the phenomenon that people deem certain tradeoffs as not permissible (Atran et al. 2007; Baron and Spranca 1997; Fiske and Tetlock 1997; Ritov and Baron 1999; Tetlock et al. 2000). For example, many people think that it is morally unacceptable to compromise freedom, love, honor, human rights, or human lives in return for other values, in particular economic benefits. Many people would never sell friendship for money—no matter how much money is offered (see also Sandel 2012, for more examples). Tradeoffs involving protected values are considered taboo, because they would erode and corrupt the inherent worth and symbolic meaning attached to such values, or undermine one’s self-image and social identity as a moral being (Fiske and Tetlock 1997). Such observations are at odds with the claim of rational choice theory that *all* types of values are fungible and can be traded off. At the same time, they emphasize that more is at work than just utility

maximizing based on (extrinsic) consequences. But this resistance has also further important implications: it signals that an extension of a market-pricing model to such values is deemed inappropriate. Taboo tradeoffs appear to set moral boundaries to the reach of markets (Bénabou and Tirole 2011; Fiske and Tetlock 1997; Norris and Inglehart 2004; Sandel 2012).

The belief that protected values ought to be defended from tradeoffs does not imply that individuals endorsing such values do always demonstrate absolute tradeoff reluctance (Bartels 2008; Tetlock 2003). Indeed, there is ample evidence that protected values are somewhat malleable and flexible (Iliev et al. 2009). According to Tetlock, compromising sacred values becomes acceptable in situations that pose a conflict between several sacred values (so called *tragic tradeoffs*). Imagine a hospital administrator who is faced with the problem of saving the life of one of two individuals; both need a liver transplant but due to shortage of organs, only one liver is available. Or imagine a manager who has to decide whether to improve the safety conditions of a group of employees working in the company or to solve company's widely criticized severe environmental pollution. In both scenarios, each option may involve protected values. Thus, provided no other reconciling solutions are possible, the situations require sacrifice one of the values. Actually, studies have shown that reframing protected values in such ways, or pushing people to think of counter-arguments to protected values, increased their flexibility to compromise them (Baron and Leshner 2000; McGraw and Tetlock 2005).

The observation that commitments to taboo values can be modified has led some authors to claim that protected or sacred values are often merely *pseudo-sacred*; they may primarily serve impression management or "posturing". In negotiations, for instance, claiming to endorse protected values could be a beneficial tactic that a negotiator may use to get individually a more advantageous settlement (e.g., Thompson and Gonzalez 1997). However, despite the possibility that people sometimes only pretend to have sincere protected values, this does not imply that protected values are nonexistent. Other studies have shown that decision maker suffer emotionally from trading off protected values (e.g., Lichtenstein et al. 2007). Bartels and Medin (2007) have found that individuals endorsing protected values were more than others motivated to search for ways to maximize value protection when violations of taboo values were unavoidable. Such findings indicate that individuals' claims to have protected values can be real, even when tradeoff resistance is not expressed in its strongest version (Baron and Leshner 2000).

Negative affective reactions

Since considering tradeoffs of taboo values question the validity of the value and one's personal identity (Fiske and Tetlock 1997), forcing people to tradeoff such values or to "put a price" on them is threatening and can lead to harsh reactions. Such reactions will typically involve affective reactions, such as anger, fear, or moral outrage (Baron and Spranca 1997; Tetlock et al. 2000), increase of social and physical distance to the transgressors (Skitka et al. 2005), or even the intention to sanction the transgressors (Ginges et al. 2007). Tetlock and colleagues propose that people treat even the mere contemplation of trading of taboo

values as disturbing (Tetlock 2003; Tetlock et al. 2000). Consistent with this, empirical studies have shown people were more likely to respond with negative affective and protest reactions when faced with *taboo tradeoffs* (conflicts between sacred and secular values, e.g., friendship vs. money) rather than *routine tradeoffs* (conflicts between secular values, e.g., services vs. money) (Hanselmann and Tanner 2008; Tetlock et al. 2000). Further support for the view that states of threat are induced when protected values are at risk is provided by Kouzakova and colleagues (2013) who included cardiovascular measures in their recent study. These researchers found that conflicts about values, but not conflicts about allocations of resources, raised cardiovascular threat profiles and prevention-focused motivational states.

Ginges and colleagues examined, in real-world conflicts (such as the Middle East conflict), how people respond when they are expected to compromise sacred values and to trade them off against money (Ginges and Atran 2009; Ginges et al. 2007). Providing Palestinian and Israeli participants with various deals, which could potentially have led them to compromise over core issues (e.g., giving up land in the case of Israeli settlers, or the right of return for Palestinians) in exchange for monetary incentives, they found that those participants who treated the corresponding issue *not* as a sacred value responded with less emotional outrage and support for violence. However, among those participants who attached sacred values with the issues concerned, offering money for compromising the sacred values, largely increased the level of emotional outrage and support for violence (including suicide attacks). Obviously, these findings challenge the economic view that all individuals reason in terms of maximizing monetary benefits. Moreover, they also highlight that strategies to solve disputes that involve sacred issues can even backfire.

Evidence in favor of deontology

There is mounting evidence that people who care for protected values base their decisions not on consequences solely, but on moral duties to particular behaviors (Baron and Spranca 1997; Tanner and Medin 2004). For example, one implication of deontological thinking is that it should make a difference whether outcomes derive from an act or an omission, whereas from a consequentialist perspective, this difference should be irrelevant. Consistent with this conjecture, studies revealed that individuals holding protected values were more than other people sensitive to the act–omission distinction (Tanner 2009).

Another implication of deontological thinking is that individuals should be less sensitive to the magnitude of outcomes, because they focus more on the inherent wrongness or rightness of the activity per se. Evidence for such *quantity insensitivities* has been provided by Ritov, Baron, and colleagues (Baron and Spranca 1997; Ritov and Baron 1990). For instance, when faced with the problem that the only way to prevent 1000 children from dying from a serious epidemic would be to vaccinate the children, which, however, will also cause the death of 100 children, Ritov and Baron (1990) found that a substantial number of participants holding protected values preferred not to vaccinate (even though not doing so would result in larger losses). They appeared to reject this tradeoff on the grounds that they would not want to cause the death of any single child. Ritov and Baron suggested

that people holding protected values were more likely to perceive the harmful act as violating moral prohibitions, which led them to prefer the harmful omission over the harmful act. Such preferences for (more) harmful omission over (less) harmful acts are also known as the “omission bias” (Ritov and Baron 1999).

Nonetheless, despite the evidence in favor of protected values being associated with deontological rules, one should not conclude that consequences never matter. Some researchers have speculated that the observation of quantity insensitivity among people holding protected values is primarily given in contexts that prompt individuals to direct their attention to the nature of the act (e.g., as in taboo tradeoffs). But other situations may prompt individuals to focus more on balancing risks and consequences (e.g., when violations of protected values are unavoidable). In line with this, Bartels and Medin replicated quantity insensitivity among people holding protected values only in tasks that entailed a choice between a harmful omission and a (less) harmful act (similar to the vaccination task by Ritov and Baron 1990). Yet, the pattern reversed in decision tasks that entailed equal acts but associated with varying magnitudes of (harmful) consequences, thereby forcing individuals to compromise over protected values. In such situations, individuals holding protected values revealed suddenly greater quantity sensitivity and *more* consequentialism and utility-maximization than people without protected values (Bartels 2008). The findings suggest that individuals who care for the values at risk are more than other individuals motivated to find ways to achieve maximal defense of the value.

Resistance to situational influences

Related to the fact that individuals who care for protected values are generally more than other people prone to deontological thinking and value defense reactions, some research tested the idea that protected values also result in stronger resistance to *situational influences*. First evidence for this claim has been found in studies investigating *framing effects*. Framing effects stand for subtle contextual influences on decision-making (Tversky and Kahneman 1981). They refer to the effect that different but otherwise equivalent descriptions of choice problems give rise to preference reversals. Given Tversky and Kahneman’s risky choice framing paradigm, the typical finding is that people are sensitive to whether the outcomes of the options are described in terms of gains (positive frame: e.g., human lives are saved) or losses (negative frame: e.g., human lives are lost): they are more risk-seeking under the negative frame and more risk-averse under the positive frame.

However, the typical framing paradigm is structured in a way that brings *only* outcomes to bear, but not a deontological focus on acts versus omissions. It is, therefore, not surprising that explanations of framing effects (Tversky and Kahneman 1981) are predominantly based on the evaluation of consequences. Yet, the findings change when the outcomes of the options are not just described either in terms of gains or losses, but *also* in terms of whether the outcomes are related either to an action or an omission. Given this slight modification, Tanner and colleagues found that participants who cared for protected values and were prone to deontological thinking (assessed separately), revealed immunity to

framing effects, while framing effects were only found among people prone to consequentialist thinking (Tanner and Medin 2004; Tanner et al. 2008).

While the previous sections focused on moral and protected values in general, the next sections will focus on one specific moral value, namely “honesty.”

Honesty as an important example of moral values

Honesty is a key element of ethical behavior in business. Yet, examples of dishonesty can be found everywhere. Since the turn of the century we have witnessed the deceptions that led to the economic and financial crisis, numerous accounting scandals (e.g., WorldCom, Satyam, Enron), financial fraud (e.g., Jerome Kerviel, Bernard Madoff, Kweku Adoboli), and banking scandals (e.g., the LIBOR and FX market manipulations). These cases have shocked many beyond the world of business and finance. Such recurring ethical scandals have raised questions again about the conditions and motivations underlying (dis)honest behavior (including lying, deceiving, stealing, cheating, fraud, etc.). Why do people behave honestly or dishonestly?

Research on determinants of (dis)honesty

Dishonesty is part of many business interactions, since they often provide people with the opportunity to profit (gain money) from selecting the dishonest path (or act). Such opportunities may reflect tradeoffs between taking selfish gains (by cheating, misleading others) versus acting in virtuous ways (by telling the truth). The approach predominantly taken to understand determinants of honesty is the standard economic theory with its premise that the *pursuit of self-interest* is one of the main drivers of human beings. Individuals are portrayed as opportunists who care only about maximizing their own utility of wealth; they thus will always lie when it is in their material self-interest to do so (Grover 1997; Somanthan and Rubin 2004). Certainly, standard economics provides one powerful mechanism through which honest behavior can be sustained, even when it is not in agents' immediate short-term interest: over time, through repeated interaction, cooperative equilibria can be sustained. Thus, truth-telling is incentive-compatible for an agent, even if it brings a short-run cost, as long as the agent knows that a deviation from that behavior results in the loss of long-run reputation benefits. However, in practice, reputational losses due to dishonesty do not always seem to be as dramatic as proposed in repeated games models. Therefore, some scholars have asked: why be honest when dishonesty does pay out and is rarely detected (Bhide and Stevenson, 1990)? Clearly, according to these views, strategies aimed at increasing the frequency and magnitude of truth-telling have to center around changes in the consequences. This typically means either changing the reinforcement contingencies or implementing controls and monitoring measures to increase the detection of dishonest behavior.

In contrast to such proposals, but in line with the self-interested view, several psychologists have highlighted the role of *self-control mechanisms* in restraining selfish temptations (e.g., Baumeister and Heatherton 1996; Mischel 1974). Yet, self-control is effortful and

does require mental resources. It was, therefore, hypothesized that depletion of self-control resources would make one “too tired to tell the truth” (Mead et al. 2009). Consistent with this, studies demonstrated that individuals cheated less when the situation allowed for self-control, but they cheated more when individual’s self-control resources were depleted by prior mental exertion (Gino et al. 2011; Mead et al. 2009).

However, in sharp contrast to the self-interest hypothesis, history and daily life provides us with numerous examples of virtuous role models (e.g., Nelson Mandela, Ghandi), whistleblowers, or journalists who seem to accept enormous costs in order to reveal the truth about the wrongdoing of organizations or political systems. In addition, there is mounting evidence from experimental studies that more people tell the truth than conventional models would predict. For example, using a simple sender–receiver game, Gneezy (2005) found that many people were not only unwilling to lie but they took also care about the well-being of others. Other studies investigating cheating in various contexts (e.g., tax evasion, cheating in classroom, and simulated business interactions) also found a substantial fraction of individuals who behaved honestly, even at the expense of financial benefits (e.g., Evans et al. 2001; Sánchez-Pagés and Vorsatz 2007; Zak 2008).

Some scholars interpreted those findings to be consistent with the existence of two groups: the *economic type* (who cares only about consequences) and the *ethical type* (who cares only about moral oughts) (Hurkens and Kartik 2009; Koford and Penno 1992). In line with the deontological approach, the ethical type conceptualizes honesty as a prescriptive norm. But other work suggests that these categories are likely to be malleable by *contextual influences*. Gibson et al. (2013) provide a simple experiment that rejects the type-based model by observing that agents do change behavior as economic costs of stating the truth change. Moreover, studies have shown that people are less likely to behave honestly in public rather than in private settings (Abeler et al. 2014), in market rather than in personal contexts (Cappelen et al. 2013), in competitive rather than in cooperative settings (Rode 2010), or when people are exposed to a social norm that approves rather than disapproves dishonesty (Gino et al. 2009). Finally, other interesting research suggests that the mere exposure to material objects common to the domain of business (such as briefcases, boardroom tables, money) triggers (non-consciously) competitive behavior (Kay et al. 2004; Voh et al. 2006), whereas moral reminders (such as honor codes or the Ten Commandments) cause people to cheat less (Ariely 2012). Overall, these results lend more support to the view that individual behavior, when it comes to truth-telling, is heterogeneous.

Emphasizing moral commitments as an essential source of moral motivations, research lines referring to concepts such as *moral identity* (Aquino and Reed 2002; Blasi 1983) or *moral integrity* (Carter 1996) propose that an individual feels committed to moral oughts when moral beliefs and values are central to one’s self-understanding. Indeed, (cross-cultural) studies have confirmed that strong moral commitments are associated with less cheating and corruption in business (Fine 2010). These approaches share with the approach of the *protected values* that at least some people would behave truthfully because they treat honesty as morally mandatory, even when it is associated with extrinsic costs.

Approaches of *moral self-regulation* attempt to integrate such positions into a dynamic view (e.g., Bandura 1986; Carver and Scheier 1981). They state that individuals are motivated to behave consistently with their moral standards and to maintain a positive view of themselves by exercising control over their behaviors through self-regulatory processes. Within such systems, internalized moral values serve as an internal reference by which compliance with the moral standards leads to intrinsic rewards and deviations leads to intrinsic costs of lying (Bandura 1986; Mazar et al. 2008). One advantage of the self-regulatory frameworks is that it may integrate both the deontological and consequentialist aspects. Individuals endorsing honesty as a moral duty are more than other people motivated to behave consistently with this principle (this is the deontological part), while behaving in line with this internalized standard minimizes lying costs (this is the consequentialist part).

Other developments by economic researchers have started to model moral identity management less in terms of commitments to moral oughts (as, for example, in the approach by Aquino and Reed 2002) but more in terms of “investments” into moral identity. By highlighting the notion of *self-signaling* (Bénabou and Tirole 2011), the premise is that individuals are uncertain about their moral self, and they signal their true identity to themselves through their actions (see also Bem 1972). According to this view, individuals are then primarily motivated to behave honestly, when such a behavior is more likely to reinforce a positive view of oneself as a moral being.

In sum, prior research suggests that truth-telling is likely to reflect both adherence to moral principles and regulation based on consequences. The next section describes some recent results from our own research on the interplay of these two factors.

Experimental evidence on protected values for honesty

How relevant are protected values for honesty in the realm of economic decision-making? Conceptually, treating honesty as a protected value implies a motivation to defend honesty against monetary tradeoffs, because considering such tradeoffs would threaten and undermine one's self-image as a moral being (e.g., Fiske and Tetlock 1997). We, therefore, hypothesized that the extent to which individuals consider honesty as a protected value would determine the regulatory potency of situational factors (such as monetary incentives) in affecting dishonesty. The framework and findings testing this general hypothesis are detailed in Gibson, Tanner, and Wagner (2013, 2015) and Tanner, Gibson, and Wagner (2015). To our knowledge, these studies are the first to test the relevance of the protected values' concept in situations where acting according to these values is actually financially costly. Here, we present some selected findings.

The existence of a felt obligation to behave honestly is likely to be most clearly visible in situations where living up to such a commitment entails a sacrifice. We used *earnings' management* as an example of a realistic business context that confronts people with a trade-off between expected monetary gains and honesty. Earnings' management occurs when a manager changes reported earnings to mislead stakeholders about the accurate economic performance of the company (Healy and Wahlen 1999). Hence, earnings' management

can be viewed as a form of deceit or dishonesty. Typically, a manager's salary has a fixed and variable component, while the variable one is often tied to the announced earnings. That is, managers can profit financially from behaving dishonestly. It may be important to mention that such a behavior, even though it is a case of lying, is permitted within a *legal* range, provided by generally accepted accounting standards.

These are the features that we simulated in our experiments as well. The participants were placed in the situation of a manager and asked to disclose earnings per share (EPS) of their companies in multiple-choice tasks. In each choice situation they had the option to announce the real economic performance (honest option) or not (dishonest option). The situations only varied in terms of *opportunity costs* (i.e., the benefits in terms of variable salary a person would have received when behaving dishonestly). We used *real* money as financial consequences. Crucially, participants earned less money when choosing the honest option. Standard economic models, which view individuals essentially as being self-interested and utility maximizing, would predict that people do not behave honestly in such situations.

The extent to which participants treated honesty as a protected value (PV_{honesty}) was assessed with the Protected Value Measure (Tanner et al. 2009) in separate steps. To illustrate: in one set of experiments, participants were provided with five choice tasks, in each of them they had to choose between announcing the true earnings per share (honest option) or announcing higher earnings per share (dishonest option). The five situations differed in terms of opportunity costs. The costs of behaving honestly (i.e., announcing the true earnings per share) differed in the five situations from CHF 0.00 (not-costly) to CHF 1.20 (costly), in steps of 30 Rappen (cents). At the end, participants got real money, the amount being dependent on their decisions.

Combining the results of several such experiments ($N = 361$), we generally found that in about 36.9% of the situations involving costs for honesty, participants preferred the honest option, foregoing monetary benefits. Participants sacrificed 31.1% of the total amount of money they could have earned. We also found that 21.3% of all the participants were displaying absolute tradeoff resistance, i.e., these individuals kept on behaving honestly, irrespective of the financial costs involved. This behavior was more often adopted by individuals stating stronger PV_{honesty} , as indicated in Fig. 11.1 (where for the sake of convenience, PV_{honesty} is divided into low vs. high, based on a median split). As can be seen in Fig. 11.1, people stating higher levels of PV_{honesty} were more likely to behave honestly—even when it was costly for them to do so. In a further study, we also found that people endorsing PV_{honesty} were also more likely to resist the pressure from social norms, which suggest that dishonesty is socially approved (Gibson et al. 2015).

But let us also note: Fig. 11.1 also reveals a wide range of heterogeneity in individual behavior. Though 36.6% of individuals of the group high in PV_{honesty} displayed absolute tradeoff resistance (compared to 7.4% within the group low in PV_{honesty}), intentions of even highly intrinsically motivated individuals (Bowles and Polania-Reyes 2012) appear to *crowd out* when higher incentives for cheating are provided.

Fig. 11.1 Proportion of honest choices as a function of PV honesty and costs of truth-telling (varying from low to high).

One possible explanation of the difference between individuals high or low in PV may be that they differ in their skills to make tradeoffs and calculations. To examine this, we provided people in another study ($N = 261$), beyond the original *honesty task* (taboo trade-off) also with an *effort task* (routine tradeoff). This latter task was identical to the honesty task, except that participants had to make tradeoffs between effort and monetary benefits. More specifically, participants were asked to engage in five sets of simple calculation tasks. In each of them they had the option to do one or five calculations. They could increase their payment by doing more calculations. But more payment would also imply taking more effort or time to solve calculations. Again, choice situations differed in terms of monetary compensations associated with doing one or five calculations. The costs of engaging in one calculation instead of doing five differed from not-costly to costly.

As expected, with regard to the honesty task, we found very similar findings as described in Fig. 11.1. But with regard to the effort task, we found no differences at all between people low or high in PV_{honesty} (see Fig. 11.2). This finding is important, because it suggests that individuals high in PV_{honesty} are not less skilled in doing standard tradeoffs. They only differ from other people when honesty comes into play.

In more recent studies, we also studied the role of PV_{honesty} and perception of trustworthiness of CEOs in *investment decisions* (Tanner et al. 2015). Participants were in the situation of investors who had to decide in which of two companies (one managed by CEO A and the other by CEO B) they wanted to invest their money. For this purpose, participants were also provided with some information about the two companies, which were identical, except that CEO A and CEO B announced different earnings per share (EPS) and thus received different salaries. Based on this information, we expected that participants will infer that one CEO is more committed to honesty (since he does not engage in earnings' management) and hence is more trustworthy, while the other CEO is less committed to honesty (since he engages in earnings' management) and thus is less trustworthy.

Fig. 11.2 Proportion of choices to do five calculations as a function of PV honesty and costs of doing one calculation (instead of five calculations) (varying from low to high).

Indeed, the studies revealed that the CEO who did not engage in earnings' management was perceived as more honest, trustworthy, and credible, and this, in turn, increased the likelihood of investing more into this CEO than into the other company. Importantly, this relation was more prominent for those investors with higher levels of PV_{honesty} . The results suggest that perceived honesty and trust of market participants is an essential aspect of investment decisions, but that this aspect is particularly important for some categories of investors (those with higher levels of PV_{honesty}).

Overall, our research provides evidence that individuals vary in their propensity to tell the truth and that some people are more likely to treat honesty as a moral mandate, which is expressed in the stronger (albeit not always absolute) resistance to trade honesty off against money. The study on investors' decisions adds to this by suggesting that the perception of other people as honest and trustworthy may economically pay off, and that this relation is moderated by individuals own level of PV_{honesty} . Nonetheless, what we also see from our studies, is that there is not only heterogeneity between individuals, but also much within individuals (see also Gibson et al. 2013); the intrinsic motivation among individuals claiming higher levels of moral commitments appears to crowd out when exposed to higher incentives for cheating.

Some speculative thoughts on policy relevance and implications for finance professionals

It is tempting to consider—even at this early stage of research—possible implications of the research cited in the previous sections for business practices. We shall give in to this

temptation and in particular speculate on how hiring decisions, corporate governance policies, remuneration policies, and the role of regulation may be affected by the previous findings. In doing so, our task is to raise hopefully interesting questions and make a few conjectures, rather than to report on firmly established evidence.

We may first conjecture that in order to establish a moral climate and ethically driven corporate governance policies, firms should hire managers and boards of directors' members who display moral values; for instance, those who possess high protected values for honesty. We have seen previously that such individuals are better able to resist tradeoffs between monetary benefits (associated with cheating) and honesty or to resist the pressure from morally (dubious) social norms. Thus, these individuals are a priori well-equipped to manage a firm in the long-run interests of all its stakeholders, since they can sacrifice short-term personal gains and resist negative social pressure for the sake of implementing corporate choices rooted in integrity. Such hiring decisions at the top of corporations, however, may raise other questions. First, will the established management hire such moral leaders at the risk of losing their own situational rents? Second, managers with high integrity may favor a cooperative climate for doing business that may not be compatible with the competitive environment under which companies have to operate. Finally, one may wonder whether individuals endorsing protected values may be less open for innovations and policies that require changes. In short, interesting tensions could be explored in further research that may, under some circumstances, lead to the conclusion that absolute protected values are optimal, whereas in other circumstances an interior solution may be optimal.

Another core lesson from the literature on honest decision-making rooted in deontological motives is that the "principal-agent" conflicts' issue may need to be revisited. Central to the corporate finance literature, it describes the type of contract that an owner, i.e. principal, will write with the agent who works for him in order to incentivize him to exercise best effort. Indeed, the hiring of virtuous leaders may resolve or mitigate this problem without relying so heavily on financial incentives to align the interests between the principals and such virtuous agents. This statement brings us to the related topic of managerial remuneration that has over the past two decades been at the heart of the corporate governance dilemmas faced by corporations. Corporate shareholders have to regularly deal with issues such as excessive managerial pay, the lack of pay for performance, misaligned incentives resulting from executive compensation packages, and even fraud on a massive scale (e.g., the investment bank Libor scandal). Carlin and Gervais (2009) have shown that when one hires a virtuous manager, the optimal contract is a fixed-wage contract. The key message is that high-morality individuals who are driven primarily by deontological motives need not be subject to such high financial incentives to work in the interest of their principals: they derive their satisfaction from doing the right thing without requiring extra compensation for that purpose. Despite a number of challenges, we thus believe that the favorable characteristics of leaders with high moral traits make them well-suited to promote an ethical culture and sound corporate governance principles within their organizations. When it comes to the long-term prospects, we would argue that one first needs

to analyze the fitness for survival of moral leaders and whether their firm's profits are sustainable within competitive environments. Another challenge for future research would be to deepen our understanding of the possible workings, implications, and limitations of a system of governance and incentives that acknowledges protected values as one important force in economic decision-making.

Finally, it is worth considering the potential role and need for regulation to foster sound corporate governance and remuneration policies, especially in systemically risky industries, which are prone to market abuses (such as the financial industry). Preventing market abuse, protecting customers and clients, and promoting a climate of trust in the markets and in our financial institutions are all important goals that require an enforcement of individual and thus ultimately market integrity. It is, however, a matter of debate as to whether markets can, and, in fact, will, implement such enforcement goals freely (via self-regulation, whereby behavior in line with integrity gets rewarded by market participants) or whether regulation needs to be exogenously imposed. Optimal regulation represents a challenging task. While exogenous regulation is arguably needed to directly address the most egregious cases of misconduct and while it is, by design, a powerful enforcement tool, it can also come at significant direct and indirect costs, including distorted incentives. Besides direct command and control regulation, there are also approaches attempting to leverage the power of financial incentives in order to foster proper conduct by market participants. Some may worry that this, by nature, goes counter to the very notion of trying to promote moral behavior. Whether or not one shares this view, however, it is to be kept in mind that the interplay of financial incentives and intrinsic preferences is far from trivial. A significant number of studies show that financial incentives may ultimately "crowd out" the moral intentions of highly intrinsically motivated individuals. A smaller, but noteworthy set of studies shows that financial incentives can, in fact, "crowd in" intrinsic preferences (for a survey, see: Bowles and Polania-Reyes 2012). Future research must make progress in identifying the conditions under which one or the other happens.

Conclusion: some open issues in research on honesty and economic decision-making

Despite a prolific literature on the theme of moral values and, more specifically, of honesty in economic decision-making, a number of questions still remain open for future research. We have highlighted some of the more policy-oriented questions in the previous section. Here, we close with two more conceptual questions.

First, it would be interesting to explore whether reputation in repeated strategic games, complements the role of preferences for truth-telling in fostering agents' truth-telling propensity, or whether there are, in fact, substitutive effects between reputation and preferences for truth-telling. Similarly, we have ruled out from our discussion other important situational factors, such as the roles of explicit punishment, group dynamics, and loyalty considerations, in enhancing or hindering agent honesty in economic choices. Further research could investigate how these factors interact with intrinsic preferences for truth-telling.

Second, while several authors have acknowledged the existence of individuals' preferences for truth-telling, it remains unclear whether those preferences are driven by selfish or unselfish considerations (such as signaling one's identity as an honest person, for instance) or by a mixture of both. A related question is to determine whether moral economic choices rely on emotional and/or cognitive processes and the extent to which those processes are associated with different brain regions than those activated by standard economic choices. We believe that the cross-fertilization of experimental economics, neuroscience, and psychology will in the future be able to shed light on these fundamental questions.

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