

OXFORD LIBRARY OF PSYCHOLOGY

EDITOR-IN-CHIEF

Peter E. Nathan

AREA EDITORS:

Clinical Psychology

David H. Barlow

Cognitive Neuroscience

Kevin N. Ochsner and Stephen M. Kosslyn

Cognitive Psychology

Daniel Reisberg

Counseling Psychology

Elizabeth M. Altmaier and Jo-Ida C. Hansen

Developmental Psychology

Philip David Zelazo

Health Psychology

Howard S. Friedman

History of Psychology

David B. Baker

Methods and Measurement

Todd D. Little

Neuropsychology

Kenneth M. Adams

Organizational Psychology

Steve W. J. Kozlowski

Personality and Social Psychology

Kay Deaux and Mark Snyder



OXFORD LIBRARY OF PSYCHOLOGY

Editor in Chief PETER E. NATHAN

The Oxford Handbook of Work Engagement, Motivation, and Self-Determination Theory

Edited by

Marylène Gagné

OXFORD
UNIVERSITY PRESS

CONTENTS

1. The History of Self-Determination Theory in Psychology and Management 1
Marylène Gagné and Edward L. Deci

Part One • Conceptual Issues

2. The Importance of Universal Psychological Needs for Understanding Motivation in the Workplace 13
Edward L. Deci and Richard M. Ryan
3. Employee Commitment, Motivation, and Engagement: Exploring the Links 33
John P. Meyer
4. Effective and Sustained Proactivity in the Workplace: A Self-Determination Theory Perspective 50
Karoline Strauss and Sharon K. Parker
5. A Behavioral Economics Perspective on the Overjustification Effect: Crowding-In and Crowding-Out of Intrinsic Motivation 72
Antoinette Weibel, Meike Wiemann, and Margit Osterloh
6. Passion for Work: Determinants and Outcomes 85
Robert J. Vallerand, Nathalie Houliort, and Jacques Forest

Part Two • Individual Considerations

7. The Foundation of Autonomous Motivation in the Workplace: An Attachment Perspective 109
Sigalit Ronen and Mario Mikulincer
8. Contingent Self-Esteem: A Review and Applications to Organizational Research 127
D. Lance Ferris
9. Person-Environment Fit and Self-Determination Theory 143
Gary J. Greguras, James M. Diefendorff, Jacqueline Carpenter, and Christian Tröster

Part Three • Organizational and Contextual Considerations

10. The Motivational Power of Job Design 165
Marylène Gagné and Alexandra Panaccio
11. Leadership 181
Stephanie L. Gilbert and E. Kevin Kelloway
12. Compensation and Work Motivation: Self-Determination Theory and the Paradigm of Motivation through Incentives 199
Amar Fall and Patrice Roussel

A Behavioral Economics Perspective on the Overjustification Effect: Crowding-In and Crowding-Out of Intrinsic Motivation

Antoinette Weibel, Meike Wiemann, and Margit Osterloh

Abstract

In the last two decades, economic motivation research has undergone a paradigm shift when it comes to the effect of incentive schemes on individual performance and motivation. Inspired by self-determination theory, a new branch in economics evolved called behavioral economics. Especially by evidencing the negative effect of "pay-for-performance" on intrinsic motivation, called the "crowding-out" or "overjustification" effect, it challenges the economic paradigm of the relative price-effect and its inherent belief in incentives as universal remedy for motivation and individual performance. This article reviews the findings of behavioral economics on motivation. Drawing on these results we discuss which institutional conditions strengthen rather than weaken intrinsic motivation. We demonstrate that fairness, participation, market-driven wages, and normatively affected decision-making contexts have a positive effect on intrinsic motivation.

Key Words: intrinsic motivation, extrinsic motivation, pay-for-performance, crowding-out effect, overjustification effect, behavioral economics, institutional conditions

Cognitive¹ evaluation and self-determination theory (SDT) inspired one of the most dramatic changes in economic theory. When Bruno Frey demonstrated in the 1990s (Frey, 1992, 1997a, 1997b) that the so-called relative price-effect (i.e., the performance-enhancing effect of incentives), in certain cases is counterbalanced, even outruled by a negative effect on individual performance termed "crowding-out effect," many economic theories needed to be rewritten. Bruno Frey was one of the pioneers of behavioral economics whose proponents started to test the behavioral assumptions of economic theory rigorously by means of a bold empirical "invasion" (Camerer, Loewenstein, & Rabin, 2004). This article summarizes the findings of behavioral economics on the negative and positive effects of incentives on intrinsic motivation and individual performance.

At the core of behavioral approaches to economics lies the idea that social communities

cannot flourish without voluntary, intrinsically motivated contributions to public goods (Ostrom, 2000). We show, from this behavioral economics view, which institutional conditions inhibit or boost intrinsic motivation. In particular, variable "pay-for-performance" schemes, which are commonly used by practitioners, can have a negative effect on employees' intrinsic motivation. A positive effect on intrinsic motivation, however, can be achieved through mechanisms of participation, fairness, normatively affected decision contexts, and market-driven salaries.

Is "Pay-for-Performance" Recommendable? A Taste of Heated Discussion in the Field of Economics

In many companies, incentive pay has caught on as the embodiment of modern management methods. Such pay-for-performance schemes

focus on the relative price-effect, which states that behavior depends on relative prices and assumes that for employees low engagement becomes more costly when they are paid for their performance; hence with pay-for-performance less "idling" is expected. Standard economic theory assumes that the promise of higher payment tied to measurable performance always leads to increased performance. Empirically, such a positive effect has been confirmed particularly for piece-rate wages paid for simple jobs (Stajkovic & Luthans, 1997). A much quoted example is the field experiment of the personnel economist Lazear (2000) on the US company *Safelite Glass*: after changing from fixed hourly wages to piece rate, the productivity increased by an astounding 36% (incentive effect, 20%; selection effect, 16%), whereas the labor costs only rose by 9%. Those human resource management scholars that rely strongly on economic theories have also welcomed these insights. For instance Barry Gerhart and Sara L. Rynes (2003) in their comprehensive review on compensation—particularly on the effect of pay-for-performance on individual performance—clearly seem to recommend the use of incentive pay because it "can produce substantial increases in productivity" (p. 195) and will assist companies in "getting rid of the poor performers through turnover" (p. 195). Hence the universal recommendation for human resource managers is to install what has been termed "high performance work practices," which always entail some form of individual incentive pay (Becker & Huselid, 1998; Huselid, 1995). As a consequence, the principle of piece-rate wages has been increasingly transferred to all employment forms, for example to companies' middle and upper management (e.g., Bebchuk & Grinstein, 2005), government agencies (e.g., Bertelli, 2006; Schneider, 2007), and even to the public sector (i.e., the new W-salary levels in German universities; Osterloh & Frey, 2002). However, in contrast to typical piece-rate work, these occupations are characterized by a large scope of action, complexity, and are intrinsically interesting. They are difficult to control, and therefore call for much more personal initiative (Osterloh, 2006; Osterloh & Frey, 2000).

Psychological theories have questioned the universal validity of the relative price-effect for a long time, particularly for tasks that call for more personal initiative. They show that, under certain conditions, variable performance-related payment lessens performance (Deci & Ryan, 1985). This is referred to as the "hidden costs of rewards" (Deci, 1976), the

"overjustification effect" (Lepper & Greene, 1978), or the "corruption effect" (Kruglanski, 1975). Bruno Frey (1992, 1997b) introduced this effect to economics as the so-called crowding-out effect, which states that extrinsic and intrinsic motivation are related in such a way that external interventions (aimed to strengthen extrinsic motivation) can diminish intrinsic motivation. He thereby fructified one of the fundamental new orientations called for by behavioral economics. By now, a sizeable number of experiments and field studies from behavioral economics have demonstrated such a crowding-out effect caused by pay-for-performance in a variety of sectors. Coincidentally and more recently, the findings that examined the crowding-out effect have been supplemented with a number of findings on the crowding-in effect, dealing with institutional conditions that strengthen intrinsic motivation. In addition, behavioral economics has provided a number of theoretical explanations for these effects, which nicely complement the self-determination framework.

What is "Behavioral Economics"?

For more than 30 years standard economic theory has dominated business school research and economic research in dealing with human motivation (Gintis & Khurana, 2008). Standard economic theory has been highly valuable in its capacity to explain competitive markets and it has been successful in permeating managerial practice through prominent subtheories, such as the principal-agency theory and transaction cost economics. For example, nowadays it seems to be common wisdom to view CEOs as agents, who are knowledgeable "contractors" steering companies for their owners, which are in turn seen as principals. In addition, one theoretical assumption of the standard-economic principal-agent model has been taken for granted in the business press and elsewhere, namely that CEOs are often portrayed as employees with their own hidden agenda, who mainly use their formidable inside knowledge of the company to satisfy their own interest (Jensen & Murphy, 1990).

However, standard economic theories use a behavioral model that disregards psychological factors almost completely (Frey & Benz, 2004). The Homo Economicus model treats individuals as utility maximizers, who are rational (cognitive limitations resulting in systematically suboptimal decisions are disregarded), self-controlled (self-control problems and emotions are not

considered), and self-interested (the Homo Economicus does not have prosocial preferences) (Camerer & Loewenstein, 2003; for a recent account see Tomer, 2007). Each of these key assumptions is now systematically challenged by findings in behavioral economics, which suggest that "humans are dumber, nicer, and weaker than the Homo Oeconomicus" (Thaler, 1996, p. 227). Yet, the challenge of the motivational characteristics of the Homo Economicus, namely the assumption that individuals on average are "nicer" than assumed so far, entices by far the most heated discussion between standard and behavioral economists (Osterloh & Frost, 2009).

The underlying motivational assumptions of standard economic theory can be typified by the following three assumptions (e.g., Frey, 1990; Kirchgässner, 1991):

1. There is a strict division between preferences (i.e., needs, values, and utilities, which underlie motivation) and restrictions (i.e., external incentives and limitations of one's freedom of action).
2. The individual's preferences are fixed and relatively enduring (Stigler & Becker, 1977). As a consequence, changes in individual behavior are mainly a result of changes in restrictions.
3. Individuals only know self-serving preferences. Other person's preferences are not included in one's own preference function.

In addition, standard economic theory often adapts an even narrower version of the self-interested human being than the "traditional" Homo Economicus model: individuals are assumed to maximize their own tangible interests, that is, their own monetary or goods payoff (Camerer, 2005) and are depicted to be solely extrinsically motivated by tangible rewards or avoidance of punishment. Preferences, and thus, intrinsic motivation, cannot be influenced in the short term and are therefore excluded from the analysis.

Behavioral economics rigorously tests these assumptions and usually proceeds as follows (Camerer & Loewenstein, 2003):

1. Identification of an assumption within the standard economic model
2. Identification of deviations from this assumption
3. Use of these deviations in order to generate an alternative hypothesis to the standard economic model

4. Construction of a behavioral economic model out of the alternative hypothesis
5. Testing of this model
6. Development of new implications

The aim of behavioral economics is to stepwise modify conventional assumptions of standard economics in order to set up a more realistic psychological-empirical foundation of (usually mathematical) models, keeping the standard economic model at the same time as a reference (Camerer, 2005; Frey & Benz, 2004; Rabin, 2002). This proceeding explains behavioral economists' preference for laboratory experiments because they allow the isolation of individual variables and their modification under controlled conditions (Camerer & Fehr, 2006). In addition, adhering to the skepticism of economics toward survey data, observable facts, such as a change in the quantity or quality of performing a task, are taken as *explanandum* and in a reverse engineering process the *explanans* is concluded (Camerer & Loewenstein, 2003). Despite the preference for laboratory experiments, field experiments (e.g., Gneezy & Rustichini, 2000) and experimental survey studies, such as vignettes, recently have complemented the behavioral economist's toolkit. These latter studies often also incorporate actors' subjective interpretation (i.e., they seek to measure motivation as well as changes in motivation; Weibel, Rost, & Osterloh, 2007).

The Motivational Perspective of Behavioral Economics

In contrast to standard economics, behavioral economics has developed a much richer understanding of the motivational characteristics of human beings. Particularly, it is proposed that an empirically grounded Homo Economicus is typified by the following:

1. Proself and prosocial preferences (Meier, 2006)
2. Heterogeneous preferences (Andreoni, 1990; Fischbacher, Fehr, & Gächter, 2001)
3. Preferences, which are plastic and systematically susceptible to the design of institutions, working conditions, and the quality of human interactions (Ostrom, 2000)
4. Preferences, which are often not known to the individuals (Ariely, Loewenstein, & Prelec, 2006) or are falsely interpreted by them (Stutzer & Frey, 2007)

The most ubiquitous finding of behavioral economics is that prosocial behavior is much more prevalent than standard economic theory suggests (Meier, 2006), a fact that cannot be explained assuming individuals to be solely self-interested and extrinsically motivated. For instance, a large body of research has been accumulated on whether, when, and why individuals contribute to (the) commons. Large-scale survey studies show that individuals contribute substantial amounts of money and time to public goods. In the United States almost 70% of all households make charitable contributions, exceeding 1% of the Gross Domestic Product (Andreoni, Gale, & Scholz, 1996). Volunteer work in Europe is estimated to amount to 4.5 million full-time equivalent volunteers for 10 European countries studied (Anheier & Salamon, 1998). Similar "selfless" behavior is observed in laboratory experiments, where behavioral economists have studied participants' behavior in social dilemma situations. In this situation, standard economic theory assumes that for a self-interested individual, the unique dominant strategy would be to defect, for example to free-ride on others' contributions. In contrast to this gloomy prediction, experiments of behavioral economists (and social psychologists) show that people cooperate quite often. For example, it has been demonstrated that participants in such experiments invest up to between 40% and 60% of their endowments in public goods (Fehr & Gächter, 1998). Henrich et al. (2001, p. 77) conducted a series of ultimatum games in 15 societies around the world and came to the conclusion that "the canonical model of the self-interested material pay-off—maximizing actor is systematically violated."

The most popular explanation of these "anomalies" is the introduction of motivational propensities to economic theory. Next to the standard assumption of "egoism", two further "intrinsic motivation propensities" have been introduced, namely altruism (i.e., unconditional prosocial motivation) and strong reciprocity (i.e., conditional prosocial motivation). Altruism depicts the tendency of an individual to pay a personal cost to provide benefits to others in general (Fowler & Kam, 2007). Strong reciprocity is understood as a tendency to reciprocate kind intentions of the interaction partner because of a moral obligation. Thus, reciprocitists' moral obligation is conditioned by the intentions and the behavior of others (i.e., uncooperative and proself-oriented behavior is met by a change in one's own behavior; Nyborg, 2010). In laboratory experiments, different types of motivational

tendencies are found: overall about 50% of the test persons can be characterized as reciprocitists, 20% as altruists, and 30% as egoists (Andreoni & Miller, 2002; Fischbacher, et al., 2001). Field studies show a smaller proportion of altruists (Frey & Meier, 2004).

A second way to explain this high amount of prosocial behavior is to introduce different types of motivation to economic theory. *Extrinsic motivation* is directed by external incentives for the individual (awards or penalties). These make mediated satisfaction possible, especially by the means of money. In the situations studied by behavioral economics, extrinsic motivation cannot explain prosocial behavior completely. *Intrinsic motivation* is understood as the direct satisfaction of needs (i.e., activities that are performed for their own sake). Intrinsic motivation can, on the one hand, be seen as a *hedonistic preference*, self-serving for one's own fulfillment or well-being. On the other hand, intrinsic motivation can be directed to the well-being of others as a *prosocial preference*. This is included in one's own preference function and imparts a "warm glow" (Andreoni, 1990). In this case, motivation is derived from internalized social norms (Lindenberg, 2001). Both types of intrinsic motivation have been used to explain the high proportion of prosocial behavior in the studies mentioned previously and both types of intrinsic motivation are seen as plastic, and, hence, are influenced systematically by institutions.

Thus, behavioral economics, just like SDT, seeks to differentiate different qualities of motivation but it is done so in slightly different ways. Intrinsic motivation in the economic understanding means autonomous motivation in SDT language. Hence although economists do not care to differentiate different forms of extrinsic motivation it is still apparent that their understanding of intrinsic motivation includes what SDT views as identified—or integrated extrinsic motivation and as pure intrinsic motivation. Furthermore, behavioral economics concurs with the SDT distinction of intrinsic motivation as the desire to fulfill a task, because it is inherently interesting, and prosocial motivation as the desire to serve others (e.g., Grant & Berry, 2011). Nevertheless, behavioral economists rather concentrate on analyzing whether both types of preferences are governed by the same set of mechanisms (like both being control-independent, autonomous forms of motivation), than on targeting their separate underlying psychological processes.

Managing Intrinsic Motivation: Crowding-Out and Crowding-In

Behavioral economics states that extrinsic and intrinsic motivation cannot be seen as additive phenomena. Rather both forms of motivation interact in a predictable way (Frey, 1997b). The *crowding-out effect* states that intrinsic motivation for an activity can be repressed by extrinsic rewards (or punishments) and by certain forms of control. The *crowding-in effect* states that specific institutional conditions might increase intrinsic motivation for an activity (e.g., Andreoni, 1990; Frey & Osterloh, 2002). There are different theories used to explain the two effects (see Bolle & Otto, 2010; Frey, 1997b; Sliwka, 2003). In this section we synthesize the literature on crowding effects, assigning the crowding-out of intrinsic motivation to effects of pay-for-performance as well as to the exertion of control, and the crowding-in effect to participation, procedural fairness, priming, and market-driven wages. At the end, we conclude how crowding effects are conditioned and what implications researchers and practitioners can derive from these findings.

The Crowding-Out Effect CROWDING-OUT THROUGH PAY-FOR-PERFORMANCE

There are many different explanations for why, and through which mechanisms, performance-related compensation leads to a crowding-out of intrinsic motivation. The most famous theory, imported to behavioral economics in order to explain the crowding-out effect, is the psychological theory of *cognitive evaluation* (Deci, 1980; Frey, 1997b), which also constitutes the basis for SDT (Deci, Connell, & Ryan, 1989; Deci & Ryan, 1985). Cognitive evaluation theory draws on unobservable cognitive processes to explain the negative effects of rewards on motivation. One of those governing processes is depicted by the concept of "locus of causality" (De Charms, 1968), which provides a systematic explanation for the transition from intrinsic to extrinsic motivation, because it accounts for why and under which conditions external incentives lead to a shift in motivation. The so-called perceived locus of causality pictures a person's attribution concerning a certain behavior, whereby holding an internal locus of causality means to attribute an activity to one's own initiative and endorsement, and holding an external locus of causality means to ascribe one's own behavior to external constraints (De Charms, 1968). According

to Deci et al. (1989), an internal locus of causality results in intrinsic motivation, relative to an external locus of causality, which is linked to extrinsic motivation.

External conditions are proposed to foster an internal locus of causality, and hence intrinsic motivation, if they provide informational feedback and thereby enable individuals to learn and to feel self-determined (Ryan, 1982). Incentive pay, however, is perceived as controlling feedback, which reduces the perception of self-determination (Deci, Koestner, & Ryan, 1999a, 1999b). Individuals feel like "puppets on strings", experience a strong external locus of causality, which thwarts their intrinsic motivation (Deci, 1971), and, as a consequence, motivation shifts to be predominantly extrinsic. Bruno Frey has "imported" this explanation to behavioral economics: monetary incentives and tight, punishment-oriented regulations crowd-out intrinsic motivation if these are perceived to be controlling and hence do not offer acknowledgement of voluntary engagement (Frey & Benz, 2004).

Another cognitive explanation of the phenomenon of crowding-out has been developed by Lindenberg (2006). In his *goal-framing theory* he assumes that all behavior is goal-oriented and that these goals affect the orientation of motivation. At any time, there are a number of goals competing for an individuals' attention. The goal that eventually wins this competition acts as a dominant frame, which steers attention processes (Lindenberg, 2001). The so-called hedonic frame enables intrinsic motivation, the normative frame prosocial motivation and the gain frame extrinsic motivation. In this view, tangible, contingent rewards strengthen the gain frame and let the hedonic and/or normative frame fade to the background of the individual's attention. As a consequence, an activity, formerly framed as enjoyable or appropriate, looks less enjoyable and appropriate if a strong gain frame is induced by external incentives (Lindenberg, 2001). Lindenberg and Steg (2007) exemplarily show how to apply framing theory to the policy question of how to encourage proenvironmental behavior. They conclude that the normative frame is central to the issue of environmentally friendly behavior, because this type of behavior is often framed in a normative way as a behavior that is "good and right." In contrast, a prominent gain or hedonic frame would work in the opposite direction, because "environmental protection" is often associated with high expenditures, thus reducing individual rewards, and a lot of personal constraints thereby lowering

individual comfort and pleasure. Therefore effective institutional interventions would have to actively increase individuals' moral obligation while at the same time, the competing gain and hedonic frame need to be de-emphasized, for instance by creating low-cost possibilities to engage in environmental friendly behavior.

Other authors hold "the information aspect of extrinsic incentives" responsible for their crowding-out effect on intrinsic motivation. Extrinsic incentives are proposed to signal to the agent that the principal does not trust in him or her or that the principal considers a certain task to be either not attractive, generally difficult to achieve, or particularly difficult to achieve for the agent (Bénabou & Tirole, 2003). Thus, contingent rewards signal which tasks are not enjoyable, and hence cannot create any intrinsic motivation (e.g., Gneezy, Meier, & Rey-Biel, 2011). Bolle and Otto (2010) extend this view by demonstrating that such a signaling effect of prices can have persistent effects. The authors argue that rewards attach values to activities, which can be problematic, particularly in situations where no "official price tag" to an activity is available. For instance, blood donation is a voluntary act in many countries; introducing rewards in return for a blood donation implies an economic valuation. Those clearly defined prices have been found to often have a negative effect on the amount of blood donation in a country. Bolle and Otto (2010) argue that such crowding-out takes place because individuals previously attached a higher, symbolic price to their contribution to this public good, and that such a crowding-out effect is persistent once the prices are officially defined. Finally Bénabou and Tirole (2006) extend their argument on the signaling effect of prices: rewards also inform individuals about their intentions. The authors claim that individuals are not clear about their preferences and thus about their real "goodness." As a consequence, individuals experience a warm glow in observing themselves behaving prosocially, because it confirms their self-serving assumption to be intrinsically "good." However, as soon as fines or rewards are linked to these "good deeds" people face the possibility that their contributions are rather motivated by extrinsic incentives than by high moral values as originally assumed. As a consequence, individuals tend to stop contributing to such deeds voluntarily and in the absence of rewards.

Irrespective of the different mechanisms underlying the crowding-out effect, Frey and Jegen

(2001) identify three *conditions*, under which variable, performance-related compensation leads to a reduction in effort at work:

1. The activity was originally intrinsically motivated.
2. The reward is interpreted as a monitoring device.
3. And the extrinsic motivation generated by reward does not counterbalance the loss of intrinsic motivation.

By now, there are a large number of *laboratory experiments* as well as *meta-analyses of these experiments* that studied influencing factors of the crowding-out effect in detail. The effect is stronger with expected rewards than with unexpected ones, and stronger with pecuniary incentives than with symbolic ones (Deci, et al., 1999a; Heckhausen, 2006). Moreover, there is a stronger crowding-out effect with interesting activities than with less interesting, monotonous jobs (Weibel, Rost, & Osterloh, 2010). Jenkins, Gupta, Mitra, and Shaw (1998), although not finding a negative effect of rewards, still provided evidence that these rewards are ineffective when it comes down to performance quality rather than quantity. Furthermore, crowding-out was found to effect contributions to public goods that are delivered in public, but not always to privately delivered public goods (Ariely, Bracha, & Meier, 2009).

In addition, a number of field experiments have supported the existence of a crowding-out effect (e.g., Ariely, Gneezy, Loewenstein, & Mazar, 2009; Frey, Eichenberger, & Oberholzer-Gee, 1996; Frey & Götte, 1999; Holmas, Kjerstad, Luras, & Straume, 2010). Holmas and colleagues (2010), for example, show in a unique natural experiment that monetary punishment strongly crowds out prosocial behavior. A long-standing problem in the Norwegian health-care system is the transfer of elderly patients that need specialist care from the treatment hospital to the care facility in the patients' home municipalities. This transfer has to be arranged by the local facilities but is often delayed for a number of reasons. In order to speed-up this transfer some municipalities started to fine their long-term providers for transfer delays, whereas other municipalities were at the same time abolishing their already existing fining system. Holmas et al. (2010) demonstrated that the implementation of these monetary punishments results in a "bed-blocking behavior" from the owners of long-term care institutions. Thus, fines seemed to prolong rather than to shorten patient

stays in state hospitals. In contrast, where fines had been formerly in place and were suddenly abolished, patients' length of stay was significantly shortened. Hence, in this case contingent punishments diminished performance, whereas the abolishment of fines had a positive effect on performance. Another recent study reveals how salient rewards negatively influence performance (Ariely, Gneezy, Loewenstein, & Mazar, 2009). The authors conducted a set of experiments in India and the United States to look at how rewards influence respondents' performance on different tasks. In India, respondents showed lower performance across different types of tasks when performance-contingent rewards were high in comparison with a situation where rewards were rather low. Thus, it could be argued that only salient contingent rewards crowd-out intrinsic motivation. In the United States, the effect of rewards on performance was moderated by the task at hand. On tasks that require motor skills, performance significantly increased with high rewards (in the experiment the high reward condition offered 10 times the rewards of the low reward condition). However, performance decreased when rewards were tied to cognitive or creative tasks.

Some experiments conducted by behavioral economists also show how both crowding-out and the price-effect operate in conjunction. Gneezy and Rustichini (2000), for instance, demonstrated how crowding-out and the price effect operate in opposite directions: the authors investigated the influence of financial incentives on the voluntary fundraising behavior of 180 students. These were divided into three groups. The first group received no financial bonus, the second received 1%, and the third 10% of the fundraising. The group with the 1% bonus fundraised considerably less than the group that received nothing. The third group fundraised more than the second group, but still fell short of the achievement of the first group. Thus, the price and crowding-out effect work in opposite directions (Frey & Osterloh, 2002): according to the price effect, the increased bonus boosts work effort (Figure 5.1). Without a bonus (i.e., being intrinsically motivated) the children engage at the A1 level. As long as there is no crowding-out effect, intrinsic motivation stays constant, so the addition of a bonus B raises work effort from A1 to A2.

According to the crowding-out effect, a bonus decreases work efforts as soon as it is being perceived as autonomy-thwarting. The supply curve moves from S to S' (Figure 5.2), indicating that intrinsic motivation decreases. As a result, work effort

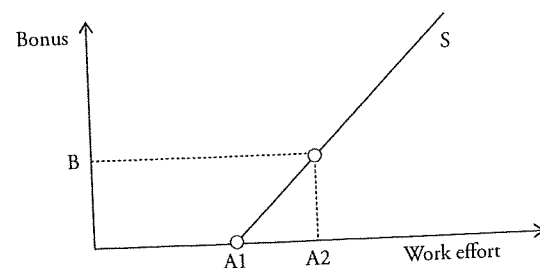


Fig. 5.1. The price effect.

drops to A3. If the crowding-out effect is weaker, that is, the intrinsic motivation is not reduced to zero, a lesser decline or even a slight but expensive rise in work effort can result. For this reason, the authors Gneezy and Rustichini (2000, p. 791) entitled their article: "Pay enough or don't pay at all." This trade-off has recently been substantiated by Pouliakas (2010, p. 618), who finds, that "monetary incentives may have a positive effect on workers' utility and performance as long as they are large enough."

Summarizing the vast evidence about the effects of performance-pay on performance and intrinsic motivation, pay-for-performance is clearly shown to have a negative effect on individual-level performance for interesting and more challenging tasks as well as for complex tasks. The crowding-out effect tends to be stronger for tangible and salient incentives, although current research has yet to unravel what drives the "salience" of rewards in a company context. However, it is safe to say that the current omnipresent use of individual-level pay-for-performance does not reflect scientific evidence: the effect of pay-for-performance on knowledge-based work and higher level managerial work is dubious and cannot be recommended based on current evidence from behavioral economics. These findings are also in accordance with research from psychology as a recent review of Gagné and Forest (2008) shows.

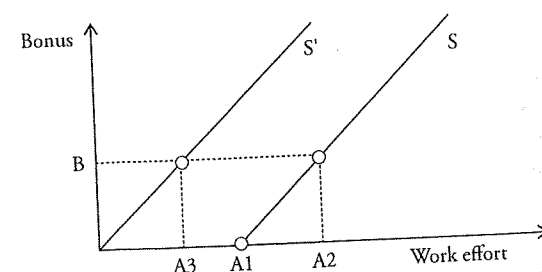


Fig. 5.2. The net effect of the price effect and the crowding-out effect.

CROWDING-OUT THROUGH FORMAL CONTROL

The second institutional mechanism, which is closely linked to crowding-out, is formal control. Here we define control as the purposive influence on the regulation of an individual's behavior through hierarchical authority, which leads to the attainment of institutional goals (see Fayol & Urwick, 1963; Gulati, 1998; Snell, 1992). Thus, formal control is firmly built on influencing extrinsic motivation: common goals are defined, goal attainment is monitored by supervisors, and individuals are rewarded or sanctioned depending on their compliance. The negative effect of formal control on intrinsic motivation is still a matter of debate, but by now, many authors suggest that formal control undermines intrinsic motivation if certain conditions are met (Weibel, 2010). Two arguments are advanced to explain the possible negative effects of formal control on intrinsic motivation. First, formal control, almost by definition, is seen as a form of externally devised influence on the work context as well as the work process of employees, and is thus naturally "at odds" with the need for autonomy (Argyris, 1957; Walton, 1985). Second, formal control is often portrayed to interrupt social relations (Bijlsma-Frankema & Costa, 2005; Fox, 1974), it signals suspicion (Falk & Kosfeld, 2006; Kramer, 1999; McGregor, 1960; Sitkin & Stickel, 1996), and exacerbates the hierarchical distance between the controller and the controlled (Weibel, 2007).

A number of empirical studies show that formal control crowds-out intrinsic motivation. For example, Barkema (1995), in an econometric study, demonstrates that managers in Dutch companies are more willing to do overtime when they are less monitored by their supervisors. The crowding-out effect of formal control is particularly strong if the controller holds a "controlling," that is, a suspicious intention. In this spirit, current empirical studies of behavioral economists supports McGregor's (1960) conceptual model of the negative effect of monitored working relations on intrinsic work engagement under the condition that the controller initiates control with a "theory X" in mind, that is, a suspicious and negative view of employees' work morale. For example, Falk and Kosfeld (2006) tested the effect of managerial monitoring in a two-stage principal agent game. The principal could choose to monitor the agents' effort either lightly, moderately, severely, or not at all. The experiment showed that principals who chose to trust, that is, not to monitor their agents at all, fared best. To put a figure on it, agents who were trusted showed twice the effort

of agents who were lightly controlled. In an effort to understand the underlying reason for the performance reduction, the authors designed two games with different types of control: in the first case monitoring was chosen by the principal, whereas in the second case control was exogenously given. Agents reduced their efforts only in the first case, which means that agents seemed to react negatively to the principal's suspicious mind-set, and not the monitoring per se (see also Strickland, 1958). These findings from behavioral economics are corroborated by findings from SDT research, which similarly show that a nonsuspicious and supporting managerial style has a positive effect on autonomous motivation (Deci, et al., 1989).

In addition, Sliwka (2007) proposed that formal and suspicion-based control affects above all individuals with a specific motivation propensity, which he dubbed "conformist." He argues that four types of motivation propensity should be distinguished: (1) altruists, (2) reciprocitists, (3) egoists, and (4) conformists. Conformists are proposed to behave in the way that is perceived to be the most prevalent in their environment: conformists behave in a prosocial way if their environment is seen to be prosocially oriented and in an egoistic way if their environment is seen to be egoistically oriented. Thus, if a supervisor signals trust, even when enacting formal control, the controlled is much more likely to act in a trustworthy way in response, as prosocial behavior is framed as "prevalent" in this environment.

The Crowding-In Effect

The crowding-in effect has been investigated to a much lesser extent than the crowding-out effect. Still, many findings show that certain institutional measures can have a positive impact on intrinsic motivation and job performance in the long run.

CROWDING-IN THROUGH PARTICIPATION AND THROUGH ORGANIZATIONAL FAIRNESS

Participation, that is, codetermination at work (Frey & Osterloh, 2002), increases employees' intrinsically motivated efforts. Participation can also buffer against the crowding-out effect caused by variable performance-related compensation: It has been shown that at the same income level, self-employed persons obtain higher intrinsic benefit from their work than salaried employees (Benz & Frey, 2008). Further support for the crowding-in-through-participation effect is provided by Feld and Frey (2002) and Frey and

Torgler (2007), who show that participation in political decision-making processes increases tax morale. Tax morale can be understood as an individual's willingness to pay taxes out of moral obligation. A number of laboratory experiments conducted in different countries show that such an intrinsic motivation to pay taxes differs across countries. Alm and Torgler (2006) speculate that countries with direct-democratic elements in their political system consistently feature higher tax morale than countries with fewer political participation possibilities. Alm and Torgler (2006) argue that such an offer for active political participation signals a trusting stance and thereby fosters citizens' identification and loyalty toward their country, which translates into their higher willingness to pay taxes.

Participation is strongly linked to organizational fairness perceptions, which have also been found to be positively related to intrinsic motivation. Tyler and Blader (2000) showed that *procedural fairness* has a positive effect on employees' prosocial behavior and on their intrinsic motivation. Procedures are perceived to be fair if these allow for participation, that is, codetermination, neutrality, impartiality, respect, and appreciative treatment. This positive relationship between procedural justice and intrinsic motivation was also demonstrated by justice researchers (Zapata-Phelan, Colquitt, Scott, & Livingston, 2009). In a laboratory experiment, Fehr and Rockenbach (2003) provided further evidence for the importance of impartiality: principals who imposed sanctions out of self-interest received less support within the team than principals who imposed sanctions for the team's interests.

The evidence is less conclusive as to whether distributive fairness, which refers to the perceived justice of decision outcomes, also fosters intrinsic motivation. Gagné and Forest (2008) reviewed studies demonstrating that both forms of fairness contribute to psychological need satisfaction, and thereby to intrinsic motivation. Other authors, however, link distributive fairness to instrumental expectations, and thus to extrinsic motivation (Tyler, 1999; Tyler & Blader, 2003). A study by Maier, Streicher, Jonas, and Frey (2007) adds an interesting facet to this debate. The authors found that an inherent personal need for procedural justice was positively related to intrinsic motivation, whereas an inherent personal need for distributive justice was negatively related to intrinsic motivation. They argued that individuals who are intrinsically

motivated and strive for autonomy, competence, and relatedness also acquire appropriate procedural justice conditions (for themselves and others) that allow for the satisfaction of those needs. In contrast, individuals who are naturally oriented toward distributive justice are highly susceptible to extrinsic incentives and in turn generally experience less intrinsic motivation.

CROWDING-IN THROUGH NORMATIVELY SHAPED DECISION-MAKING FRAMES

Individuals contribute more to public goods if the *decision-making frame* signals unambiguously that prosocial behavior is expected (Lindenberg, 2006). Such a strong signaling effect has been demonstrated very vividly in a public goods game²: cooperation in two identical test arrangements differed highly depending on whether the public goods game was labeled as a "Community Game" or as a "Wall-Street-Game." In the first case, about 70% of the respondents contributed to the public goods, whereas in the second case only about 30% did so (Lieberman, Samuels, & Ross, 2004). A recent experimental test by Reeson and Tisdell (2008) showed that people's behavioral choices depend on whether or not a normative frame is signaled. Participants were also playing public goods games. Results demonstrated a significant increase in public contribution every time after participants were reminded that they should contribute (i.e., a normative frame was signaled), and a significant decrease following-up the regulation treatment that exercised a certain kind of institutional control (consistent with the findings presented earlier). Ariely, Bracha and Meier (2009) provided an explanation for people's strong response to the signaling of social norms. Next to intrinsic and extrinsic motivation, the authors identified *image motivation* as a determinant of people's decision to act prosocially. In other words, individuals wanted to be considered "good" by others and by themselves (consistent with Bénabou & Tirole, 2006). In a laboratory and a field experiment the authors showed that if a certain public goods is socially considered "good" and the contribution to that public goods is visible (e.g., blood donations), image motivation is crowded-in, adding an "image value" to the contribution; and that monetary incentives crowd out such publicly visible contributions, because they decrease the image value, signaling to others (or oneself) that one's contribution could also be motivated by opportunistic motives.

CROWDING-IN THROUGH MARKET-DRIVEN WAGES

Wages can reinforce employees' intrinsic motivation if they are perceived as a *signal* for the company's *goodwill* and as *appreciation* of the employee's performance (Akerlof, 1982). Field studies (Kuvaas, 2006) and laboratory experiments (Irlenbusch & Sliwka, 2005) show that a principal's offering of high fixed wages is recompensed by high voluntary cooperation of the agents. More recently, a number of behavioral economists have demonstrated that fixed pay, particularly "generous" fixed pay, is positively related to self-esteem and to non-extrinsic motivation (Bénabou & Tirole, 2003; Ellingsen & Johannesson, 2008). Moreover, fixed pay has been shown to strengthen trust and thereby leads to higher intrinsic motivation. Sliwka (2007), for instance, demonstrated that the choice of pay, namely the decision to either introduce incentive pay or to stick with fixed pay, sends strong signals to employees: fixed pay is taken as a strong signal of trust, and, as a consequence, employees that are receptive to social norms show much higher individual performance under fixed pay than under variable pay schemes.

Conclusion

Behavioral economics shows that prosocial behavior is more common than assumed in standard economics. This finding concurs with the imposing evidence on the prevalence of prosocial, citizenship, and contextual performance behavior studied in the field of organizational behavior (Penner, Dovidio, Piliavin, & Schroeder, 2005). In addition, behavioral economics has clearly shown that preferences are plastic, that is, subject to systematic influences, and thus contingent on institutional mechanisms. Like SDT, behavioral economics expects performance-contingent rewards and control to have a detrimental effect on intrinsic motivation under certain conditions: if intrinsic engagement was present before rewards were introduced; if these rewards are tangible, contingent, and salient; and if the controls are authoritative and mistrusting (Deci, et al., 1999a; Weibel, et al., 2010). In addition, such a crowding-out effect is expected to reduce individual performance if it is stronger than a possible price-effect exerted by rewards or controls. Overall these findings are quite similar to findings in the field of psychology; however, these additional findings should be seen as producing more robustness for the field because these results were produced using different methods than those

used in psychology. Finally, small but growing evidence shows that participation, fairness, normative framing, and fair market-oriented fixed wages strengthen intrinsic motivation.

In addition, findings from the field of behavioral economics have clear practical implications. First, companies should refrain from using pay-for-performance schemes for challenging, creative, and complex work. Second, generous fixed pay, participation, procedural fairness, and clear normative signals to behave prosocially are robust drivers of intrinsic motivation. In addition, several aspects merit further investigation. At present it is unclear what drives the salience of incentive pay and hence its negative effect on intrinsic motivation. Although it seems clear that a high fraction of variable pay in the overall pay mix and frequent performance evaluations drive salience perceptions, we still do not know what "high" and "frequent" means in practical terms. Further research is also needed to unravel the conditions under which formal control can have a positive effect on intrinsic motivation—such a crowding-in effect has been partially shown in research in the field of organizational behavior but findings are still fragile and scattered. Finally, it is unclear whether distributive fairness crowds-in or crowds-out intrinsic motivation. To conclude, behavioral economics clearly shows that the universal application of pay-for-performance as practiced today is not warranted by scientific facts.

Notes

1. This chapter is an extended and refreshed version of a German journal article: Osterloh, M., & Weibel, A. (2008). Managing Motivation—Verdrängung und Verstärkung der intrinsischen Motivation aus Sicht der psychologischen Ökonomik. *WIST*, 37, 406–411.
2. In a public goods game participants are asked to choose how many of their *private* tokens they contribute to a shared pool. The tokens in the shared pool are multiplied by a factor and this "*public goods*" payoff is then evenly shared among all participants. In addition, all subjects also keep the tokens they do not contribute.

References

- Akerlof, G. A. (1982). Labor contracts as partial gift exchange. *Quarterly Journal of Economics*, 97, 543–569.
- Alm, J., & Torgler, B. (2006). Culture differences and tax morale in the United States and Europe. *Journal of Economic Psychology*, 27, 224–246.
- Andreoni, J. (1990). Impure altruism and donations to public goods: A theory of warm-glow giving. *Economic Journal*, 100(401), 464–477.
- Andreoni, J., Gale, W. G. & Scholz, J. K. (1996). Charitable contributions of time and money. *University of Wisconsin-Madison Working Paper*.

- Andreoni, J., & Miller, J. (2002). Giving according to Garp: An experimental test of the consistency of preferences for altruism. *Econometrica*, 70, 737-753.
- Anheier, H. K., & Salamon, L. M. (1998). Nonprofit institutions and the household sector. In United Nations Statistics Division (Ed.), *The household sector*. New York: United Nations.
- Argyris, C. (1957). Individual and organization: Some problems of mutual adjustment. *Administrative Science Quarterly*, 2(1), 1-24.
- Ariely, D., Bracha, A., & Meier, S. (2009). Doing good or doing well? Image motivation and monetary incentives in behaving prosocially. *The American Economic Review*, 99(1), 544-555.
- Ariely, D., Gneezy, U., Loewenstein, G., & Mazar, N. (2009). Large stakes and big mistakes. *Review of Economic Studies*, 76(2), 451-469.
- Ariely, D., Loewenstein, G., & Prelec, D. (2006). Tom Sawyer and the construction of value. *Journal of Economic Behavior & Organization*, 60, 1-10.
- Barkema, H. G. (1995). Do top managers work harder when they are monitored? *Kyklos*, 48(1), 19-42.
- Bebchuk, L., & Grinstein, Y. (2005). The growth of executive pay. *Oxford Review of Economic Policy*, 21(2), 283-303.
- Becker, B. E., & Huselid, M. A. (1998). High performance work systems and firm performance: A synthesis of research and managerial implications. In G. R. Ferris (Ed.), *Research in personnel and human resources* (Vol. 16, pp. 53-101). Stanford, CA: JAI Press.
- Bénabou, R., & Tirole, J. (2003). Intrinsic and extrinsic motivation. *Review of Economic Studies*, 70, 489-520.
- Bénabou, R., & Tirole, J. (2006). Incentives and prosocial behavior. *American Economic Review*, 96(5), 1652-1678.
- Benz, M., & Frey, B. S. (2008). Being independent is a great thing: Subjective evaluations of self-employment and hierarchy. *Economica*, 75(298), 362-383.
- Bertelli, A. M. (2006). Motivation crowding and the federal civil servant: Evidence from the U.S. Internal Revenue Service. *International Public Management Journal*, 9(1), 3-23.
- Bijlsma-Frankema, K., & Costa, A. C. (2005). Understanding the trust-control nexus. *International Sociology*, 20(3), 259-282.
- Bolle, F., & Otto, P. (2010). A price is a signal: On intrinsic motivation, crowding-out and crowding-in. *Kyklos*, 63(1), 9-22.
- Camerer, C. F. (2005). Behavioral economics. In *World Congress of the Econometric Society*, 18-24 August 2005, London.
- Camerer, C. F., & Fehr, E. (2006). Does "economic man" dominate social behavior? *Science*, 311, 47-52.
- Camerer, C. F., & Loewenstein, G. (2003). Behavioral economics: Past, present future. In C. F. Camerer, G. Loewenstein & M. Rabin (Eds.), *Advances in behavioral economics* (pp. 3-51). Princeton, NJ: Princeton University Press.
- Camerer, C. F., Loewenstein, G., & Rabin, M. (2004). *Advances in behavioral economics*. Princeton, NJ: Princeton University Press.
- De Charms, R. (1968). *Personal causation: The internal affective determinants of behavior*. New York: Academic Press.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology*, 18, 105-115.
- Deci, E. L. (1976). The hidden costs of rewards. *Organizational Dynamics*, 4(3), 61-72.
- Deci, E. L. (1980). *The psychology of self-determination*. Lexington, MA: D. C. Heath: Lexington Books.
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74(4), 580-590.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999a). A meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation. *Psychological Bulletin*, 125(6), 627-668.
- Deci, E. L., Koestner, R., & Ryan, R. M. (1999b). The undermining effect is a reality after all—extrinsic rewards, task interest, and self-determination: Reply to Eisenberger, Pierce, and Cameron (1999) and Lepper, Henderlong, and Gingras (1999). *Psychological Bulletin*, 125, 692-700.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Publishing Co.
- Ellingsen, T., & Johannesson, M. (2008). Pride and prejudice: The human side of incentive theory. *The American Economic Review*, 98(3), 990-1008.
- Falk, A., & Kosfeld, M. (2006). The hidden costs of control. *American Economic Review*, 96(5), 1611-1630.
- Fayol, H., & Urwick, L. F. (1963). *General and industrial management*. London: Pitman.
- Fehr, E., & Gächter, S. (1998). Reciprocity and economics: The economic implications of homo reciprocans. *European Economic Review*, 42, 845-859.
- Fehr, E., & Rockenbach, B. (2003). Detrimental effects of sanctions on human altruism. *Nature*, 422, 137-140.
- Feld, L., & Frey, B. S. (2002). Trust breeds trust. *Economics and Governance*, 3, 87-99.
- Fischbacher, U., Fehr, E., & Gächter, S. (2001). Are people conditionally cooperative? Evidence from public good experiments. *Economic Letters*, 71, 397-404.
- Fowler, J. H., & Kam, C. D. (2007). Beyond the self: Social identity, altruism, and political participation. *Journal of Politics*, 69(3), 811-825.
- Fox, A. (1974). *Beyond contract: Work, power and trust relations*. London: Faber and Faber.
- Frey, B. S. (1990). *Ökonomie ist Sozialwissenschaft. Die Anwendung der Ökonomie auf neue Gebiete*. München: Vahlen.
- Frey, B. S. (1992). Tertium datur: Pricing, regulating and intrinsic motivation. *Kyklos*, 45(2), 161-184.
- Frey, B. S. (1997a). A constitution for knaves crowds out civic virtues. *Economic Journal*, 107(July), 1043-1053.
- Frey, B. S. (1997b). *Not just for the money. An economic theory of personal motivation*. Cheltenham: Edward Elgar.
- Frey, B. S., & Benz, M. (2004). From imperialism to inspiration: A survey of economics and psychology. In J. B. Davis, A. Marciano, & J. Runde (Eds.), *The Elgar companion to economics and philosophy* (pp. 61-84). Cornwall, UK: Edward Elgar.
- Frey, B. S., Eichenberger, R., & Oberholzer-Gee, F. (1996). The old lady visits your backyard: A tale of morals and markets. *Journal of Political Economy*, 104, 193-209.
- Frey, B. S., & Götte, L. (1999). Does pay motivate volunteers? Unpublished. Institute for Empirical Research in Economics.
- Frey, B. S., & Jegen, R. (2001). Motivation crowding theory: A survey of empirical evidence. *Journal of Economic Surveys*, 15(5), 589-611.
- Frey, B. S., & Meier, S. (2004). Social comparisons and pro-social behavior: Testing "conditional cooperation" in a field experiment. *American Economic Review*, 94, 1717-1722.
- Frey, B. S., & Osterloh, M. (2002). *Successful management by motivation. Balancing intrinsic and extrinsic incentives*. Heidelberg: Springer.
- Frey, B. S., & Torgler, B. (2007). Tax morale and conditional cooperation. *Journal of Comparative Economics*, 35, 136-159.
- Gagné, M., & Forest, J. (2008). The study of compensation systems through the lens of self-determination theory: Reconciling 35 years of debate. *Canadian Psychology/Psychologie Canadienne*, 49(3), 225-232.
- Gerhart, B., & Rynes, S. L. (2003). *Compensation. Theory, evidence, and strategic implications*. Thousand Oaks, CA: Sage.
- Gintis, H., & Khurana, R. (2008). Corporate honesty and business education: A behavior model. In P. J. Zak (Ed.), *Moral Markets: The Critical Role of Values in the Economy* (pp. 300-327). Princeton, NJ: Princeton University Press.
- Gneezy, U., Meier, S., & Rey-Biel, P. (2011). When and why incentives (don't) work to modify behavior. *Journal of Economic Perspectives*, 26(4), 191-210.
- Gneezy, U., & Rustichini, A. (2000). Pay enough or don't pay at all. *Quarterly Journal of Economics*, 115(3), 791-810.
- Grant, A. M., & Berry, J. W. (2011). The necessity of others is the mother of invention: Intrinsic and prosocial motivations, perspective taking, and creativity. *The Academy of Management Journal*, 54(1), 73-96.
- Gulati, R. (1998). Alliances and networks. *Strategic Management Journal*, 19, 293-317.
- Heckhausen, J. (2006). *Motivation und Handeln*. Berlin: Springer.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. (2001). In search of Homo Economicus: Behavioral experiments in 15 small-scale societies. *The American Economic Review*, 91(2), 73-78.
- Holmas, H., Kjerstad, E., Luras, H., & Straume, O. R. (2010). Does monetary punishment crowd out pro-social motivation? A natural experiment on hospital length of stay. *Journal of Economic Behavior & Organization*, 75, 261-267.
- Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672.
- Irlenbusch, B., & Sliwka, D. (2005). Incentives, decision frames and motivation crowding out—an experimental investigation. IZA Discussion Paper No. 1758.
- Jenkins, D. G., Gupta, N., Mitra, A., & Shaw, J. D. (1998). Are financial incentives related to performance? A meta-analytic review of empirical research. *Journal of Applied Psychology*, 83(5), 777-787.
- Jensen, M. C., & Murphy, K. J. (1990). CEO incentives—its not how much you pay, but how. *Harvard Business Review*, 68(3), 138-149.
- Kirchgässner, G. (1991). *Homo Oeconomicus*. Tübingen: Mohr.
- Kramer, R. M. (1999). Trust and distrust in organizations: Emerging perspectives, enduring questions. *Annual Review of Psychology*, 50(1), 569-598.
- Kruglanski, A. W. (1975). Endogenous exogenous partition in attribution theory. *Psychological Review*, 82, 387-406.
- Kuvaas, B. (2006). Work performance, affective commitment, and work motivation: The roles of pay administration and pay level. *Journal of Organizational Behavior*, 27(3), 365-385.
- Lazear, E. P. (2000). Performance pay and productivity. *The American Economic Review*, 90(5), 1346-1361.
- Lepper, M. R., & Greene, D. (1978). *The hidden costs of reward: New perspectives on the psychology of human motivation*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Lieberman, V., Samuels, S. M., & Ross, L. (2004). The name of game: Predictive power of reputations versus situational labels in determining prisoner's dilemma game moves. *Personality and Social Psychology Bulletin*, 30, 1175-1185.
- Lindenberg, S. (2001). Intrinsic motivation in a new light. *Kyklos*, 54(2/3), 317-342.
- Lindenberg, S. (2006). Prosocial behavior, solidarity, and framing processes. In D. Fetschenhauer, A. Flache, B. Buunk & S. Lindenberg (Eds.), *Solidarity and prosocial behavior* (pp. 23-44). Springer US.
- Lindenberg, S., & Steg, L. (2007). Normative, gain, and hedonic goal-frames guiding environmental behavior. *Journal of Social Issues*, 63(1), 117-137.
- Maier, G. W., Streicher, B., Jonas, E., & Frey, D. (2007). Bedürfnisse nach organisationaler Gerechtigkeit und Bereitschaft zu innovativem Handeln. *Wirtschaftspsychologie*, 9(2), 43-54.
- McGregor, D. (1960). *The human side of enterprise*. New York: McGraw Hill.
- Meier, S. (2006). *The economics of non-selfish behaviour: Decisions to contribute money to public goods*. Cheltenham, UK: Mass.
- Nyborg, K. (2010). Will green taxes undermine moral motivation? *Public Finance and Management*, 10(2), 331-351.
- Osterloh, M. (2006). Human resources management and knowledge creation. In I. Nonaka & I. Kazuo (Eds.), *Handbook of knowledge creation* (pp. 158-175). Oxford: Oxford University Press.
- Osterloh, M., & Frey, B. S. (2000). Motivation, knowledge transfer, and organizational forms. *Organization Science*, 11, 538-550.
- Osterloh, M., & Frey, B. S. (2002). Does pay for performance really motivate employees? In A. D. Neely (Ed.), *Business performance measurement: theory and practice* (pp. 107-122). Cambridge University Press.
- Osterloh, M., & Frost, J. (2009). Bad for practice—good for practice. From economic imperialism to multidisciplinary mapping. *Journal of International Business Ethics*, 2(1), 36-45.
- Ostrom, E. (2000). Crowding out citizenship. *Scandinavian Political Studies*, 23, 3-16.
- Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology*, 56, 365-392.
- Pouliakas, K. (2010). Pay enough, don't pay too much or don't pay at all? The impact of bonus intensity on job satisfaction. *Kyklos*, 63(4), 597-626.
- Rabin, M. (2002). A perspective on psychology and economics. *European Economic Review*, 46, 657-685.
- Reeson, A. E., & Tisdell, J. G. (2008). Institutions, motivations and public goods: An experimental test of motivational crowding. *Journal of Economic Behavior & Organization*, 68(1), 273-281.
- Ryan, R. M. (1982). Control and information in the intrapersonal sphere—an extension of cognitive evaluation theory. *Journal of Personality and Social Psychology*, 43(3), 450-461.
- Schneider, M. (2007). Zielvorgaben und Organisationskultur. Eine Fallstudie. *Die Betriebswirtschaft*, 67(6), 619-637.
- Sitkin, S. B., & Stickel, D. (1996). The road to hell: The dynamics of distrust in an era of quality. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 196-215). Thousand Oaks, CA: Sage Publications.
- Sliwka, D. (2003). Anreize, Motivationsverdrängung und Prinzipal-Agenten-Theorie. *Die Betriebswirtschaft*, 63(3), 293-308.
- Sliwka, D. (2007). Trust as a signal of a social norm and the hidden costs of incentive schemes. *The American Economic Review*, 97(3), 999-1012.

- Snell, S. A. (1992). Control-theory in strategic human-resource management—the mediating effect of administrative information. *Academy of Management Journal*, 35(2), 292–327.
- Stajkovic, A., & Luthans, F. (1997). A meta-analysis of the effects of organizational behavior modification on task performance. *Academy of Management Journal*, 40, 1122–1149.
- Stigler, G. J., & Becker, G. S. (1977). De gustibus non est disputandum. *American Economic Review*, 67, 76–90.
- Strickland, L. H. (1958). Surveillance and trust. *Journal of Personality*, 26(2), 200–215.
- Stutzer, A., & Frey, B. S. (2007). What happiness research can tell us about self-control problems and utility misprediction. In A. Stutzer & B. S. Frey (Eds.), *Economics and psychology: A promising new cross-disciplinary field* (pp. 169–195). Cambridge, MA: MIT Press.
- Thaler, R. H. (1996). Doing economics without Homo Economicus. In S. G. Medema & W. G. Samuels (Eds.), *Foundations of research in economics: How do economists do economics?* Cheltenham, UK: Edward Elgar.
- Tomer, J. F. (2007). What is behavioral economics. *Journal of Socio-Economics*, 36(6), 463–479.
- Tyler, T. R. (1999). Why people cooperate with organizations: An identity-based perspective. In R. I. Sutton & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 21). Stamford, CT: Jai Press Inc.
- Tyler, T. R., & Blader, S. L. (2000). *Cooperation in groups: Procedural justice, social identity, and behavioral engagement*. Philadelphia: Psychology Press.
- Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review*, 7(4), 349–361.
- Walton, R. E. (1985). From control to commitment in the workplace. *Harvard Business Review*, 63(2), 77–84.
- Weibel, A. (2007). Formal control and trustworthiness—never the twain shall meet? *Group & Organization Management*, 32(4), 500–517.
- Weibel, A. (2010). Managerial objectives of formal control: High motivation control mechanisms. In S. B. Sitkin, L. B. Cardinal & K. Bijlsma-Frankema (Eds.), *Control in organizations: New directions in theory and research* (pp. 434–462). Cambridge, UK: Cambridge University Press.
- Weibel, A., Rost, K., & Osterloh, M. (2007). Disziplinierung der Agenten oder Crowding-Out?—Gewollte und ungewollte Anreizwirkungen von variablen Löhnen. *Zeitschrift für betriebswirtschaftliche Forschung*, 59(12), 1029–1054.
- Weibel, A., Rost, K., & Osterloh, M. (2010). Pay for performance in the public sector—benefits and (hidden) costs. *Journal of Public Administration Research & Theory*, 20(2), 387–412.
- Zapata-Phelan, C. P., Colquitt, J. A., Scott, B. A., & Livingston, B. (2009). Procedural justice, interactional justice, and task performance: The mediating role of intrinsic motivation. *Organizational Behavior and Human Decision Processes*, 108(1), 93–105.

Passion for Work: Determinants and Outcomes

Robert J. Vallerand, Nathalie Houliort, and Jacques Forest

Abstract

Passion can be uplifting and energizing; it can also be destructive and obsessive. The work realm represents a fertile ground to observe this duality of passion. This chapter provides a 10-year overview of the research on passion for work. The initial work on passion and its conceptualization is followed by a more focused presentation of the studies conducted in the workplace. First, various studies are presented that validate the concept of passion for work, distinguishing between harmonious passion and obsessive passion. Second, research that has examined the convergent and divergent validity of these two types of passion for work and their consequences on cognitive processes, psychological well-being, interpersonal relationships, and performance is discussed. Third, we present research on the determinants of passion, specifically the individual and social factors involved in the early and on-going development of passion for work. Finally, future research directions are proposed to stimulate new and exciting research in this growing field.

Key Words: passion, work, cognitive processes, psychological well-being, interpersonal relationships, performance, harmonious passion, determinants of passion

“Nothing is as important as passion. No matter what you do with your life, be passionate”

(Jon Bon Jovi)

The above quote from famous rock star Jon Bon Jovi underscores one major point: If you want to succeed in your field of endeavor, be passionate! And Bon Jovi is not the only one to believe so. For instance, the late Steve Jobs, founder and former CEO of Apple, underscored the role of passion in persisting and reaching one's business goals, and business mogul Donald Trump believes in the energy that passion provides while working toward one's goals. Even the famous philosopher Hegel (1770–1831) suggested that “Nothing great in this world has ever been accomplished without passion.” But is it the case? Does passion matter

with respect to performance? What about other outcomes, such as the quality of relationships that one develops and maintains at work and one's psychological well-being? Does passion for one's work matter as well?

Until recently, it was difficult to answer these questions because little to no psychological research was conducted on passion, let alone passion for work. However, roughly 10 years ago, psychologists started to empirically study passion, largely using the dualistic model of passion (DMP; Vallerand et al., 2003) as a basic structure. Since then, an increasing amount of research has been conducted in a variety of areas including the workplace (e.g., Vallerand & Houliort, 2003). This chapter reviews such research. The first section describes the concept of passion, the DMP (Vallerand, 2008, 2010), and initial research on elements of the model. The