

Affect and Choice: A Case for the Affect Heuristic in Image Theory

Kermit W. Kuehn

University of Arkansas – Fort Smith

The decision literature has generally viewed an individual's choice through the lens of cognitive psychology. This perspective has been a fruitful path in many ways, but not always satisfying in terms of results. Some recent studies in the field of psychology have suggested that there are numerous conditions in which emotions play an important role in decision making. Using image theory as a lens, this paper reviews these findings as they relate to judgment and choice, and discusses some of the theoretical and practical implications of this research on the field.

Keywords: Image theory, affect heuristic, decision making

Introduction

Decisions, decisions, decisions. Life is full of them. It has long been understood that humans make numerous decisions every day, and, for the most part, these decisions appear to consume very little time or effort on the part of the decision maker.

From the earliest days of study in the organizational sciences, decision making has been a central area of concern. Early on, the study of decision making in organizational life assumed the inherent rational character of the decision maker. Cognitive schools of thought flourished as the field focused on mapping out how these rational decision makers reasoned their way along logical, evidenced-based paths to arrive at utility-optimized choices.

As the rational model ran up against difficulties in explaining the judgments and choices people actually made, adaptations to the model were made. Cognitive constraints of the decision maker were noted and explanations were incorporated into the revised model. Concepts such as bounded rationality by Simon (1956) and by extension, Tversky and Kahneman's (1974) judgmental heuristics, helped explain deviations from the utility-maximizing world that was envisioned.

In the past decade and a half, there has emerged an increased interest in the role of affect on judgment and choice (Finucane, Alhakami, Slovic and Johnson, 2000). It is not that affective factors were completely absent from decision making discussion to begin with, but they were clearly tangential to the focus and contributions made by the cognitive schools.

This paper summarizes the current literature on the role of affect on judgment and choice, commonly referred to as the affect heuristic. Next, using a recognized decision framework, image theory, we look at the potential interface between affect and cognition in decision making. Image theory is a schema theory and as such, is firmly rooted in the cognitive school of decision making. Finally, the paper concludes with a discussion of the theoretical and practical implications of this research on decision making.

Affect in Judgment and Decision Making

The affect literature is substantial and has a long history. The discussion will highlight key concepts and findings from research that will be used to outline potential integration points of the affective and cognitive models of judgment and choice. There are more extensive reviews of the field available (ie. Slovic, Finucane, Peters, and MacGregor, 2002; Lowenstein and Lerner, 2002).

Each of the following points and claims will be discussed in turn:

- 1) affect and cognition reflect parallel systems utilizing different modes of thinking;
- 2) images are viewed as central to the way humans process and store information and are affectively tagged, positively and/or negatively. Repeated exposure to an image increases positive reactions to the image;
- 3) the affective impact of an image impression on judgment and decision making depends on the precision of the impression attribute (evaluability);
- 4) under uncertainty, information in the form of frequencies, proportions (or percentages) of something, or as probabilities, are weighted more heavily in judgment tasks than other information formats, such as quantities; there are limits to this effect;
- 5) judgments of risk and benefits are often inversely related.

Affect and cognition reflect parallel systems

Affective systems, often referred to as experiential systems, are defined as those that function automatically, usually unconsciously, rely on intuition or instinct, are nonverbal and are rooted in emotion, opinions or feelings related to experience embedded in memory. Cognitive, or rational, systems are often described as those that rely on logic, reason, analysis, conscious effort and control. Proponents of affective systems argue that each system depends on the other to guide judgment and choice.

One of the early proponents of the role of affect in decision making was Zajonc (1980). He argued that all perceptions were tinged by affect and this “coloring” of perception had a significant impact on guiding the direction of information processing and judgment.

Other studies have suggested that judgments are influenced across situations and time by affective states that are more dispositional (trait) in nature (Lerner and Keltner, 2001). Lerner and Keltner (2001), for example, found that fearful persons make relatively more negative assessments of risks and preferred more risk-averse options. Trait emotions are examined extensively in research in moral judgment where anger or regret are found to be pervasive emotions associated with moral choices (ie. Choe and Min, 2011).

Damasio (1994), a neurologist, worked with patients who experienced damage to a part of the brain that regulates their ability to associate affective feelings and emotions with future consequences of actions. He noted that their basic intelligence, memory, and capacity for logical thought remained unimpaired. He noted (and his research revealed) that these patients appeared to have the necessary faculties to make a rational decision, but didn’t seem to learn from experience, to their detriment.

Damasio makes the case that thought is for the most part comprised of images and include a variety of sights, sounds, smells, impressions, words and such, which get “marked” over time by positive and negative feelings. He called these somatic markers. When a negative outcome marker is salient, a warning is sensed, while a positive marker motivates or incentivizes an action.

He concluded that these markers were an essential part of accurate and efficient decision processes. His findings are in line with a growing literature that supports the notion of a parallel, even interdependent, relationship between cognitive and affective processes in judgment and choice.

Affectively tagged images stored in memory for future information processing

Literally hundreds of studies from the late 1960s through the 1980s tested stimulus exposure primed by affect to assess the impact on subsequent reactions to varied stimuli. It was found that the initial affective priming persisted over time, even in the face of priming attempts to reverse the previous effect (see Bornstein (1989) meta-analysis summarizing many of these studies).

In a typical study, subjects were exposed to (primed by) either a smiling or frowning face, or neutral symbol, before being exposed to a stimulus (sound, visual, abstract, etc.). The priming was typically done subliminally. The results consistently revealed the impacts of the unreinforced priming on subsequent ratings or responses to the stimuli. Attempts made to re-prime the stimulus to a different affective symbol failed – the original prime held sway.

This stream of research revealed two outcomes of interest: 1) the attachment by subjects of affect to a stimulus was made quickly and persisted – the affective tag appears relatively fixed; and 2) the more exposure subjects had to a stimulus the more positive the response they had to it, regardless of the positive-negative nature of the prime.

In sum, the affective manipulation of images impacted subsequent judgments, preferences and choices made by subjects across a wide-ranging set of experiments using differing stimuli.

Impact of an affective impression (image) on judgment depends on evaluability

In order for a person to give meaning to something (a word, event, person, characteristic, etc.), he or she must be able to evaluate or rate on the attribute in question with some precision. The higher degree of precision of a rating attached to an image, the more weight that impression will carry in subsequent judgments. In essence, it has high evaluability and thus, meaning. The more imprecise (referred to as diffuse) the ratability, the weaker its meaning, value and weight in judgment – thus, low evaluability equals low value in judgment and choice. This is referred to as the evaluability hypothesis (Hsee, 1996):

“...the weight of a stimulus attribute in an evaluative judgment or choice is proportional to the ease or precision with which the value of that attribute (or a comparison on the attribute across alternatives) can be mapped into an affective impression. In other words, affect bestows meaning on information ... and the precision of the affective meaning influences our ability to use information in judgment and decision making.” (Slovic et al, 2002, p. 406)

The term used to describe these ratings of impressions and responses, such as a probability on a scale of 0-1, is affective mapping. An impression (image) is strongly or weakly tagged (mapped), whether positively or negatively, based on the evaluability of the impression.

One example of attempts to capture a subject’s level of experience can be seen in the medical field where medical staff seek pain level markers from a patient in order to gauge the seriousness of a patient’s condition. Staff will ask the patient to rate their pain level on a scale of 1-10. They continue to ask the patient this periodically during the diagnostic period to gauge pain levels and whether pain is increasing or decreasing. Other methods to gather include using a series of icons reflecting levels of depression or happiness (ie. variations of a happy face to identify patient’s perceived level of happiness).

While it is not expected that people quantify all affective tags in memory, the ability to do so when required seems possible.

Some information types are more valued than others in terms of evaluability

The review by Slovic et al (2002) observed that in situations involving uncertainty or ambiguity, the format of the information provided was valued differentially among subjects. Specifically, under certain conditions, subjects valued proportion or probability information more than other types, such as quantity or amounts.

In studies where subjects were tasked with evaluating gambles, subjects more strongly preferred the probabilities (or proportions)-of-winning attribute in determining attractiveness of a gamble rather than the actual winnings from the gamble. Tversky, Slovic and Kahneman (1990) in a replay of earlier studies found that when subjects were asked to rate the attractiveness of a gamble with a 7/36 probability of a \$9 payoff, they rated such a gamble as low in attractiveness (low probability), with groups apparently weighting the probability attribute more heavily than the payoff information. However, this result reversed when a high probability (29/36) of a small loss of 5 cents was added to the payoff scenario.

These results were confirmed in other settings (Fetherstonhaugh, Slovic, Johnson, and Friedrich, 1997; Hsee, 1998). What explains these reversals?

Information on probabilities is easier to map than an amount of money (ie \$9) that could be won. While \$9 may be rated as “good”, it is diffuse. It is difficult to judge or place on a scale of attractiveness. On the other hand, probabilities provide a relatively clear metric by which to judge the gamble. It has precision and thus is evaluable. But when the small loss with a high probability was added, the results changed. Suddenly, the \$9 has evaluability as the risk – benefit became immediately clear.

Judgments of risk and benefits are often inversely related

From a rational perspective, risk is positively related to reward or benefit. That is, higher risk would be expected to present higher potential benefit. However, studies in risk perception frequently find that risk and benefit are *inversely* related in subject perceptions. Examples include studies that show that smoking is viewed as high risk but low benefit, whereas vaccines are viewed as low risk but high benefit. In a study exploring the reason for this, Alhakami and Slovic (1994) found that the perceived risk and perceived benefit were related to the degree of positive or negative affect associated with the activity. That is, when a person is positive toward an activity, say smoking, they will rate the risk as low and the benefit as high, and vice-versa.

Finucane, Alhakami, Slovic, and Johnson (2000) examined the above findings in a study in which they attempted to manipulate affect by providing information that either increased or decreased risk perception and measured the impact on impressions of benefits. They did the same with benefits to assess impressions of risk. As expected, as risk (and benefit) impressions were raised or lowered, the corresponding affective impression of benefits (and risk) moved inversely.

Finucane et al (2000) also found that adding time pressure to their study scenarios magnified the inverse-correlation effects. The interpretations of these findings support the case for the reduced use by subjects of cognitive processes and greater reliance on affective processes to rate risks and benefits, an outcome expected in the affective literature.

The Affect Heuristic – Pulling it Together

Before moving onto a discussion of image theory, let’s summarize what has been learned so far about the role of affect on judgment and decision making. Let’s start with a proponent’s view of the decision process:

“The basic tenet ... is that image, marked by positive and negative affective feelings, guide judgment and decision making. Specifically, we propose that people use an affect heuristic to make judgments. That is, representations of objects and events in people’s minds are tagged

to varying degrees with affect. People consult or refer to an ‘affective pool’ (containing all the positive and negative tags associated with the representations consciously or unconsciously) in the process of making judgments.” (Finucane et al, 2000, p. 3)

In sum, cognitive processes used in judgment and decision making are not independent of the affective processes operating in parallel. From this perspective, the only question is to what degree affect will “guide” these processes. This is determined by factors such as the evaluability of the attributes being considered by the decision maker, the level of uncertainty and complexity involved in the decision, and the time available to analyze the options.

To the degree that an attribute is evaluable with a high level of precision, the resulting impression, positive or negative, is mapped by the decision maker in the form of images and used in future situations of similar character.

Now let’s turn to our discussion of a cognitive perspective found in image theory in order to further our discussion of the interface of these affective and cognitive processes.

Image Theory

Image theory states that individuals make decisions using stored ‘images’ from memory (Beach, 1997). Our discussion will first focus on these images, followed by the decision situations (decision frames) by which these images are selected and applied, and finally the kinds of decisions specified by the theory will be reviewed.

Images

Images are cognitive frameworks constructed from the individual’s experience, which are stored in memory. These images contain a person’s understanding as to what should happen in any given situation, as well as the how and why. Each image is made up of three categories: value, trajectory and strategic images. Each of these categories is comprised of a constituent membership of descriptors that are associated with a particular decision context.

The *value image* is what the person stands for, thus the goals worthy of pursuit and how they are to be pursued. They are the decision maker’s values, morals and ‘first’ principles. Beach (1997) collectively calls these a person’s “self-evident truths”. For example, one constituent in this image might be that any opportunity presented must be lawful. While not all descriptors are used for every decision context, the value image does form the boundary for what is possible or acceptable in the remaining two image categories – trajectory and strategic.

The *trajectory image* determines the goals that are to be pursued. Previously determined goals make up the constituents of this image and reflect what the decision maker seeks to be or to achieve. Call it his or her vision of the future and ranges from the abstract to the specific. These images should not conflict with relevant value image constituents. Finally, the *strategic image* contains the plans and selected strategies to achieve goals. The constituents are the strategies previously selected to achieve goals.

As an example of these images working together, a man wishing to make a good and honest living (value image) so he can retire comfortably in Bermuda at age 55 years (trajectory image) may choose to work for the same company his whole career with the hope of getting steady promotions, benefits and salary increases (strategic image).

In image theory, decision makers pursue multiple goals at any given time and these goals are expected to be generally consistent with each other and not in conflict with the foundational values or principles of the person. Plans are then made to achieve these goals and results from using such plans are forecast.

Decision Framing

Image theory is a schema theory. As such, it argues that decision makers use scripts, prototypes, among other things, and images, to structure or frame their reality in a cognitively efficient manner. By tapping into these similar situations of the past, the decision maker can readily access the store of knowledge he or she has accumulated from previous decision scenarios. Thus, a decision frame contains the relevant image constituents needed to address a particular situation which allows the person to structure it, make sense of it, and then act on it.

In sum, the relevant constituents from the three images are pulled together which structures the new situation and provides the standards to be used in decisions related to the new situation. This frame is determined by matching salient information drawn from the new decision context with a matching or similar scenario pulled together from memory. Thus, the current situation will be framed by past experience whenever possible.

Decision Types and Tests

The decision to be made will determine the test used by the decision maker to address the new situation (Beach, 1997). Two decisions are specified in image theory: adoption and progress decisions. Related to these two decision types are two tests, the compatibility and profitability tests.

Adoption decisions define those situations where new goals or plans are being proposed as additions to the existing image constituents (i.e. start a new venture). The decision to accept or reject the new proposal is a two-step process in image theory. First, new proposals must meet “the decision maker’s standards, as defined by the image constituents that make up the decision frame” (Beach, 1997, p. 168). This pre-decision screening process compares the new proposal’s compatibility with the selected decision frame. This is referred to as the compatibility test. If the proposal violates the decision frame at some threshold level, it is rejected and will not be considered as a valid alternative in the final decision pool.

A job offer with higher salary, but requiring a move to another city, has to get past the current how-to-make-a-living image and its supporting constituents of low risk, high certainty and knowledge of the work and employer, etc., all things less known in the new opportunity.

The pool of proposals that meet the compatibility test will then be assessed by a second test, the profitability test. If only one alternative remains after the compatibility test, it will be accepted without further analysis.

The compatibility and profitability tests differ considerably as to where they are used in the decision process and how they are used, cognitively speaking. The *profitability test* is argued to operate along the lines of an expected utility maximization model, consistent with normative decision theory.

Image theory’s unique contribution to cognitive decision theory, however, rests in the pre-decision *compatibility test*. The compatibility test screens out all alternatives that violate established thresholds of the existing decision frame. This rejection threshold is based solely on all the things ‘wrong’ with an alternative and how ‘wrong’ it is, with no consideration for what is ‘right’ or good about it. It uses a very conservative criterion that is an additive and non-compensatory process. Unlike the expected utility model of the profitability test (maximize benefits relative to costs), the compatibility test removes alternatives that have unacceptably high negatives, ignoring any positives.

The *progress decision*, the second decision type, relates to existing constituent goals and plans. As the name suggests, a compatibility test is used to assess congruence between the actual progress toward goal achievement relative to the forecasted progress. If progress toward a goal (trajectory image) is determined to be inconsistent with forecasts, the executed plan (strategic image) is

modified or discarded and a new one is put in place that is also consistent with relevant image constituents.

A person's plan to retire from the same company with a comfortable savings may be reevaluated if he is repeatedly passed over for a promotion and the sizable salary increases that come with it. Image theory suggests that the person will reassess retirement plans and supporting strategies if progress is not being made.

Summary of Research on Image Theory

Research to date has provided considerable support for the main claims of the theory. Of particular interest to our discussion is the support found for the two-stage screening-choice model in the adoption decision proposed in image theory.

Adoption Decisions. Potter and Beach (1994), in a series of studies, found that subjects used information differently depending on whether they were screening options or choosing a final option among a set of alternatives. Consistent with image theory, subjects in the screening step used information in a non-compensatory, additive manner in order to eliminate unacceptable options. In the later choice step of the decision process subjects used a more compensatory, multiplicative model to arrive at the best choice. Multiplicative is used in the sense that probabilities were used to weight the likelihood of the outcome of a decision, positive and negative.

The additive model used in the screening stage treats probabilities as either violations or non-violations, adding up the violations relative to the decision frame. These results supported earlier studies on the screening process (Beach and Strom, 1989; van Zee, Paluchowski, and Beach, 1992). These findings suggest that a 95% probability of an outcome is no more meaningful than a 50% probability, if both are above the individual's acceptance threshold.

Potter and Beach (1994) also demonstrated that the quality of information about options affected the screening process. Missing information or weak information was generally treated as a violation, as was low probability options. Subjects in these studies appeared to be more inclined to reject options which they knew less about as opposed to those in which they knew more.

In further support of this two-stage model, van Zee et al (1992) found evidence that information used in screening was not used in the subsequent selection decision to arrive at the best choice. As described by Beach in his 1998 review of the literature, subjects seemed to consider the screening information as "used up" as if it had nothing more to contribute to the subsequent decision.

To summarize, when making adoption decisions, research suggests that subjects treated information about alternatives for adoption differently depending on whether they were in a screening versus choice mode of the decision process. Further, the screening process involved a non-compensatory violation model to filter options – what we called the compatibility test, whereas in the choice process, a more expected utility model was used to arrive at the best choice – what we've referred to as the profitability test. Finally, information used in the screening process appeared to be disregarded in the choice stage when other or new information was available.

Progress Decisions. As discussed earlier, progress decisions refer to previously determined goals and plans and was an assessment of the progress being made toward those goals. Dunegan (1993) found that assessments of compatibility between trajectory images (goals) and actual performance were influenced by the framing of performance. Performance framed in negative terms yielded ratings of higher incompatibility, resulting in a review of existing plans to achieve these goals. The opposite was true for the same information positively framed. Dunegan (1995) found additional support for framing effects with subjects in positively framed scenarios indicating intent

to continue with projects and more willing to commit additional resources to these projects, unlike their counterparts in negatively framed scenarios.

Regardless of framing, however, the larger the incompatibility between goals and perceived performance, theory and evidence indicate that the decision maker will become more engaged in re-evaluating the plan by putting more effort into making existing plans either more effective, changing strategies or changing goals (Beach, 1998; p. 29). However, research also suggests that there is a bias toward the ‘status quo’ in that subjects have a tendency to seek any evidence of progress toward existing goals so as to conclude compatibility (Dunegan, 1995). That is, subjects were more sensitive to information that supported a current course than information that did not. This is consistent with Sharpiro’s (1982) suggestion that inertia was the ruling principle in human behavior and as such, people would not normally change course without being forced by what he called ‘displacement’ events.

To summarize the progress decision research, it can be seen at this point that current plans and strategies are favored over new ones. Decision makers have a bias toward current commitments and seem anxious to find evidence to support current strategies for achievement.

Image Theory: Important Points

Image theory presents decision making as a two-stage process, a unique contribution to the cognitive perspectives in the field. Our review of research indicates support for key aspects of the model. There are several points we want to highlight from this review of image theory before examining the potential of affect in current judgment and choice literature.

- 1) Images are central to the model’s function.
- 2) Value images define limits of goals pursued and how they are pursued by individuals.
- 3) In this two-stage process, the screening mechanism is more powerful than the actual decision mechanism. It determines the pool of options considered.
- 4) Not all information is equally valued by the decision maker, within stages and between stages.
- 5) The status quo is valued more than change.

The next section will examine these five points through the lens of the affect heuristic. By doing so, the aim is to identify possible contact points between the cognitive and affective research literatures which could be tested.

Image Theory and the Affect Heuristic

Image theory provides an opportunity to examine affective theory and results within a recognized framework rooted in cognitive decision making. Schema theories, of which image theory is one, have long been used to conceptualize human decision processes, including memory (an early example is Bartlett, 1932). That images are central to cognitive and affective schools should prove useful in this discussion.

In this section, we will discuss research from the affect heuristic literature that speaks to core aspects of image theory. These discussions will be used to suggest research opportunities going

forward. We capsule these ideas in the following three contrast statements, and discuss them in turn:

- 1) Image theory describes how images are used and the constituents they contain, while affective research suggests why a template is chosen and the influence constituents of the template might have on the actual judgement or decision.
- 2) Image theory observes that information characteristics (i.e. quality) will impact judgement, while affective research suggests which characteristics will evoke constituent inclusion in the decision frame and the degree of impact on the decision.
- 3) Image theory illustrates how the status quo is the preferred state, while affective research suggests why change generally comes slowly.

Images are cognitively convenient mechanisms which allow an individual to process large amounts of information with a limited amount of effort. We might think of these mechanisms as frameworks, systems or templates which are automatically pulled into service when an individual is faced with evaluating any of life's situations.

Image and Constituent Selection

Before an event, situation or choice can be evaluated a template must be pulled from memory, along with the requisite attributes. In image theory, these are referred to as image constituents. The potential constituent must be relevant to the situation at hand, of course, in order to become part of the decision frame used to judge the situation or option. But what triggers the relevant constituents?

First, recall that affect, as used here, is a concept that includes feelings, emotions, attitudes, beliefs and opinions. They are arrived at over time based on experience and, perhaps, as argued by the dispositional proponents of affect, natural or cross-situational emotional responses or tags. Thus, terms such as like-dislike, important-not important, right-wrong, good-bad, beautiful-ugly, or pleasant-painful, to name a few, are all viewed as affective in nature.

Affective theorists argue that affect guides the image selection process. It does this by steering the decision maker toward a suitable analytic framework (image) depending on the affective reaction to the situation. This reaction is the first processing action, which precedes any conscious reasoning processes. It's a gut response or early warning system that alerts the person to a potential problem, or gives them warm fuzzies and positive vibes about a situation.

How does affect guide image selection? Via the tagging of images with specific affect. What determines the tagging in terms of sign and intensity? Experiences and the resultant judgement of these experiences filed away in memory. In this case, judgement refers to the conclusion based on how it felt or was perceived. If a person went door-to-door as a child to sell magazines to raise money for some school project, rejection by prospects might result in a negative emotional tag associated with such an activity. If it was a particularly bad experience, then the intensity of the affective tag will make the memory particularly salient. Future scenarios that cue this image will come loaded with this affect.

Research on the affect heuristic suggests that these constituents are not merely there because of relevance in any reason-based sense. They're relevant because of their emotional markers which makes them salient and thus meaningful. Meaning is central to this, thus the more precise the meaning of the attribute the more valuable it is in assessing the situation at hand.

Recall the discussion regarding subjects offered a relatively low probability of a \$9 outcome of a gamble. While \$9 is specific, it is unclear as to its meaning in terms of judging the specific risk-

reward of this gamble. It is diffuse or ambiguous as opposed to precise. Thus, it has low evaluability and cannot be easily mapped. And, as we saw, it was not valued in the ensuing gamble decision.

The bottom line here is that images are argued to come loaded with affect, which defines the initial direction of the situation assessment. The alternative-screening stage seems most impacted by this process due to its subconscious and automatic nature.

Information Characteristics

Image theory notes that not all information is treated the same in various stages of decision making nor under all conditions. Beach and his colleagues observed that in the most important stage, the screening stage, an alternative's negative or non-conforming attributes relative to the decision frame were valued more heavily than positive or frame-consistent ones. They explained this outcome as being the result of the conservative nature of the screening mechanism that resulted in focusing on what is wrong with new adoption options. Wrong being defined in terms of the selected decision frame and its respective image constituents.

Why this is the case seems consistent with the affect heuristic, especially in the pre-decision screening stage, the stage of primary interest in this paper. First, the entire decision frame must conform to the value image. That is, trajectory (goals) and strategic (methods) images cannot stray far from the value image boundaries. Thus, for us the first question is: how does the value image garner such preemptive power? It could be that the nature of value images is such that they reflect the most deeply held beliefs of the person, which defines who the person is. In affective terms then, these carry the most strongly marked attributes.

Second, new alternatives face the added challenge of being unfamiliar to the existing order and are therefore harder to assess accurately. This is exacerbated in those cases where there is a higher level of uncertainty or ambiguity in the available information, or information is missing, in the judgement situation. This lack of clarity is viewed as a mark against the proposal in image theory (Potter and Beach, 1994).

Kuehn (2009) points this out in his discussion of a hypothetical scenario in which a person is to choose between potential career options, a job offer or starting a new venture. While a job offer has its uncertainties, it would seem relatively clear on many points relative to starting a new business. Pay, hours of work, work environment, etc. are relatively clear in the job offer, whereas most of these things are not in a new venture option. While neither alternative may pass the pre-decision screening process, the new venture option would have the more difficult time within this structure.

Research on affect notes a similar issue with information quality in that results have shown that in situations where attributes are hard to evaluate or map, these attributes are discounted or ignored in the decision process (Slovic et al, 2002). For example, if a person is unable to determine whether an offer of \$100 to do a task is fair or right or good, then the amount has little meaning in the decision to accept or reject the offer, at least relative to other information.

Bias Toward Status Quo

As the discussion has revealed to this point, decision frames emerge from existing images and the stored constituent pool. New members are admitted to the pool if they can pass muster with existing image structures – no minor accomplishment. Typically, candidates for admission to the constituent pool will succeed to the degree they are similar to the existing constituents. The bias is toward the status quo, as noted from earlier research (Beach, 2007; Shapero and Sokol, 1982; Kuehn, 2009). This was viewed as the case in both adoption and progress decisions.

Research on the affect heuristic suggest a different way to understand this phenomenon. As noted in our review of the affective literature, subjects expressed more positive views of a stimulus

the more they were exposed to it, and regardless of the affective sign attached to the stimulus. Further, the relative ease of mapping (understanding) the current course puts new alternatives at a disadvantage. Finally, affective tags are not easily changed. The net result is that decision frames, cognitively and affectively, are collectively biased toward the status quo.

Research Implications and Conclusion

This paper reviewed the theory and research of the cognitive and affective schools of decision making and judgement, focusing on image theory and the affective heuristic. Until recently, the judgement and choice literature has been dominated by the cognitive approaches. Our purpose in this study was to evaluate each literature and highlight core areas where there appears to be meaningful overlap.

Image theory provided a unique opportunity to make this comparison due to its two-stage process and emphasis on the pre-decision stage of the process. This fit well with the affective literatures which argued that in many cases affect influenced the decision process early (and later, though not the focus of our study in this study).

This paper makes two important contributions to the decision literature. First, our conclusions from this review suggests that the two views are not merely parallel systems which operate like two ships passing in the night, but rather each contributes essential pieces that define the ultimate structure and outcome of a person's decision process. As affect marks features of the experiential landscape of the decision maker, cognition codifies and files this information into an individual's reference library of life. This interdependent relationship cannot be ignored.

The second contribution of this paper centers around affect's impact on the unique and specific process outlined in image theory. Among cognitive perspectives, image theory views judgement and choice as a two-stage process, and as such, we're better able to specify the differential role of affect on decision making. Going forward, the development of the field of decision making will be enhanced to the degree the two streams address this potentially powerful integration of human cognition and emotion into a more comprehensive understanding of the decision process.

Three areas seem particularly relevant here going forward. First, in general, cognitive perspectives have assumed that alternative decision options exist from which decision makers judge, weigh and choose. Image theory has challenged the nature of this decision pool by demonstrating that a powerful pre-decision stage operates to filter out unacceptable alternatives. The research in the affect heuristic suggest that this filtering mechanism is set by affect, which influences decision frame constituent selection. This potential needs to be better understood.

Second, while both schools of thought agree that images are defined early in life and tend to persist, little is understood as to their malleability or their specificity as to the images and their constituents. Studies in language and meaning suggest that there can be considerable variation in meaning between similar words or phrases (Hall, Phillips, and Townsend, 2015; Richeson and Trawalter, 2005), and thus affective reactions to these words. Similarly, research in attitudes have demonstrated an affective component which predisposes a person to initial reactions to virtually any stimulus (Ajzen, 1991).

Would changing the words used to label an alternative change the response to it? For example, do terms such as entrepreneur and business owner conjure up different emotional responses and thus, decision preferences? Would using terms like "opportunity for independence" or "to be in control of your own destiny" or even "self-employment" change the response toward uncertain and ambiguous career options such as entrepreneurship?

Finally, the tendency of individuals toward the status quo is both rational and predictable, at least in terms of the main routines of life. However, as suggested here, this tendency is reflective of a bias toward what has been experienced in the past and not toward what is unfolding in the increasingly dynamic future. It can be expected that decision makers will need to adopt more fluid models of judgement and choice in order to successfully adapt to these contexts.

The presence and persistence of affective markers needs to be better understood if adaptive behavior is to be reimagined. At this point in the field, it's more a gut feeling than a proven fact.

References

- Alhakami, A. S., and Slovic, P. (1994). A psychological study of the inverse relationship between perceived risk and perceived benefit. *Risk Analysis*, 14(6), 1085-1096.
- Ajzen, I. (1991). Theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211.
- Bartlett, F.C. (1932). *Remembering: A Study in Experimental and Social Psychology*. Cambridge, England: Cambridge University Press.
- Baum, J.R., Frese, M., and Baron, R.A. (2006). *The Psychology of Entrepreneurship*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Beach, L. R. (1997). *The psychology of decision making: People in organizations*. Thousand Oaks, CA: Sage.
- Beach, L.R. and Mitchell, T.R. (1990). Image theory: A behavioral theory of decision making in organizations. In B. Staw & L.L. Cummings (Eds.), *Research in Organizational Behavior* (Vol. 12, pp. 1-41). Greenwich, CT: JAI Press.
- Beach, L. R. & Strom, E. (1989). A toadstool among the mushrooms: Screening decisions and image theory's compatibility test. *Acta Psychologica*, 72, 1-12.
- Bornstein, R. F. (1989). Exposure and affect: Overview and meta-analysis of research, 1968-1987. *Psychological Bulletin*, 106, 265-289.
- Choe, S. Y. and Min, K. (2011). Who makes utilitarian judgements? The influences of emotions on utilitarian judgements. *Judgement and Decision Making*, 6 (7), 580-592.
- Damasio, A. R. (1994). *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: Avon.
- Dunegan, K. J. (1995). Image theory: Testing the role of image compatibility in progress decisions. *Organizational Behavior and Human Decision Processes*, 62, 79-86.
- Dunegan, K. J. (1993). Framing, cognitive modes, and image theory: Toward an understanding of a glass half full. *Journal of Applied Psychology*, 78 (3), 491-503.
- Fetherstonhaugh, D., Slovic, P., Johnson, S. M., and Friedrich, J. (1997). Insensitivity to the value of human life: A study of psychophysical numbing. *Journal of Risk and Uncertainty*, 14(3), 282-300.
- Finucane, M.L., Alhakami, A., Slovic, P., and Johnson, S.M. (2000). The affect heuristic in judgements of risks and benefits. *Journal of Behavioral Decision Making*, 13, 1-17.
- Hall, E. V., Phillips, K. P., and Townsend, S.S.M. (2015). A rose by any other name? The consequences of subtyping "African-Americans" from "Blacks". *Journal of Experimental Social Psychology*, 56, 183-190
- 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, 242-257.
- Hsee, C. K. (1998). Less is better: When low-value options are valued more highly than high-value options. *Journal of Behavioral Decision Making*, 11, 107-121.

- Kuehn, K. (2009). It wasn't an option: Entrepreneurial choice through the lens of image theory. *Academy of Entrepreneurship Journal*, 15 (2), 99-110.
- Lerner, J.S. and Keltner, D. (2001). Fear, anger, and risk. *Journal of Personality and Social Psychology*, 81, 146-159.
- Loewenstein, G. and Lerner, J.S. (2002). The role of affect in decision making. In R.J. Davidson, K.R. Scherer, and H.H. Goldsmith (Eds), *Handbook of Affective Sciences*, pgs. 619-642. Oxford University Press: New York.
- Potter, R. E. and Beach, L. R. (1994). Imperfect information in pre-choice screening of options. *Organizational Behavior and Human Decision Processes*, 59, 313-329.
- Richeson, J. A. and Trawalter, S. (2005). On the Categorization of Admired and Disliked Exemplars of Admired and Disliked Racial Groups. *Journal of Personality and Social Psychology*, 89(4), 517-530.
- Shapiro, A. and Sokol, L. (1982). Social dimensions of entrepreneurship. In C. Kent, D. Sexton and K. Vespers (Eds), *The Encyclopedia of Entrepreneurship*, pgs. 72-90. Prentice-Hall: Englewood Cliffs, NJ.
- Simon, H. (1956). Rational choice and the structure of the environment. *Psychological Review*, 63, 129-138.
- Slovic, P., Finucane, M., Peters, E., and MacGregor, D. G. (2002). The Affect Heuristic. In Gilovich, T., Griffin, D., & Kahneman, D. (Eds.), *Heuristics and Biases: The Psychology of Intuitive Judgement*. New York: Cambridge University Press, pp. 397-420.
- Staw, B. M. (1976). Knee-deep in the big muddy: A study of escalating commitment to a chosen course of action. *Organizational Behavior and Human Performance*. 16 (1), 27-44.
- Tversky, A., and Kahneman, D. (1974). Judgement under uncertainty: Heuristics and biases. *Science*, 185, 1124-1131.
- Tversky, A., Slovic, P., and Kahneman, D. (1990). The causes of preferential reversals. *American Economic Review*, 80, 204-217.
- van Zee, E. H., Paluchowski, T. F., & Beach, L. R. (1992). Information use in screening and in choice. *Journal of Behavioral Decision Making*, 5, 1-23.
- Zajonc, R. B. (1980). Feeling and thinking: Preferences need no inferences. *American Psychologist*, 35, 151-175.

Kermit W. Kuehn earned his Ph.D. in management from the University of Nebraska. He is a professor of management at the University of Arkansas – Fort Smith.