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Social Rationality, Semi-Modularity and Goal-Framing: What Is It All About?

> "Our ability to selectively engage and disengage our moral standards [...]
> helps explain how people can be barbarically cruel in one moment and
> compassionate the next."
> *Albert Bandura*

Abstract: Human beings are not general problem solvers. Their mental architecture is modular and the microfoundations for the social sciences have to take that into consideration. Modularity means that there are hardwired and softwired functionally specific subroutines, such as face recognition and habits that make the individual particularly sensitive to a narrow range of information from both inside and outside. Goals are the most important creators of modules that contain both hard- and softwired submodules. Goals determine what we attend to, what information we are sensitive to, what information we neglect, what chunks of knowledge and what concepts are being activated at a given moment, what we like and dislike, what criteria for goal achievement are being applied, etc. Overarching goals govern large classes of submodules, and therefore the social sciences have to deal especially with these overarching goals. Three such overarching goals are identified: hedonic, gain, and normative goals. At every given moment one of them is focal (a goal-frame) and self-regulation is the process by which humans balance the dominance of goal-frames. In turn, self-regulation (here seen as the heart of 'social rationality'), depends much on social circumstances that are open to sociological investigation.

0. Introduction

Rational choice theory (RCT) has achieved much in the social sciences but has for some time now been in need of a major overhaul. RCT has been the first theory of action that truly integrated aspects of the person (preferences) and of the situation (constraints). For the social sciences, this is probably the most important feature of a theory of action (see Lindenberg 2006a), and yet it had taken a long time for this idea to take hold outside economics. Now that it is fairly well established in its different versions (price theory, SEU theory, game theory), it becomes clear that there are some major deficits in the core of the theory. With the help of newer developments in cognitive sociology and (social) psychology, evolutionary psychology, and neuro sciences, it is now also possible to identify these deficits in detail and to come up with alternatives. What is particularly troublesome in RCT is the assumption that human beings are general problem solvers (Barret/Kurzban 2006; Hsee/Hastie 2006) and that the 'person part' of a theory of action is best represented by preferences (Ariely/Lowenstein/Prelec

2006). In this contribution, I will present a short overview of newer developments that can be captured by the term 'social rationality'.

1. Goal-Framing Theory

To set the tone, let me begin with the by now famous study by Liberman, Samuels and Ross (2004). They found that labeling a social dilemma game as 'Community Game' (suggesting a context with group-related decisions and an emphasis on appropriateness) versus labeling it as 'Wallstreet Game' (suggestion a context with competition-related decisions and an emphasis on gain) made a big difference in the relative frequency of cooperative responses (66% versus 31%). Presumably, the label alone created different interpretations of the situation and consequently more or less cooperative behavior. What effects like these suggest is that human perception, thinking, and deciding is organized in a modular way. However, as we will see later on, this modularity is porous or 'semi'. Human beings are not general purpose problem solvers, as implied by the microeconomic view of rationality; but neither are they stuck with a 'Swiss Army knife', where each blade (a hard-wired task-specific module) serves a different purpose (see Tooby/Cosmides 2000). The adaptive advantages of modularity are evident. The possible interpretations of sensory input are legion and the organism cannot react fast enough without being *selective* with regard to inputs and *prepared* with regard to the processing of inputs. There are hardwired modules, such as face recognition, and learned modules, such as word recognition and habits, each characterized by functional specificity (Barret/Kurzban 2006). Modularity is thus tantamount to functional specialization. But social life is rife with uncertainty and sudden changes and requires flexible forms of modularity. It is thus more than likely that evolutionary pressure will have selected for this flexibility. The basis on which flexible modularity is built is the way goals work. Goals are the most flexible form of functionality in the sense that they can change according to situational cues and affordances *and* make the organism both selective with regard to inputs and prepared with regard to processing them. Take as an example the effect of being hungry. If somebody is very hungry he is likely to have a strong focal goal to eat something. What this goal does is to make him particularly sensitive to cues that something is edible, make it easy to imagine what something would taste like, increase liking for objects that are edible and tasty, suppress attention to goal-irrelevant or possibly distracting aspects (such as monetary costs, possible negative long-term effects of what you eat, etc). Goals can become focal as an automatic reaction to cues, without deliberation (see Bargh et al. 2001). When they are focal, they create modularity by affecting what we attend to, what information we are sensitive to, what information we neglect, what chunks of knowledge and what concepts are being activated at a given moment, what we like and dislike, what criteria for goal achievement are being applied, etc. (see Gollwitzer/Bargh 1996; Kruglanski/Köpetz 2009; Marsh/Hicks/Bink 1998; Förster/Liberman/Higgins 2005).

If we are looking for the most inclusive modules, we thus must look at overarching goals each of which comprises a great number of subgoals and representations of means and causal relations among them. When such a goal is focal, it organizes cognitions and evaluations in a modular way and it selectively activates hardwired and learned modules. A focal high-level goal can thus be seen a composite module, comprising a particular selection of modules and hardwired and learned submodules. These overarching goals thus create domain specificity and selective sensitivity to specific inputs. For example, the high-level goal 'to act appropriately' is likely to make situationally relevant norms cognitively more accessible, make people particularly sensitive to information about what is expected, activate the modules to process information on gaze and on certain facial expressions of approval and disapproval, and activate response tendencies and habitual behavioral sequences concerning conformity to norms (such as facial expression, shaking hands, keeping a certain distance to the other person, helping in need etc.) and activating positive evaluations of the means to reach the goal (Ferguson/Bargh 2004). This is the basis for goal-framing theory (Lindenberg 2001a; 2001b; 2006b; Lindenberg/Steg 2007) which I will briefly describe in some more detail. I will also explain in what way human mental processes are 'semi-modular' rather than fully modular and why this makes modularity especially interesting for the social sciences.

1.1 Three Goal-Frames

There are many indications that the human beings are predisposed to strive for improving their condition. For example, human beings don't stick to what they know but quite impulsively seek a modest degree of novelty and discovery (Fredrickson 1998; Loewenstein 1994; Silvia 2005). In addition, one gets used to what one has, and one expects satisfaction mainly from an improvement vis-a-vis the status quo (see Bandura/Cervone1983; Frey/Benz/Stutzer 2004; and Higgins/Grant/Shah 1999). Related to this is the finding that individuals generally prefer improving sequences of events even if the total result is less than in a worsening sequence (see Loewenstein/Prelec 1993). There is also a general tendency of satiation that points to an adaptive capacity to improve one's condition by automatically biasing the allocation of resources towards the realization of goals that promise a higher rate of improvement of one's condition. Finally, it is also known that the motivation to improve one's abilities increases as efforts to do so succeed (see Ilies/Judge 2005). I take these facts to indicate that to improve one's condition is a very high-level goal. However, due to modularity, nobody is bent on improving his or her total condition. Behavior is chronically one-sided.

Improvement will be selective, depending on which aspect the individual focuses on. What are the most important foci? Here, evolutionary psychology points to the crucial interdependence of individual and group. For the individual, living in (larger) groups has definite adaptive advantages (Dunbar 2003), yet these advantages do not materialize if the groups cannot deliver collective goods, i.e. if individuals are not also able and willing to do what is necessary from the point

of view of the group. There is a problematic balance between improving one's condition as an individual and as a member of a group and goal-modularity will thus have evolved in the context of this problematic balance. Individuals will have developed overarching goals with regard to acting as individuals and acting as members of a group. According to Dunbar (2003) the neocortex of humans developed under selective pressures to make it possible to derive individual adaptive advantages from living in groups, most notably by the ability to put oneself into the shoes of the other and to be cognitively and motivationally prepared for jointness in doing things (Tomasello et al. 2005).

This added brain power, however, also greatly advanced the possibility for prospective behavior. It created additional abilities to increase the individual adaptive advantages within the group by being able not just to attend to improving the way one feels right now, but also by acting strategically, by making plans, by being able to identify with and invest in one's own future self. For example, one could invest in improving one's status position within the group by strategically entering coalitions, by deceiving, and by manipulating others. This resource and future orientation requires a very different selectivity and preparedness than focusing on improving the way one feels right now (say by eating, or having fun, or venting one's anger).

The fault lines individual/collective and short-term/longer-term led to three overarching goals that generate modularity: A goal 'to improve the way one feels right now' (a hedonic goal); a goal 'to guard and improve one's resources' (a gain goal), and a goal to 'act appropriately'. When one of these three overarching goals is activated (i.e. when the goal is 'focal'), it will influence how people process information, what they think of at the moment, what information they are sensitive to, how they will evaluate things, what action alternatives they perceive, and how they will act. A focal goal together with these cognitive and evaluative consequences is called a 'goal-frame', indicating that the goal creates a frame within which all other processes take place. Goal-framing is thus the same as (semi)modularity brought about by goals. Which of the three goals is focal (i.e. is the goal-frame) depends on internal and external cues that trigger the goal. Note that the term 'triggered' is used quite deliberately. Goal-frames are not chosen but are subject to automatic priming effects. For example, in the experiment by Liberman, Samuels and Ross (2004) described above, the cue 'this is a community game' triggered in most subjects a normative goal-frame, whereas, the cue 'this is a Wallstreet game' triggered in most subjects a gain goal-frame. There is no deliberate decision involved. Similarly, people are quite easily influenced by instructions from others and by the goals of others without any deliberate choice involved ("goal-frame resonance" see Lindenberg 2000, and "goal contagion", see Aarts/Gollwitzer/Hassin, 2004). How goal-frames can nonetheless be deliberately influenced will be discussed below when I describe the relation of goal-framing to self-regulation. Suffice to say at this point, that because of modularity, rationality is to a large extent tantamount to self-regulation which, in turn, depends much on social circumstances. In the following section, I will briefly describe each of the three goal-frames in some more detail, and later I will say more about the process of triggering.

1.2 Hedonic Goal-Frame

A hedonic goal-frame activates one or more subgoals that promise to improve the way one feels in a particular situation (such as seeking direct pleasure, seeking direct improvement in self-esteem, seeking excitement, avoiding effort, avoiding negative thoughts and events, avoiding direct uncertainty, etc.). The time horizon will be short. The hedonic goal-frame will sharpen the sensitivity towards opportunities for need satisfaction (such as a piece of cake left on their kitchen counter) and towards events that affect the way one feels (mood swings, pain, the friendliness or unfriendliness of people at this moment, mishaps, losses etc). For example, in such a goal-frame, the amount of effort for an activity will, ceteris paribus, loom larger than money expenditure because effort *directly* influences the way one feels. Cues in the environment can activate a hedonic goal frame. For example, being exposed to hedonic goods will not just make people impatient to have this good, it will also make them impatient with regard to other goods. In short, the hedonic goal-frame makes one see all sorts of attractive things in a short-term light. For example, being exposed to an attractive dessert also shifts people's time preferences toward smaller and sooner rather than larger and later monetary gains (see Li 2008). Or being exposed to an attractive cookie smell leads subjects to make more unplanned purchases, even when their budget is tight (see also Van den Bergh/Dewitte/Warlop 2008).

1.3 Gain Goal-Frame

A gain goal-frame activates subgoals having to do with resources (such as saving money, increasing one's income, dealing with threats to one's financial security). Subgoals having to do with the way one feels and with normative behavior (see below), are pushed into the cognitive background. In such a goal-frame people will be very sensitive to changes in their personal resources. The time horizon is middle or long-term and the criterion for goal realization is an improvement of (or prevention of decrease in) one's resources or efficiency of resources. Since deviating from norms can create costs, attention to norms in a gain goal-frame is tantamount to attention to sanctions. For example, cheating is against the established norms, but in a gain goal-frame only the expected costs (say, in terms of a fine or reputational damage) of cheating will be considered. Cues that the situation is competitive and focused on private gain will trigger a gain goal-frame in most people (such as the cue 'this is a Wallstreet game'). Similarly, presenting a situation in terms of choice between monetary outcomes will trigger a gain goal-frame ('choose the highest outcome'), whereas presenting the same situation as one of accepting or rejecting a certain share of the whole will push fairness considerations into the foreground and thus trigger a normative goal-frame ('reject an unfair offer'), see Handgraaf et al. 2003.

1.4 Normative Goal-Frame

A normative goal-frame activates subgoals associated with appropriateness (such as behaving the right way, contributing to a joint project, showing exemplary

behavior). It will make people especially sensitive to what they think one ought to do. When people are in a normative goal-frame, subgoals having to do with the way one feels and with personal resources are pushed into the cognitive background. In such a goal-frame, improvement is related to group goals. In different situations, this can mean different things. In some situations, it is contributing to a joint project (such as winning in a team sport within the boundaries of the rules), in others it is achieving a public goal (such as being a judge and serving justice), in yet another situation, it is conforming to the group norms (such as behavior in public places). Cues that the situation is one of joint production will, *ceteris paribus*, trigger a normative goal-frame in most people (see Lindenberg 1997; Rege/Telle 2004). Fehr and Rockenbach (2003) showed that this also holds for the way sanctions work. They found that when sanctions are interpreted as supporting private gain, they reduce the willingness to cooperate if the punishment is not high enough. By contrast, when sanctions are interpreted as supporting the group, they promote cooperation. Thus, cues that convey jointness or moral legitimacy will trigger a different goal-frame compared to cues that convey privateness (competition and private gain).

2. Why Semi Modularity? The Importance of Background Goals

The flexibility of reacting to changing aspects of a given situation is heightened by the fact that the modularity of goal-frames is porous, i.e. that it is open to some influence from the background goals. In this sense, then, modularity is 'semi'. When one overarching goal becomes focal, the other two goals lost the competition but they don't lose all influence. Rather, they are pushed into the cognitive background. From there, they still exert some influence. For example, when people are in a normative goal-frame and thus focused on acting appropriately, then ambiguity in what is appropriate (say following equity or equality would both be fair behavior in a given situation) will make them choose the norm that is most advantageous for them in terms of gain. In other words, they still see the situation as one of appropriateness but the gain goal in the background exerts its influence by increasing the weight of the more advantageous normative alternative. This has been well demonstrated in empirical research (see for example Babcock/Loewenstein 1997; De Vries 1991; Wade-Benzoni/Tenbrunsel/Bazerman 1996). Conversely, experimental evidence shows that people rarely act completely egotistically even if their main goal is gain. Rather, even then, they seem to be somewhat restrained by normative concerns (see Camerer 2003). 'Mixed motives' are in that sense the rule rather than the exception; however, they are not 'mixed' next to each other but divided into foreground and background goals. This makes modularity porous.

In order to understand how this works, it is important to realize that, at any given moment, a goal-frame can be weaker or stronger, depending to a large degree on the background goals. For example, in a strong normative goal-frame, if one is asked to help a friend in need, one will not hold back and give as much

as one can. In a weak normative goal-frame, one will help but the gain goal in the background can exert some influence and one will give less than one could have given. A goal-frame can become so weak that it will be displaced as a goal-frame by a background goal. For example, if the friend keeps coming back for more help, the gain goal may take over and then guarding one's resources rather than appropriateness is the focal goal.

A background goal can be in conflict with the goal-frame (and thus weaken it) as in the example of the friend in need, or it can support the goal frame (and thus strengthen it), as for example when doing good is also fun. At any time, one goal is focal and influences cognitive process the most (i.e., it is a goal-frame), while other goals are in the background and increase or decrease the strength of the focal goal to a greater or lesser degree. Because of this background effect, aspects of the situation that do affect the background goals only will have a sluggish effect on behavior. For example, rising monetary costs for somebody in a normative goal-frame will affect behavior, but it will do so much less than if the goal-frame had been gain. This framing effect can considerably muffle the effect that can rightly be counted as the most robust regularity in economic theory: The relative price effect (see Lindenberg/Frey 1993). Conversely, even though the effects of background goals are sluggish (compared to the situation when they are 'focal'), they are quite crucial for supporting a goal-frame that may otherwise be replaced by a stronger one. In that sense, selfish reasons for conforming to norms (such as a 'warm glow', see Andreoni 1990) are to be expected and they are certainly not a sign that there is no sense of obligation. As I will discuss in the next section, it is to be expected that a strong normative goal-frame will virtually without exception be heavily supported by background goals.

3. The Different *apriori* Strength of Goal-Frames

The fact that background goals can also strengthen the goal-frame (when they are compatible with it), is of great importance for battling the *apriori* difference in strength between the goal-fames. Not counting the support from background goals, the three goal-frames are not equally strong. The hedonic goal-frame, being directly related to need satisfaction and thus being the most basic, is *apriori* the strongest of the three master goal-frames. This means that in order to displace the hedonic goal from the foreground, the gain and normative goals must have additional supports from compatible goals in the background. Because these are often dependent on institutional arrangements, sociology has much to do with discovering the conditions under which gain and normative goal-frames are strengthened vis-à-vis the hedonic goal-frame. Much of Max Weber's work can be taken to be concerned with the question how the gain goal-frame could come to such prominence in the Western world and how large the role of institutional arrangements (such as religion and the legal order, including secure property rights) was in shoring up the gain goal-frame against the hedonic goal-frame. The normative goal-frame is even more dependent on external support, but here we have a (probably) hardwired human sensitivity

to social cues that trigger a normative goal-frame when the competition from the other two goals is relatively low (such as the human gaze, see Haley/Fessler 2005; Milinski/Rockenbach 2007; human presence, see Joly/Stapel/Lindenberg 2008). Because of their ordinariness, they play a very important role in everyday interaction. Social requests (for example, 'give for a worthy cause', see Bekkers 2006; Eckel/Grossman 1996) and participation in joint production (Lindenberg 1997) are stronger triggers. However, even though a normative goal-frame can be triggered by such cues, it is difficult to maintain it without extra supports. Fehr and Gächter (2000) have shown that sanctions are good supports for a sustainable normative goal-frame (even though the authors do not use this concept). Fehr and Rockenbach (2003) have shown that these sanctions will only have this function if they don't trigger a gain goal-frame, i.e. if they are morally legitimate. In other words, when sanctions are interpreted in a gain frame, they will only work if they and/or the probability of detection are high. When people are in a normative goal-frame the size of the sanction and the probability of detection will only work on the gain goal in the background and will thus have only very muffled or no effect, as can be seen from, for example, studies on tax morale (see Slemrod/Blumenthal/Christian 2001). By contrast, being in a normative goal-frame makes one particularly sensitive to cues about appropriateness, and such cues also have a direct link to a strong hedonic background goal that supports the normative goal-frame, namely the shame of being caught cheating (Tangney/Dearing 2002). Thus, for people in a normative goal-frame, shaming will be a much stronger support than financial sanctions.

4. Self-Regulation and the Balance between Goal-Frames

Goal-directed behavior itself can be seen as a form of self-regulation (see Carver/Scheier 1998). However, when we explicitly focus on semi-modularity, self-regulation takes on a broader meaning. Even though social cues and institutions will help invert the *apriori* strength of goal-frames, the probably most important force in balancing goal-frames is the human ability to self-regulate in the sense that humans are able to intervene in the likelihood that they are in a particular goal-frame (and regulate subgoals within a goal-frame). The assumption of internalized norms as sufficient for norm conformity has a long time clouded the necessity to look at self-regulation processes. How do people deal with the fact that goal-frames often impose themselves on them automatically? People's ability to function in their daily lives strongly depends on this ability to regulate the goal-frames they are in (see Baumeister/Vohs 2004). For example, the inability to self-regulate hedonic goal-frames also makes people smoke and eat more than they would like to, lowering their subjective well-being (see Stutzer/Frey 2007). Certain emotions such as fear or anger can lock people into a hedonic goal-frame. The inability to regulate goal-frames can have severe long-term consequences in terms of occupational downward mobility, erratic work lives, and problematic partner-relationships (see Caspi/Elder/Bem 1988). Self-regulatory ability, in the sense used here, involves at times the flexible change of goal-frames

and, at other times, the situational maintenance of a weaker goal-frame against disturbing and stronger goals (see also Spinrad et al. 2006). Some valued goods (such as social approval) can best be acquired if one does not directly seek them but get them indirectly as a side effect of being in a normative goal-frame. This is what I have called the 'by-product paradox' of social approval (Lindenberg 1989; see also Konow/Earey 2008 and Sheldon 2004) and it underlines the importance of different frames for one's well-being.

How can people do it if they cannot choose their goal frames? Even more mysterious: How can they self-regulate if there is semi-modularity, i.e. if they do not have a super goal-frame from which they can regulate the overall improvement of their condition?

The answer lies in the fact that the very sensitivity to social influence on goal-framing can be used by the individual to help regulate his or her own goal-framing. This also makes reliance on preferences as 'tastes' (rather than goals) for predicting behavior (when external constraints are weak) problematic. For example, if we know that somebody craves sweets (and has the means to give in to this craving), we might be tempted to predict that he consumes a lot of sweets ('high willingness to pay for sweets'). However, self-regulatory goals may intervene and result in the person eating very little sweets *because* he craves them and believes that they are unhealthy. There are a number of tools available for regulating one's own goal-framing.

Escape. First of all, the individual can escape from or avoid goal-frame-endangering social influence. For example, as mentioned above, other people's goal-frames exert a strong influence on one's own goal-frame ('goal-frame resonance' or 'goal contagion'). In a group of peers who seek fun and entertainment (a hedonic goal-frame), it is difficult to keep up a normative goal-frame. If one wants to keep up a normative goal-frame, one is likely to avoid the group or to leave it quickly, if possible. If one waits too long, the contagion will have progressed beyond the point at which self-regulation is likely to make one leave the group. For good or bad, the company one keeps will thus have a lot to do with the goals one pursues. The same effect has been observed with moods (Neumann/Strack 2000).

Not all influences are as obvious as a party of peers. The public environments of a city, for example, are full of signals of other people's goals and they can be quite a challenge for self-regulatory abilities. How subtle and yet how powerful the effects of goal contagion are, can be illustrated with an experiment we performed, concerning the norm of stealing (Keizer/Lindenberg/Steg 2008). We argued that the normative goal-frame, being apriorily the weakest, can be weakened by clear signs that others are in a different goal-frame. In order to test this in the public space, we placed a very noticeable envelop with a transparent window in a public mailbox, but we did it in such a way that it stuck out and people walking by could clearly see what was inside. What they could see was a five Euro bill peaking through the window of the envelope. The question was how many people who passed the mailbox would go so far as to take the envelope with them. If they left it, or if they stuck it into the mailbox, it was counted as ok and if they took it with them, it was counted as stealing. What we

varied was just a small detail: in one condition, we left the mailbox as it was. In another condition, we covered it with graffiti. The assumption was that graffiti would create the impression of an environment with people who do not care much about general social norms. This would presumably weaken the normative goal-frame of the passersby. The results were quite dramatic. Without graffiti 13% of all passersby (N=151) took the envelope and with graffiti this percentage more than doubled (27%). Could it be that the people read the graffiti quite differently, namely as a sign that the police does not enforce laws around here and that one could steal with impunity? In order to test this possibility, we repeated the 'temptation' condition, not with graffiti but with trash around the mailbox (N=163), which we assumed would indicate the same lack of concern for general social norms in this environment. However, since the antilittering ordinance in Groningen (where the experiment was conducted) is not enforced by the police, littering could not signal that stealing is tolerated by the police. The result of the second experiment corroborated the first finding and also the high magnitude of the effect (25% with trash compared to the control condition of 13% mentioned before). Thus, if one lives in an environment with many indicators of low concern for acting appropriately, there is a risk that self-regulation will be impaired simply because of disorder in the social environment that one cannot easily leave or avoid.

Seek or provoke supporting influences. A second set of tools for self-regulation consists of the individual's ability to seek goal-frame supporting social influence or by provoking it. For example, a person who would like to strengthen his gain goal-frame can choose to mingle more with people who are known to have a strong gain goal-frame. Homophily is in all likelihood not simply a tendency for people to seek out similar others, but rather a goal directed action (see Dijkstra/Lindenberg/Veenstra 2007) and often in the service of self-regulation. People can also choose to expose themselves to the influence of others who are different and for that reason helpful for self-regulation. For example, it has been found that people motivate themselves to achieve a valued goal by seeking out others that are successful at achieving this goal as role models (Lockwood/Joran/Kunda 2002).

Goffman has pointed to people's tendency to influence others in such a way that they have a positive impression ('impression management', see Goffman 1959 and Schlenker 2003). However, one can look at it from the other side. When is one apt to make a good impression? Very likely, one makes a 'good impression' mainly by showing that one is a good self-regulator, not apt to give in to impulse, not prone to be a monomaniac or a bigot, but seemingly a balanced goal-framer, concerned about the collective when that is asked for, able to take care of one's own resources, and, at times, also able to have fun and let go. People are likely to reward others for showing good self-regulation because they would be negatively affected in their own self-regulation by people who are stuck in a particular goal-frame.

Significant others. A third powerful tool for self-regulation is to enlist the power of significant others to strengthen one's own normative goal-frame. In the course of their development, people acquire significant others (such as mother,

partner, close friends, religious leaders) whose opinions and standards weigh heavily and who can be called upon especially to strengthen the normative goal-frame. One of the most important significant others are the direct socializers in early childhood, and especially the mother. They represent norms and standards and in interaction with them the moral self, i.e. the normative goal-frame and its internal stabilizers, is developed (see Gralinski/Kopp 1993; Kochanska 2002). A significant other does not have to be physically present to influence one's behavior. Research shows that when certain significant others have been made salient in somebody's mind, their norms will influence behavior quite strongly (see Baldwin/Carrell/Lopes 1990; Baldwin/Holmes 1987; Fitzsimons/Bargh 2003; Shah 2003a; 2003b). In a recent experiment (Stapel/Joly/Lindenberg forthcoming), we could show that this effect is quite automatic and extends to the normative goal-frame as a whole. When people are primed with various significant others (without being aware of it), the readiness to follow social norms in general, not just specific norm, is greatly increased. The downside of this is that people who are not attached to significant others (say, because of a troubled period of early socialization and rejection experiences or because their significant others are rejected by society) will have lower self-regulatory capacity. Significant others can also be used for committing oneself to a course of action, such as publicly announcing to them that one will stop smoking. Precommitment can even be used to reserve periods for hedonic goal-frames (i.e. schedule times for fun), thereby reducing the possibly conflicting random influence of hedonic goals (see Kivetz/Simonson 2002). In short, people can actively seek or try to avoid the influence of significant others and thereby manipulate their own social influence on goal-framing.

Intervention. One direct consequence of this view of self-regulation is that it makes one look at incentives as a mechanism for steering behavior of others in a very different light. The crucial question is: how do rewards and punishments affect the self-regulatory capacity of people? Rewards (especially rewards by significant others) can negatively affect people's ability to maintain a normative goal-frame. For example, paying a child to mow the lawn in front of the family house, will weaken the child's ability to look at family chores from the point of view of obligation (i.e. make it more difficult for the child to maintain a normative goal-frame). Take for example problem youths and the cry for harder punishment to knock some sense into them by shocking them by the experience of brief incarceration and/or by having criminals tell them about the horrors of prison ('scared straight'), court-ordered school attendance, putting them into camps etc. It is by now well-known that these measures don't work (see Kazdin/Weisz 1998; Lipsey/Wilson 1998; Sherman et al 1997). Traditional rational choice models would assume that negative incentives (such as incarceration or shock experiences) steer behavior away from trouble. However, if punishment is not meant to mainly please the sense of justice of society but to influence behavior proactively and retroactively, then the social rationality approach, with a central place for self-regulation, would look first of all at the functioning of significant others for self-regulation capacity. Incarceration is likely to increase self-regulation problems because it reinforces the importance of delinquent

peers and decreases the importance of adults in authority as significant others
(see Huey/Henggeler/Brondino/Pickrel 2000). A more promising approach is to
improve the positive role parents and teachers can play as significant others
by focusing intervention on teacher and family functioning (Eddy/Reid/Fetrow
2000; Kazdin/Weisz 1998). Given that ambiguity of norms invites room for he-
donic or gain goals, as we have seen above, it is also important that rules and
expectations that emanate from the significant others are clear (see Sherman et
al. 1997, ch.5).

5. How is Self-Regulation Possible?

There remains the questions how self-regulation is possible given semi-modularity.
There is no overall goal-frame from which self-regulation could govern the three
goal-frames. However, there are two important ingredients that allow selfregu-
lation nonetheless. First of all, people learn from experience and escape or ap-
proach goal-frame-stabilizing social influences. Because of the influence of back-
ground goals, people are aware that the realization of their focal goal is endange-
red as the relative weights of contrary background goal(s) increase or the weights
of supporting background goal(s) decrease. Learning from that experience, they
can avoid situations and seek out others. For example, if one knows that being
with a particular person weakens one's resolve to act appropriately, one can try
to avoid this person when one is in a normative goal-frame. In this way, being
exposed to temptations can actually strengthen one's self-regulatory ability (see
Fishbach/Friedman/Kruglanski 2003; Muraven/Baumeister 2000).
    Secondly, this learning process can be greatly facilitated by the formation of
an identity (or ideal self). Identity in the sense used here, is a process in which
criteria are developed for what fits and what does not fit oneself as a unitary
person. This includes ideas about the relation of the person to each of the three
goal-frames: How fitting it is to give in hedonic goals, how fitting it is to be con-
cerned with resources and the future, and how fitting it is to be concerned with
the collective. In all likelihood, in every group, there is social pressure for deve-
loping some degree of consistency (see Suh 2002), and there will be a personal
self-regulatory payoff for doing so (Blanton/Christie 2003), but consistency does
decidedly not mean being glued to one goal-frame. Rather, consistency refers to
the personal balance between goal-frames. This is the basis for the formation
of a personal identity, for the consistency of which one is also accountable vis-
à-vis physically or psychologically present significant others. At each moment,
one's identity affects the goal-frame *and* the background goals because it con-
tains criteria for all three. For example, when a normative goal-frame is salient,
a hedonic temptation that presents itself may actually strengthen the normati-
ve goal-frame by also triggering appropriateness concerns about one's identity
('I am not the kind of person who does things like that'). Such effects can be
quite autonomic, without any deliberation (see Fishbach/Friedman/Kruglanski
2003). Self-regulation then means, at least in part, that goal pursuit within a
given goal-frame is influenced by subgoals that concern the fit of contemplated

action with one's identity. Lack of identity development, or confused identities, say due to one's being an immigrant or member of conflicting groups, will, *ceteris paribus,* lower one's self-regulatory capacity.

6. Summary and Discussion

Experience from the breakdown of Yugoslavia and many other places show that groups of people can be living peacefully together and within a short period of time confront each other as mortal enemies without a clear reason for doing so. Similar Jekyll and Hyde experiences have been described at greater length by Zimbardo in his book *The Lucifer Effect* (2007). On a small scale such switches occur routinely in everybody's life, many times a day. For a theory of action, it is not advisable to start with the assumption that human beings are consistent maximizers and all-purpose problem solvers, nor with the assumption that they are steered by strong attitudes (like internalized norms) that impose themselves across situations. Doing so would mean that one misses out on the architecture of flexible links between the individual and the action situation. Cognitive sociology, evolutionary, cognitive and motivational psychology, as well as neuro sciences jointly point to a different basis for a theory of action, one that is built around semi-modularity. In order to be able to act adaptively to changes and uncertainty in immediate and future environments, human mental processes have evolved to be both highly selective with regard to the inputs from the environment and prepared with regard to the processing of inputs. This selectivity and preparedness is organized around functionally specific processes, i.e. modules. The specific theory embedded within these newer insights and presented here revolves around the fact that goals are the most flexible form of modularity. When they are 'focal' (i.e. activated), goals affect what we attend to, what information we are sensitive to, what information we neglect, what chunks of knowledge and what concepts are being activated at a given moment, what we like and dislike, what criteria for goal achievement are being applied, etc. In that sense, goals create modularity, they 'frame' the mental processes, and that is why I speak of 'goal-frames'. For the social sciences, we need to find out what the most inclusive goal-frames are, each of which comprises a great number of subgoals and representations of means and causal relations among them.

   I identified three such overarching goal which, when activated turn into goal-frames (i.e. overarching goals together with the mental processes they activate):

1. the goal to improve the way one feels right now (when activated, it is the *hedonic goal-frame)*;

2. the goal to maintain and improve one's recourses (when activated, it is the *gain goal-frame);*

3. the goal to act appropriately (when activated, it is the *normative goal-frame).*

Basically, at any given moment, people are in one or the other of these three goal-frames and their mental processes are functionally specific (i.e. modular) with regard to the realization of the goal.

There are two important additional points about these goal frames. First, the modularity is porous, it is 'semi'. When one of the three goals is focal, the other two are not gone but pushed into the cognitive background from where they still exert some influence. Thus, 'mixed motives' are in this sense the rule rather than the exception. However, the goal-frame itself still determines most of the selectivity and the preparedness. Goals in the background can weaken a goal-frame (when they are in conflict, such as fun versus duty), or they can support it (for example, feeling good when following one's obligation). Second, the goal-frames are of different *apriori* strength. This means, that when there are no special supports, the hedonic goal-frame is stronger than the gain goal-frame, which, in turn in stronger than the normative goal frame. The sociologically important question then is: What conditions change the relative strength of the goal-frames? There are a number of important automatic cues that trigger a normative goal-frame, but for the sustainability of a normative goal-frame, social arrangements are needed. The same holds true for the gain goal-frame. It is difficult to overestimate the importance of social and institutional support needed for the stabilization of both gain and normative goal-frames. Institutions and collective activities can be analyzed with regard to their contribution to changing the relative apriori weight of goal frames. For example, Durkheim maintained that (expressed in the language used here) common rituals strongly stabilize a normative goal-frame. Far from being the default, the gain goal-frame also needs external support. Weber described developments in legal history, religion, and technology that made the gain goal-frame chronically strong in Western societies. The strengthening of weaker goal-frames is possible by weakening conflicting background goals (for example, banning people with contrary views from your group) or by strengthening compatible background goals (for example by joining religious groups that morally support making money). Both possibilities are amply illustrated by Weber historical analyses.

For a theory of action, the most important way of dealing with the different apriori strength of goal-frames is the fact that people engage in self-regulation. This means, that by escaping or seeking certain kinds of social influence, and by attachment to significant others, people are able to influence which goal-frame they are in even though they cannot directly choose a goal-frame. Self-regulation brings us to the heart of human rationality. Rationality is a phenomenon that can be located at different levels. There is a good deal of rationality that evolved under selective pressures to enable human beings to draw adaptive advantages from living in larger groups. The added brain power is there for social purposes (Dunbar 2003), to allow humans to deal with *and* be part of a complex and uncertain social environment. It has built-in flexibility by being both functional specific (different goal-frames, different rationalities) and by having self-regulatory capacities that balance the one-sidedness created by goal-framing. At each level, rationality is thoroughly linked to social purpose and circumstance, and ultima-

tely the success of the social sciences might depend on the degree to which they build on this insight.

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