Running Head: GOALS AND POLICIES

Goals, Policies, Preferences, and Actions

Arthur B. Markman   C. Miguel Brendl
University of Texas, Austin   INSEAD

Please address all correspondence to:

Arthur B. Markman
Department of Psychology
University of Texas
1 University Station, A8000
Austin, TX 78712

markman@psy.utexas.edu

Research on judgment and decision making has often focused on the rules people use to make choices and the information used in decision making at the expense of the prediction of what people like and dislike. For example, much of the heuristics and biases literature examined strategies people used when making choices such as satisficing and elimination-by-aspects (Payne, Bettman, & Johnson, 1993; Simon, 1957; Tversky, 1972). As another example, studies have examined people's tendency to focus their choices on information that matches across a set of options rather than on properties that are unique to one of the options (Hsee, 1996; Markman & Medin, 1995; Slovic & MacPhillamy, 1974; Zhang & Markman, 1998; 2001).

Research on consumer behavior can ill-afford to focus only on choice strategies and information processing. In order to understand consumption behavior and factors that influence purchase decisions, it is important to understand the constituents of preference and action. Central to this enterprise is a focus on the motivational processes that drive attitudes and purchases. For this reason, consumer behavior has benefited from an upsurge in research on the influence of motivation on cognitive processes (Brendl & Higgins, 1996; Carver & Scheier, 1998; Gollwitzer, 1999; Higgins, 1997; Markman & Brendl, 2000).

There have been many proposals for the structure of the goal and motivational systems (Carver & Scheier, 1998; Kruglanski et al., 2002; Lewin, 1935). Unfortunately, it has proven difficult to provide evidence for specific proposals about the relationship

between goals and motivation, because key aspects of the motivational system are not consciously accessible. Happily, there is quite a bit of data that bears on the structure of the motivational system, and from this work, it is possible to extract a good working framework that can be used to drive further research.

In this chapter, we outline such a framework that draws on past research. We begin by sketching nine empirical phenomena that constrain a theory of goal systems. Then, we present a framework for thinking about goals and motivation. We use this framework to suggest new lines of research, and sketch some of our recent work that addresses these questions.

Phenomena that constrain an account of goals

Goals and motivations are key terms that are used quite broadly within the Psychology literature. *Motivation* is typically used to refer to the impetus to perform an action, while *goal* is typically used to refer to an outcome that an agent has a tendency to work toward bringing about (i.e., to approach) or to keep from occurring (i.e., to avoid). Agents (people, animals, perhaps autonomous systems like robots) also have objects and strategies that can be used to fulfill their goals. These objects and strategies are called the *means* for goal satisfaction.

The motivational system has been difficult to characterize, because there are many conflicting findings in the literature that have influenced the development of

theories of the structure of the system that drives people's actions. In this section, we

briefly describe nine phenomena that bear on the structure of the motivational system.

Some of these phenomena may appear to be contradictory, though we will try to resolve

these contradictions later in this chapter. A list of these phenomena is presented in Table

1. Loosely, these phenomena bear on three aspects of the motivational system. First,

there are findings that suggest that people have some conscious access to their goals.

Second, there are findings that suggest that aspects of the motivational system are

inaccessible to consciousness. Third, the are findings on the relationships between the

world, cognitive states, and the activation of goals and motivations.

Accessibility of goals

When people are asked why they performed a particular action, they give a

response. For example, if a person is asked why they are eating breakfast, they might say

that they are hungry or that they always eat breakfast. People's explanations of their

behavior are typically sensible and seem to reflect some aspect of their environment or

their internal state. Given the importance of introspective reports as data in psychology

and applied psychological work (e.g., the laddering technique, thought listings, and

verbal protocols in studies and focus groups), it is hard to believe that people's

explanations of their own behavior have no relationship to the factors that affect their

behavior (Ericsson & Simon, 1993).

Indeed, there are many cases in which people are able to provide information about their goals. In their classic book on the use of protocols as data, Ericsson and Simon (1993) describe a number of contexts in which people's verbal reports can be taken as a good narration of the thought processes underlying behaviors. People can often give accurate reports about the way that they intend to process information in problem-solving and choice contexts.

Furthermore, there are a number of cases in which choices are made because an explicitly available reason or rationale is available to justify the choice (Shafir, Simonson, & Tversky, 1993; Simonson, 1989). For example, Simonson (1989) explored the role of reasons in the attraction effect (Huber, Payne, & Puto, 1982). In the attraction effect, the likelihood that people will choose an alternative increases when a new option is added to a choice set that is dominated only by that alternative. Simonson (1989) found that the attraction effect increases in magnitude when people are asked to justify their choices, suggesting that the availability of a justification for selecting a particular option is an important factor in this effect.

Indeed, there are cases in which explicitly forming the intention to achieve some end state increases the likelihood that the actor will succeed in reaching it. Gollwitzer's (1999) work demonstrates that when people make a conscious commitment to an action, they are much more likely to take actions congruent with their commitment.

Furthermore, people who have made this commitment can report it as a rationale for their

actions. Thus, their intentions predict future behavior.

People are also able to provide information about values that are important to

them (Baron & Spranca, 1997; Irwin & Spria, 1997; Tetlock, Kristel, Elson, Green, &

Lerner, 2000). For example, Baron and Spranca (1997) discuss the concept of a

protected value, which is some belief along which people are not willing to accept

tradeoffs. For example, someone might not be willing to accept taking a human life at

any cost. People who express that they have a protected value in a particular arena

modify their behavior accordingly. That is not to say that they do not actually accept

tradeoffs under any circumstances (e.g., Irwin & Baron, 2001), but rather that the

expression of a protected value for a dimension coincides with a behavioral consequences

for that dimension.

This discussion suggests that some aspects of the goal system are clearly

accessible to consciousness. The phenomena explored in the next section focus on cases

in which aspects of goals and motivations are not accessible to consciousness.

<u>Inaccessibility of motivations</u>

The fact that people can successfully talk about some aspects of their pursuit of

goals does not mean that the entire motivational system is accessible to consciousness

(Wilson & Dunn, 1986; Wilson & Schooler, 1991). The non-verbalizable parts consist

both of aspects that are not accessible to consciousness at all as well as of perceptual

representations that are not compatible with verbal descriptions of the same elements

(Barsalou, 1999; Schooler & Engstler-Schooler, 1990).

Wilson and his colleagues have demonstrated that many choices rest on factors

that cannot be verbalized (Wilson et al., 1993; Wilson & Schooler, 1991). For example,

in one study people chose from a set of humorous and art-reprint posters and either were

or were not asked to justify this choice (Wilson et al., 1993). People were much more

likely to choose an art-reprint poster (and much more likely to be satisfied with their

choice) when they did not give a verbal justification of their choice than when they did.

Assuming that most people do not have a good vocabulary for talking about why they

like artwork, this result suggests that giving a justification biases people away from

options whose good qualities cannot be verbalized easily. These kinds of phenomena are

relatively easy to explain, because there is no need to assume that people are good at

talking about all aspects of their cognitive representations (Markman, 1999). There is no

need to assume that these phenomena reflect a lack of accessibility of aspects of the goal

system. Somewhat more difficult to explain are findings reviewed by Berridge (1999) . In

these studies drug addicts will work much harder in a button-pressing task to

intravenously self-administer solutions containing a very low dosage of drugs than drug-

free ones. However, they were unable to identify the solutions containing drugs. In other

words, their motivational system drove them to want a solution, but they were not aware

that they liked that solution better than others. These findings are consistent with the idea

that motivation is not accessible to consciousness, though it is always hard to interpret

null effects.

Much research has begun to examine a pervasive phenomenon that people have

difficulty predicting future affective states and future preferences. As we will see, this

phenomenon also suggest that aspects of the motivational system are also inaccessible to

consciousness. For example, Kahneman and Snell (1992) found that people could not

predict the amount of ice cream that they would want to consumer at some future time.

Similarly, Read, Loewenstein, and Kalyanaram (1999) found that students choosing

between a comedy movie and a serious movie were more likely to choose the comedy

when selecting a movie to watch that day, but more likely to choose a serious movie

when selecting a movie to watch on another night. Thus, their prediction for a future

preference was not the same as their actual preference for that moment.

A third example of the inability to predict future preferences comes from a study

we conducted with smokers (Brendl, Markman, & Messner, 2003). German students

who were smokers were approached after a long lecture class during which they could

not smoke. Half remained in the classroom, and half went outside. The half that

remained in the classroom drank a cup of coffee to enhance their need to smoke. The half

that went outside smoked a cigarette and drank a cup of coffee (to provide time for the

nicotine to diffuse through their systems). Then, participants bought raffle tickets. For

half of the participants, the prize in the raffle was three cartons of cigarettes. For the

other half, the prize was an amount of cash about equal to the cost of three cartons of

cigarettes. Participants given the cigarette raffle bought slightly (and nonsignificantly)

more tickets if they were in the classroom (and hence had a high need to smoke) than if

they were outside the classroom (and thus had a low need to smoke). Of interest,

participants given the cash raffle bought significantly fewer tickets if they had a high

need to smoke than if they had a low need to smoke. Thus, they showed a decreased

preference for cash in the presence of the strongly active competing goal of smoking. We

refer to this finding as a *devaluation effect*, because cash was devalued when there was a

strong need to smoke.

Of importance for this discussion, people inside the classroom would probably be

having a cigarette soon after leaving the classroom. Thus, their assessment of the

attractiveness of the cash prize (as measured by the willingness to buy tickets) would be

changing just moments after participating in the experiment. These participants were all

habitual smokers who should have had a lot of experience with the effects of smoking,

yet they seemed unaware that the need to smoke was having an influence on their

preferences. Indeed, in an unpublished follow-up study, we found that when we

described this setting to smokers, they were unable to predict that having a high need to

smoke would decrease their willingness to purchase raffle tickets to win cash relative to

having a low need to smoke.

This finding is similar to a more general observation that people's behavior is often inconsistent with their attitudes (Fazio & Roskos-Ewoldsen, 1994). Ajzen and Fishbein (1977) suggest that many cases in which attitudes are inconsistent with behaviors reflect cases in which the elicited attitude is expressed about a different behavior or object of behavior than is actually measured. In the examples discussed here, however, the elicited preferences are well aligned to the objects and actions that are measured. Instead, there are situational factors that influence the strength of people's goals that fall outside of people's awareness, and so people are unable to recognize how these situational factors might have a different influence on their behavior at some later time.

Despite the fact that people do not have conscious access to the motivational states that drive behavior, they will give sensible explanations of their behaviors in situations where other factors are governing their performance. We raise this point, because, as discussed above, the presence of such seemingly sensible justifications of behavior may be taken as *prima facie* evidence that people do have access to their motivational states. If sensible explanations occur in situations where they must be false, then it suggests that any explanations people give for their actions are potentially suspect.

As an example of people's ability to generate sensible explanations, Kruglanski et al. (2002) replicated a study by Nisbett and Wilson (1977) in which people selected from among an array of identical pairs of socks (that they were told were different qualities).

People with a high need for cognitive closure (that is a high need to complete their

decision) were more likely to select the rightmost pair in the array than were people with

a low need for closure. Presumably this preference comes because people are scanning

the array from left to right and then selecting the last pair they examined, since that

provides an easy solution to the problem of selecting the best pair. Despite this

preference for the right-most pair, people in this study justified their choice with

comments about the quality of the socks, suggesting that they were unaware of the factors

that were actually affecting their choice.

　　　　Finally, the factors people use to assess the strength of their own goals are

typically only loosely related to the actual strength of their goals as measured by

behavior. Tiffany and his colleagues (Tiffany, 1990; Tiffany & Conklin, 2000)

demonstrate that cravings for drug are not strongly related to the underlying physiological

factors related to the need to use drugs (see Kassel & Shiffman, 1992, for a related

discussion about eating and hunger). Instead, people experience cravings or hunger when

they have a need and are blocked from their habitual means of satisfying the need.

People will attempt to satisfy an active need using automatic behaviors first, and will be

consciously aware of the activity of this need only in cases where they are unable to

satisfy the need through these automatic behaviors.

　　　　In one study we attempted to dissociate physiological need from conscious

feelings triggered by interrupted goals (Brendl, Markman, & Messner, 2003). For all

participants we triggered a goal to eat popcorn by announcing that they would participate

in a popcorn taste test and by exposing them to the smell of popcorn. (The smell should

have also raised the need to eat for all respondents). The "low hunger – high need" group

tasted a handful of popcorn right away. This supported the goal of eating an accordingly

this group reported relatively low feelings of hunger. But it presumably raised the need to

eat even further because a small amount of carbohydrates increases rather than decreases

the physiological need to eat (Rodin 1985). In contrast, the "high hunger – low need"

group was told that they would have to do another task before tasting the popcorn. Hence,

their goal of eating was interrupted and accordingly they reported relatively high feelings

of hunger. However, compared to the other group their need to eat was lower because it

was not activated by additional carbohydrates. Preferences for various objects were

driven by unconscious physiological need, showing that conscious feelings of hunger

were not diagnostic of the physiological need to eat. Thus, affective states provide an

imperfect conscious window into the activity of the motivational system.

To summarize, goals are often active without people being consciously aware of

their activation. Because many factors that drive behavior are not consciously accessible,

people are often unable to predict their future preferences and actions. Furthermore,

because the link between situational factors and goal activation is not available to

conscious experience, people have difficulties correcting their future predictions for the

effects of the current situation. Finally, the affective states that people use as markers of

their current needs are imperfectly related to the underlying state of the motivational

system, which decreases the accuracy of self-reports of the activation of goals.

<u>Priming of goals and motivational states</u>

The goal system has a clear cognitive structure that relates people's goals to the

means of achieving them. This structure is visible in the ways that goals can cause the

means of achieving them to be activated and also in how means can activate goals. In

particular, desired end states and means appear to be connected in a network that permits

activation of any one of them to activate others.

A classic example of this priming is the Zeigarnik effect (Zeigarnik, 1927). This

effect refers to cases where a person has an unfulfilled goal. People are more likely to

remember unfinished actions than finished actions, that is, an active goal (e.g., to

complete a clay figure) primes means to reach that outcome (e.g., form a clay figure).

Patalano and Seifert (1997) have obtained a similar result. Lewin (1926) also

hypothesized that objects in the environment that can facilitate satisfaction of a goal are

more easily noticed as long as the goal has not been reached (see Gollwitzer , 1993,for

evidence).

Kruglanski and colleagues have explored the relationships among elements of the

goal system (Kruglanski et al., 2002; Shah, Friedman, & Kruglanski, 2002; Shah,

Kruglanski, & Friedman, 2003). They use a variety of cognitive measures of priming to

examine this issue. For example, Kruglanski et al. (2002) describe a study in which

people made speeded responses about whether a particular word described an activity or

an attribute that a person could have. The activities and attributes used in their study

were pre-tested to find pairs for which participants believed that the activity would lead

to attainment of the attribute. Thus, the activities could be viewed as means to obtain the

goal of possessing an attribute. In those cases where people had an active goal to possess

an attribute, presentation of that attribute led to significantly faster decisions about the

activities in the speeded task. This pattern of results suggests that goals prime means.

Kruglanski et al. (2002) describe studies demonstrating that means prime goals as well.

One consequence of the conceptual relationships between goals and means is that

the structure of human memory will influence the likelihood of goal satisfaction. That is,

in order for people to consciously pursue some end state, specific goals that facilitate

bringing about that end state must be activated in appropriate circumstances. One way to

ensure that goal satisfaction occurs is to form specific intentions that relate to the

implementation of the goal (Gollwitzer, 1999). Intentions to implement a goal are

effective, because they increase the accessibility of the goal in those instances in which

the goal can be satisfied (Gollwitzer, 1993).

For example, a particular woman might want to quit smoking. This end state is

abstract, but the woman will live in specific circumstances that probably have strong

connections to specific goals of smoking. For example, she might go to a bar where she

used to meet friends and smoke. This environment would prime the goal to have a

cigarette, and this behavior might be carried out automatically (or at least lead to a strong

craving for a cigarette if the goal to smoke is blocked). Bringing about the end state to

quit smoking will be more effective if the woman envisions this circumstance in advance

and develops a plan for how to deal with the urge to smoke in that setting. In this way,

the actual circumstance of sitting in a bar will also activate the specific intention to stop

smoking and will facilitate satisfaction of this desire. Indeed, Wertenbroch (1998)

showed that smokers prefer buying small amounts of cigarettes allowing them to control

future temptations to smoke that a larger stock of cigarettes would create.

The central point of this section is that the informational content of goals is

interconnected. Thus, motivation has its influence in part by affecting information that is

active in the cognitive system. This point is important, because it makes clear that

motivation does not lead to actions that are pre-programmed by some evolutionary

process. Instead, the connections among goals and the means for satisfying them are

learned.

The structure of the goal system

Table 1 summarizes the nine phenomena relating to goals and motivation. Any

theory of goal systems must account for all of the phenomena in this table. In this

section, we develop a view of goals that is related to the one posited by Kruglanski et al.

(2002). Their theory is a cognitive view of goals that consists of interconnections among

goals, subgoals, and means for achieving them. On their view, goals are abstract desired

and undesired end states. Subgoals are more specific end states that connect to objects

and activities in the world that satisfy them. Means are the particular objects and

activities that are used to satisfy subgoals.

In this system, goals, subgoals, and means are connected in a semantic network.

Goals are connected via excitatory connections to their subgoals so that activating a goal

will lead to priming of the connected subgoals (and vice versa). Similarly subgoals have

excitatory connections to their means. Competing goals are connected via inhibitory

links, so that activation of one goal decreases activation of competing goals. Similarly,

competing subgoals have inhibitory connections as do competing means.

Not surprisingly, this structure is compatible with the goal priming phenomena in

Table 1. Indeed, Kruglanski et al.'s proposal was developed with these goal priming

phenomena in mind and was used to motivate additional studies of the degree to which

goals, subgoals, and means prime each other.

There are limitations of this proposal, however. First, it is silent on the degree to

which elements of the goal system are consciously accessible. As we have discussed, the

manifest difficulty people have in predicting their future preferences suggests that some

goals—and some relationships between the environment and goal activation—are not

accessible to consciousness. Thus, it is important to make a clear distinction between

those aspects of the goal system that will be consciously accessible and those that will

not.

Second, the relationship between affective states and motivational states is not

incorporated into this theory. As we discussed, there is a complex relationship between

the activation of some motivational state and the consciously accessible affective states

that relate to it. For example, activation of a need to use a drug or to eat need not give

rise to a craving or to hunger. Because consciously accessible states such as cravings and

hunger can influence the activation and pursuit of goals, it is important to clarify this

relationship.

In the remainder of this chapter, we develop an extended version of Kruglanski et

al.'s proposal that addresses these limitations. After we describe this proposal, we

present a line of research motivated by issues relating to this architecture.

<center>An extended goal-systems architecture</center>

The goal-systems architecture we propose is sketched in Figure 1. Embedded

within this figure is a system that contains the elements of Kruglanski et al.'s proposal.

The circles at the top of the Figure labeled Policies are related to what they called goals.

The Focal Goals in the figure are related to their subgoals. The Means in the figure play

the same role as the Means in Kruglanski et al.'s proposal. In this figure, links with solid

lines are excitatory connections. Links that terminate in circles are inhibitory

connections. Thus, Policies connect to their relevant Focal Goals via excitatory

connections and Focal Goals connect to Means via excitatory connections. As for

Kruglanski et al., competing elements have inhibitory links (only some of which are

shown in the figure for the purposes of clarity).

In the framework we present, policies are distinguished from goals in their

accessibility to consciousness. Policies are accessible to consciousness, but focal goals

are not. This distinction is designed to account for the observed dissociations between

action and attitude (that involve cases in which the attitude and behavior are being

measured at the same level of abstraction; Ajzen & Fishbein, 1977). Focal goals rather

than policies are the more proximate drivers of actions, because they are more closely

connected to Means and because policies are connected to means only through the Focal

Goals. Focal Goals are activated by Policies through their direct excitatory connections.

In addition, the current motivational state (see below) and the environment can affect the

activity of Focal Goals.

There are three key assumptions here. First, there are two different cognitive

components in the goal system, but only one of them is accessible to consciousness.

Second, it is the Focal Goals (which are relatively specific and are connected to Means)

that are inaccessible to consciousness, whereas the more abstract Policies are accessible

to consciousness. Third, consciously accessible Policies are connected to Means only

indirectly through Focal Goals. On this view, when people guide their actions

consciously (e.g., through "willpower"), they are doing so by maintaining activation of a

Policy, which activates a Focal Goal and in turn activates a particular Means.

Figure 1 contains a box labeled *motivational state* in the section of the figure that

is inaccessible to consciousness. This box is a placeholder for many aspects of the

motivational system that go beyond the scope of this chapter. For example, one key

component of motivational state is the activity among the set of Focal Goals. The total

amount of such activation may fluctuate with factors such as arousal. The mechanisms

underlying regulatory focus are also important components of motivational state.

Higgins (1997) distinguishes between promotion and prevention focus (i.e., sensitivity to

potential positive vs. negative outcomes). A more complete discussion of this model of

the goal system would have to unpack the notion of motivational state further.

An important aspect of our framework is that motivational state is separated from

affective state. As discussed above, consciously accessible markers of goal

activation—such as drug cravings and hunger—are at best loosely related to the actual

activation of underlying goals. People appear to infer which goals are activated in part by

monitoring their affective state. Thus, it is important to make an explicit distinction

between consciously accessible affect and underlying motivational states.

Means in this framework function like Means in Kruglanski et al.'s work. They

can be activated either by Focal Goals or by the environment. If the environment

activates a Means, then goals relating to those means may also become activated.

Obviously, this framework is just a sketch of the relationships among core factors

within the motivational system. The value of such frameworks, however, is that they

may lead us to ask questions that have not otherwise been addressed. In the next section,

we give one example of how this framework can lead to new research.

Testing the goal-systems architecture: What is a focal goal?

Our goal framework raises an important question. If Focal Goals are not

accessible to consciousness, then how can we know their content? We believe that one

reason why it has been so difficult to make progress on understanding the structure of the

motivational system is that key aspects of it are not accessible to consciousness. It is

crucial to find a way to provide data that bears on the structure of Focal Goals.

The valuation and devaluation of Means in the presence of an active goal may

provide a method for exploring the nature of Focal Goals (Markman, Brendl, & Kim, in

preparation). In the example described earlier, smokers were somewhat more likely to

purchase raffle tickets to win cigarettes when they needed a cigarette than when they did

not. Thus, they showed a small valuation effect for a Means related to the goal of

smoking. Smokers were significantly less likely to buy a raffle ticket to win cash when

they needed a cigarette than when they did not. This devaluation effect occurred for an

item that was not a direct Means for satisfying the need to smoke (i.e., cash cannot be

smoked).

This result suggests that objects which are Means that are directly connected to an active Focal Goal may show valuation effects. In contrast, objects which are Means that are connected to Focal Goals that are not active may show devaluation effects. Thus, if we understood the function that relates goal activation to the pattern of valuation and devaluation, then we could infer the scope of active Focal Goals from the observed pattern of valuations and devaluations of various Means.

To accomplish this task, we first assessed the relationship between the strength of the need to smoke and patterns of valuation and devaluation (see Markman, Brendl, & Kim, in preparation, for a detailed description of the methods and data). Need to smoke was manipulated either by having habitual smokers read stories involving the pleasure of smoking and depriving them of the chance to smoke or having them read stories that did not involve smoking and having them smoke a cigarette. Then, participants rated their preference for a series of items that varied in their relatedness to smoking. From most to least related to smoking, the items were: brands of cigarettes, items instrumentally related to smoking (e.g., lighters and ashtrays), foods typically consumed while smoking, products with cigarette brands imprinted on them, smoking-unrelated items (e.g., a DVD player).

In this study, both the cigarette brands and the instrumentally related items showed significant valuation. That is, their rated preference was higher for people with a high need to smoke than for people with a low need to smoke. The smoking-unrelated

items showed significant devaluation. That is, their rated preference was lower for

people with a high need to smoke than for people with a low need to smoke. Finally, the

foods consumed while smoking and the cigarette branded products showed neither

valuation nor devaluation. That is, their rated preference was about the same for people

with a high need to smoke and for people with a low need to smoke.

A followup study suggests that this pattern of data is consistent with the idea that

active goals lead to the activation of concepts describing the Means that can be used to

satisfy a goal. In this study, after a manipulation of the need to smoke, people were given

a Stroop task in which they had to identify the color of the font used to print out words.

The words described the five types of items from the study of preferences that we just

described. In this task, the more accessible a concept, the longer it should take to identify

the color of the font of the word. Overall, there was a reliable correlation between the

difference in Stroop color identification times for items in the high-need and low-need

conditions and the size of the valuation/devaluation effects for those items. Thus, goal

activation influenced both preference and accessibility of the items.

These data suggest that items that are directly related to an active Focal Goal

show reliable valuation. Items that are unrelated to an active Focal Goal show

devaluation. Items that are of intermediate relatedness to an active Focal Goal show a

pattern intermediate between valuation and devaluation.

Given this pattern, it is possible to explore the specificity of people's focal goals by varying the relatedness of the items to the goal and looking at the patterns of valuation and devaluation that arise. We used this method in a study examining preferences for foods (see Markman, Brendl, and Kim, in preparation, for details of the method and data). In this experiment, college men were given a manipulation of need to eat. A low need to eat was created by giving participants a large slice of bread with unsalted butter to eat. A high need to eat was created were given a small amount of bread with salted butter. The combination of the small amount of bread and the salt increases people's need to eat (Fedoroff, Polivy, & Herman, 1997; Herman, 1996).

In addition, subjects were run either at 9am or at 4pm, in order to provide a contextual manipulation of the appropriateness of types of foods. The morning context would facilitate access to mental representations of foods appropriate to breakfast. The evening context would facilitate access to mental representations of foods appropriate to dinner.

Subjects rated the attractiveness of a set of breakfast foods, dinner foods, and nonfoods. If Focal Goals are specific, then we would expect to see valuation for foods appropriate to the time of day when the study was run, and devaluation for nonfoods. In contrast, if Focal Goals are general, then we would expect to see valuation for all foods and devaluation for nonfoods. At the outset, it is worth recognizing that the fact that

researchers do not have a strong intuition about the outcome of this experiment suggests

that people do not have insight into the generality of their Focal Goals.

The results were consistent with the view that Focal Goals are specific. Subjects

run in the morning showed valuation for breakfast foods (i.e., higher preference ratings if

they had a high need to eat than if they had a low need to eat), devaluation for nonfoods,

and approximately equal preference ratings in the high and low need conditions for the

dinner foods. In contrast, subjects run in the evening showed reliable valuation for dinner

foods, devaluation for nonfoods, and the intermediate pattern for breakfast foods.

These data demonstrate how the goal framework discussed here can be used to

motivate research. By acknowledging that Focal Goals are not directly accessible to

consciousness, we make clear that indirect measures must be used to gather information

about the semantic content of the goals. In the studies described in this section, we used

patterns of valuation and devaluation as such an indirect measure. First, we presented

studies demonstrating that the degree of valuation goes up with similarity to the active

Focal Goal, and that devaluation occurs for objects that are distant from the active Focal

Goal. Furthermore, as we would expect if these goals exist in a semantic network (see

also Kruglanski et al., 2002), the degree of valuation and devaluation observed in the

preference ratings was systematically related to the accessibility of the items as measured

by a Stroop task. Finally, valuation and devaluation were used in the domain of eating to

demonstrate that Focal Goals were specific to the time of day in which the study was run.

This finding suggests that Focal Goals are activated by a combination of physiological

factors (e.g., the need to eat) as well as cognitive factors (knowledge of the types of food

appropriate to a time of day). We believe that this method can be used in future research

to explore the content of Focal Goals in a variety of settings.

Conclusions

We have tried to demonstrate in this chapter that psychology has learned enough

about the goal system to make concrete proposals about the structure of goals as well as

the degree to which information about active goals is accessible to consciousness. The

model sketched in Figure 1 is consistent with the extant data, and it makes predictions

that can be used to guide future research.

This model also has important implications for the study of consumer behavior.

First, it suggests that marketers should be careful when using protocol methods (both

individual protocols and focus groups) to test the effectiveness of marketing campaigns

and product launches. Verbal protocols require that the information of interest be

consciously accessible. If purchase behavior is driven by Focal Goals, then people will

not have conscious access to important elements that guide choice behavior. In these

cases, observations of purchase behavior and indirect methods of assessing goals will be

more effective than will introspective measures.

Second, the model suggests that introspective methods will also have systematic biases to focus on the relationship between affective states and consciously accessible policies. There are two potential problems with this focus. First, affective states result from motivational states, but are not a veridical readout of the underlying motivational state. Second, Policies are more abstract than the Focal Goals that drive behavior (through their connection to Means). Thus, people's justifications of their behavior will tend to focus on end states that are more abstract than the ones that drive behavior. Again, methods that observe behavior in context will be more effective than introspective reports in this case.

Future research must clarify key aspects of this framework. For example, the diagram in Figure 1 contains a single box labeled "motivational state." Obviously, motivation is itself a complex system consisting of both approach and avoidance motivations as well as states of readiness for approach and avoidance states (Carver & Scheier, 1998; Higgins, 1997). Motivational states are also influenced by physiological needs. Furthermore, the details of the relationship between affective states and underlying motivational states remain to be worked out. Finally, the methods that allow individuals to learn the relationships among Policies, Focal Goals, and Means must be elucidated. We believe, however, that this framework provides a firm basis for addressing important gaps in our understanding of the relationships among goals, motivation, and preferences.

Acknowledgements

References

Ajzen I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. Psychological Bulletin, 84(5), 888-918.

Baron, J., & Spranca, M. (1997). Protected values. Organizational Behavior and Human Decision Processes, 70(1), 1-16.

Barsalou, L. W. (1999). Perceptual symbol systems. Behavioral and Brain Sciences, 22(4), 577-660.

Berridge, K. C. (1999), Pleasure, Pain, Desire, and Dread. Hidden Core Processes of Emotion. In D. Kahneman, E. Diener, & N. Schwartz (Eds.) Well-Being. The Foundations of Hedonic Psychology (pp. 525-557). New York: Russell Sage Foundation.

Brendl, C. M., & Higgins, E. T. (1996). Principles of judging valence: What makes events positive or negative. Advances in Experimental Social Psychology, 28, 95-160.

Brendl, C. M., Markman, A. B., & Messner, C. (2003). Devaluation of goal-unrelated choice options. Journal of Consumer Research, 29, 463-473.

Carver, C. S., & Scheier, M. F. (1998). On the self-regulation of behavior. New York: Cambridge University Press.

Ericsson, K. A., & Simon, H. A. (1993). Protocol Analysis: Verbal reports as data (Revised Edition ed.). Cambridge, MA: The MIT Press.

Fazio, R. H., & Roskos-Ewoldsen, D. R. (1994). Acting as we feel: When and how attitudes guide behavior. In S. Shavitt & T. C. Brock (Eds.), Persuasion: Psychological insights and perspectives (pp. 71-93). Needham Heights, MA: Allyn and Bacon.

Fedoroff, I. C., Polivy, J., & Herman, C. P. (1997). The effect of pre-exposure to food cues on the eating behavior of restrained and unrestrained eaters. Appetite, 28, 33-47.

Gollwitzer, P. M. (1993). Goal achievement: The role of intentions. European Review of Social Psychology, 4, 141-185.

Gollwitzer, P. (1999). Implementation intentions: Strong effects of simple plans. American Psychologist, 54, 493-503.

Herman, C. P. (1996). Human eating: Diagnosis and prognosis. Neuroscience and Biobehavioral Reviews, 20(1), 107-111.

Higgins, E. T. (1997). Beyond pleasure and pain. American Psychologist, 52(12), 1280-1300.

Hsee, C. K. (1996). The evaluability hypothesis: An explanation for preference reversals between joint and separate evaluations of alternatives. Organizational Behavior and Human Decision Processes, 67(3), 247-257.

Huber, J., Payne, J. W., & Puto, C. (1982). Adding asymmetrically dominated

alternatives: Violations of regularity and the similarity hypothesis. Journal of Consumer

Research, 9, 90-98.

Irwin, J. R., & Baron, J. (2001). Response mode effects and moral values.

Organizational Behavior and Human Decision Processes, 84(2), 177-197.

Irwin, J. R., & Spria, J. S. (1997). Anomalies in the values for consumer goods

with environmental attributes. Journal of Consumer Psychology, 6(4), 339-363.

Kahneman, D., & Snell, J. S. (1992). Predicting a changing taste: Do people

know what they will like? Journal of Behavioral Decision Making, 5(3), 187-200.

Kassel, J. D., & Shiffman, S. (1992). What can hunger teach us about drug

craving? A comparative analysis of the two constructs. Advances in Behavioural

Research and Therapy, 14, 141-167.

Kruglanski, A. W., Shah, J. Y., Fishbach, A., Friedman, R., Chun, W. Y., &

Sleeth-Keppler, D. (2002). A theory of goal systems. Advances in Experimental Social

Psychology, 34, 331-378.

Lewin, K. (1926). Vorsatz, Wille und Bedürfnis [Intention, will, and need].

Psychologische Forschung, 7, 330-385.

Lewin, K. (1935). A dynamic theory of personality. New York: McGraw-Hill.

Markman, A. B. (1999). Knowledge Representation. Mahwah, NJ: Lawrence

Erlbaum Associates.

Markman, A. B., & Brendl, C. M. (2000). The influence of goals on value and choice. In D. L. Medin (Ed.), <u>The Psychology of Learning and Motivation</u> (Vol. 39, pp. 97-129). San Diego, CA: Academic Press.

Markman, A.B., Brendl, C.M., & Kim, K. (in preparation). The structure of people's goals: Evidence from valuation and devaluation.

Markman, A. B., & Medin, D. L. (1995). Similarity and alignment in choice. <u>Organizational Behavior and Human Decision Processes, 63</u>(2), 117-130.

Nisbett, R. E., & Wilson, T. D. (1977). Telling more than we can know: Verbal reports on mental processes. <u>Psychological Review, 87</u>, 231-259.

Patalano, A. L., & Seifert, C. M. (1997). Opportunistic planning: Being reminded of pending goals. <u>Cognitive Psychology, 34</u>, 1-36.

Payne, J. W., Bettman, J. R., & Johnson, E. J. (1993). <u>The Adaptive Decision Maker</u>. New York: Cambridge University Press.

Read, D., Loewenstein, G., & Kalyanaram, S. (1999). Mixing virtue and vice: Combining the immediacy effect and diversification heuristic. <u>Journal of Behavioral Decision Making, 12</u>(4), 257-273.

Rodin, J. (1985). Insulin Levels, Hunger, and Food Intake: An Example of Feedback Loops in Body Weight Regulation. <u>Health Psychology, 4</u> (1), 1-24.

Schooler, J. W., & Engstler-Schooler, T. Y. (1990). Verbal overshadowing of visual memories: Some things are better left unsaid. <u>Cognitive Psychology, 22</u>, 36-71.

Shafir, E., Simonson, I., & Tversky, A. (1993). Reason-based choice. <u>Cognition,</u>

<u>49</u>, 11-36.

Shah, J. Y., Friedman, R., & Kruglanski, A. W. (2002). Forgetting all else: On

the antecedents and consequents of goal shielding. <u>Journal of Personality and Social</u>

<u>Psychology, 83</u>(6), 1261-1280.

Shah, J. Y., Kruglanski, A. W., & Friedman, R. (2003). Goal systems theory:

Integrating the cognitive and motivational aspects of self-regulation. In S. J. Spencer, S.

Fein, M. P. Zanna, & J. M. Olson (Eds.), <u>Motivated Social Perception: The Ontario</u>

<u>symposium, Volume 9</u> (pp. 247-275). Mahwah, NJ: Lawrence Erlbaum Associates.

Simon, H. A. (1957). <u>Models of man: Social and rational</u>. New York: Wiley.

Simonson, I. (1989). Choice based on reasons: The case of attraction and

compromise effects. <u>Journal of Consumer Research, 16</u>, 158-174.

Slovic, P., & MacPhillamy, D. (1974). Dimensional commensurability and cue

utilization in comparative judgment. <u>Organizational Behavior and Human Performance,</u>

<u>11</u>, 172-194.

Tetlock, P. E., Kristel, O. V., Elson, S. B., Green, M. C., & Lerner, J. S. (2000).

The psychology of the unthinkable: Taboo trade-offs, forbidden base rates, and heretical

counterfactuals. <u>Journal of Personality and Social Psychology, 78</u>(5), 853-870.

Tiffany, S. T. (1990). A cognitive model of drug urges and drug-use behavior:

Role of automatic and nonautomatic processes. <u>Psychological Review, 97</u>, 147-168.

Tiffany, S. T., & Conklin, C. A. (2000). A cognitive processing model of alcohol

craving and compulsive alcohol use. Addiction, 95, S145-S154.

Tversky, A. (1972). Elimination by aspects: A theory of choice. Psychological

Review, 79(4), 281-299.

Wertenbroch, K. (1998). Consumption self-control by rationing purchase

quantities of virtue and vice. Marketing Science, 17(4), 317-337.

Wilson, T. D., & Dunn, D. S. (1986). Effects of introspection on attitude-behavior

consistency: Analyzing reasons versus focusing on feelings. Journal of Experimental

Social Psychology, 22, 249-263.

Wilson, T. D., Lisle, D. J., Schooler, J. W., Hodges, s. D., Klaaren, K. J., &

LaFleur, S. J. (1993). Introspecting about reasons can reduce post-choice satisfaction.

Personality and Social Psychology Bulletin, 19(3), 331-339.

Wilson, T. D., & Schooler, J. W. (1991). Thinking too much: Introspection can

reduce the quality of preferences and decisions. Journal of Personality and Social

Psychology, 60(2), 181-192.

Zeigarnik, B. (1927). Das Behalten erledigter unt unerledigter Handlungen [The

retention of completed and uncompleted actions]. Psychologische Forschung, 9, 1-85.

Zhang, S., & Markman, A. B. (1998). Overcoming the early entrant advantage:

The role of alignable and nonalignable differences. Journal of Marketing Research, 35,

413-426.

Zhang, S., & Markman, A.B. (2001). Processing product-unique features:

Alignment and involvement in preference construction. <u>Journal of Consumer Psychology</u>,

<u>11</u>, 13-27.

Table 1. Nine phenomena that a theory of goals and motivation must explain.

1) People can talk about their actions

2) Talking about actions can interfere with choices

3) People have difficulty predicting future preferences and future affective states.

4) People express attitudes, but their attitudes do not always coincide with their

     future actions

5) Affective states are taken to reflect underlying motivational states, though

     they correlate with such states only loosely.

6) States of the world can prime goals

7) Goals prime means

8) Means can remind people of goals
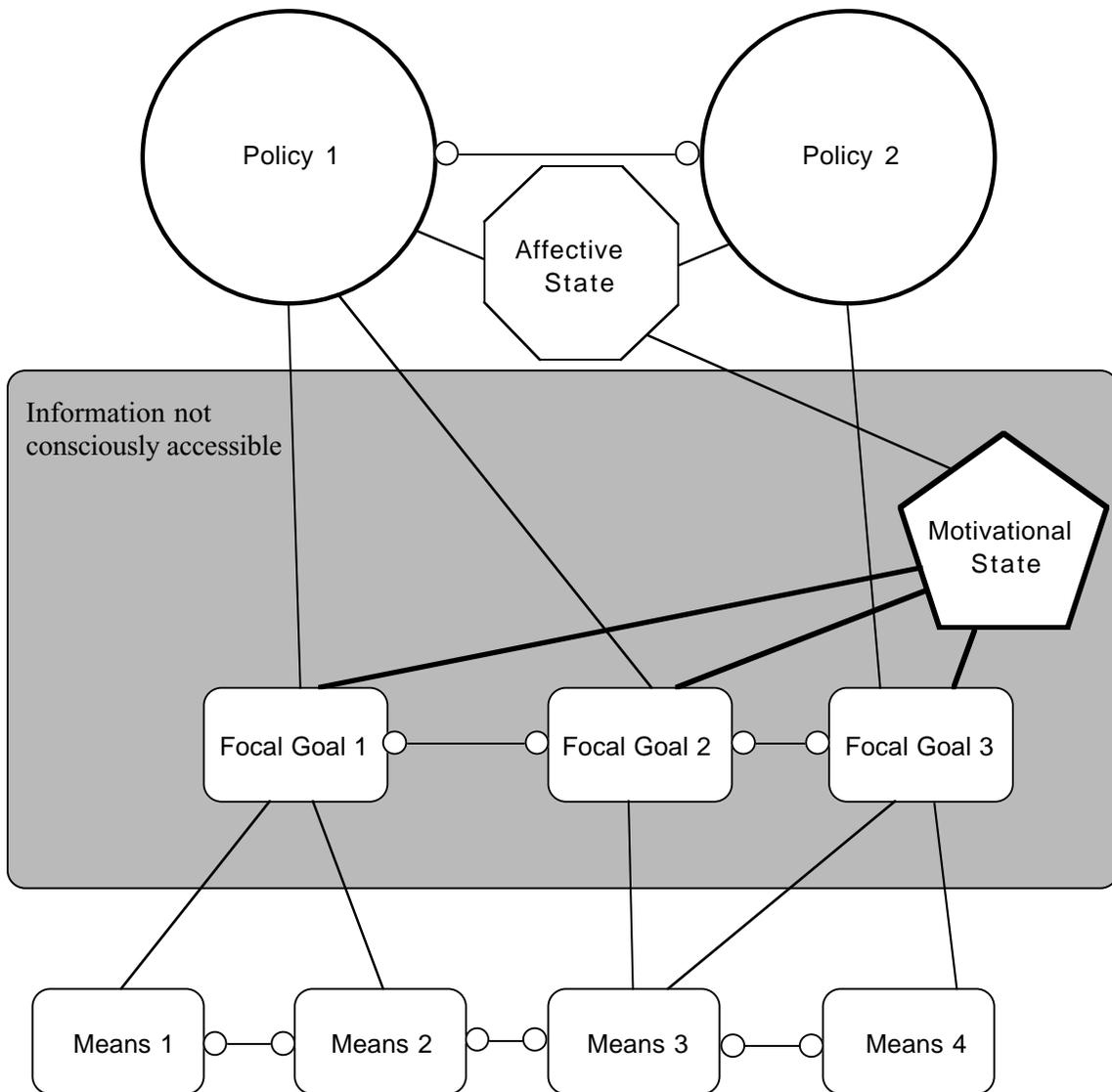
9) Explicit intentions to perform actions can influence behavior

Figure 1. An overview of the proposed view of goals and motivation.