

## Affect and Decision Making: Technical Note<sup>1</sup>

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Affect is the general term used to describe three types of states—moods, emotions, and decision-generated affect—that can influence strategic decision making. The three affective states include:

1. **Mood.** Also known as transient-affect, a mood is often a diffuse feeling or generalized state of positive or negative affect. It is mostly based on external factors such as weather, temperature, and current events (e.g. news, being in a traffic jam). Compared to emotions, moods are typically less intense and may last between several hours to several days.
2. **Emotion.** Emotional states are specific and intense but relatively short-lived affective states associated with a specific source or target. Examples of emotional states include fear, anger, happiness, pride, and jealousy. Each of these emotions may arise due to a source and/or be directed at a specific target (person, event, etc.). Fear may arise due to stimuli like fire, and anger may arise from and be directed toward stimuli such as specific people or situations. The higher intensity and target-specific nature of emotions separate them from the more transient and diffuse mood states.
3. **Decision-generated affect.** Some affective states result from decisions themselves. Being involved in a high-stakes strategic decision may generate anxiety. A parent may feel happiness or frustration when participating in his or her child's wedding planning. Sometimes the sheer volume of information that needs to be processed in a decision can overwhelm a decision maker and cause fear, anger, or frustration.

### STATE VERSUS TRAIT AFFECT

Though most affective experiences result from external stimuli, people often differ in their baseline affective states. A person's baseline affective state is his or her level of trait-affect relative to others.

Trait affect is also known as chronic or baseline affect. Thus, one person may always be happier than another person, whereas someone else might have a higher baseline level of fear. Someone with higher chronic fear is more prone to experiencing a temporary state of fear from a stimulus.

Psychologists acknowledge longer-term affective states that may exhibit trait-like properties. A person who has lost a loved one may experience prolonged anxiety or depression lasting from a few weeks to several years. These trait-like states often require prolonged recuperative support.

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## AFFECT & DECISION MAKING: UNDERLYING PROCESSES

The role of different affective states in decision-making can be understood via three intervening processes.

**Systematic versus heuristic information processing.** At the most basic level, affective states influence whether decision makers use systematic- or heuristic-information processing. Systematic-information processing is deliberative, involves great effort to analyze each piece of data, uses complex decision models, and entails a longer decision-making time. When using heuristic processing, decision makers spend less time making the decision, use general rules of thumb, and process data superficially. The two different processes often lead to different decision outcomes. For example, those using a heuristic approach will be more likely to choose the default option over new options in a decision making task, since new options typically require careful analysis.

**Valence and arousal.** Affective states can be described along two dimensions:

1. **Valence** represents the positive and negative dimensions of an affective state. Most states are typically positive or negative. Emotions, such as anger, fear, and anxiety, have a negative valence, while emotions like pride and joy have a positive valence. Through valence one experiences different sensations of pleasure (e.g., enjoyable experience is inherently positive during an affective state).
2. **Arousal** describes the basic physiological response or "level of excitement" experienced from an affective state. States are typically low-arousal states. Emotions, such as anger and fear, tend to high arousal, while joy and pleasure are associated with low arousal.

The intensity of the valence and arousal of an affective state can help one understand how it will influence decision making.

**Appraisal tendencies.** Prior to and during the decision-making process, decision makers will form an internal appraisal (evaluation). Appraisal tendencies are specific areas of emphasis that influence how a decision maker perceives the decision at hand. These areas of emphasis, or appraisal tendencies, vary by the emotional state of the decision maker. Appraisal tendencies represent a strategic decision vehicle.

1. **Control**—How much control does the decision maker feel in making the decision?
2. **Control**—How much control does the decision maker believe he or she has over the situation at hand?
3. **Responsibility**—How responsible does the decision maker feel for the outcome of the decision process?
4. **Stakehood**—How much is the situation from the decision maker's perspective, and how much risk is he or she willing to take on?

These appraisal tendencies vary by specific emotional states and therefore can vary in their influence on the decision-making process and outcome.

## METACOGNITION

Metacognition is the process whereby decision makers reflect on the decision-making process and use their knowledge of the process as an input to the decision.

The metacognitive influence of affective states is also known as “emotional intelligence” in the popular press. Those having higher emotional intelligence are better able to perceive, evaluate, and incorporate their own or another person’s emotional state into the decision-making process. Thus, a person’s ability to recognize he or she (or a colleague) is feeling angry or happy provides metacognitive information that serves as an input to the decision.

*Imagine a meeting in which your colleague Bob explains a strategy and provides feedback on your response. A person with high metacognitive ability may assess through Bob’s reactions and use it as key decision-making information. During the meeting Bob’s verbal reaction and feedback help you / make his case. Does Bob feel threatened? I might need to meet Bob privately to understand his goals and objectives. On the other hand, a person with low metacognitive ability might struggle to interpret Bob’s responses.*

*In a metacognitive decision-making system, reflective states can inform us via:*

1. **Emotional reactions (self):** Emotional states like anger or regret, fear, and anxiety, recorded as physical responses (heart rate, skin levels, a tightened jaw). The responses are sensed, reflected, evaluated and provide the decision maker with some cognitive information about the decision at hand.

*By paying attention to emotional reactions, decision makers can improve their performance. Knowing that a certain decision brings about anger provides valuable information about your own ability to resolve.*

*In many situations, decision makers enter in a state of gut feeling – a state where you may have very strong emotional reactions (excitement, concern, confidence, or anxiety) in a situation, even when you have difficulty articulating the reasons behind it. Rather than ignoring or disregarding the gut feeling, individuals can use it as an informative state (cognitive input). The gut feeling response is particularly informative for highly trained operators with diverse experiences (pilot through years of practice or work, e.g., engineer, fire fighter, professional athlete, police officer). Gut feeling, however, can be misleading for those with significant training and limited experience.*

2. **Emotional information embedded in others’ reactions:** The verbal reactions and facial expressions can also be informative. These may include the goals of the other person’s role, are correct, and whether the person feels stressed or angry from you. Those with high emotional intelligence pay attention to others’ emotional reactions and emotional responses. Incorporating this information can improve the decision-making process.

3. **Reaction as catalyst to action:** By ignoring emotional states such as anger or pride, sports coaches can sometimes lose touch with their own and their players’ emotions and spirit. The aspect of reactive management is particularly relevant during the implementation

phase of an initiative or project. Executives often include goals and objectives to give individuals a focus.

1. **Affect as Informational Processing:** Affect associated with various stimuli (e.g., people, situations, experiences, products, activities) functions as a method of storing information. What stimuli are most stored as relevant based on affective tags. Examples include:
  - a. Rather than remembering specific names or faces, people store information about encounters using affective tags like pleasant, relaxing, and fun.
  - b. Most autobiographical memories of major events, such as a vacation or job interview, are described in terms of the affect experienced. The negative/neutral details are recalled after a lengthy cue time.
  - c. One may not remember the professional credentials or experience of an executive, but rather recall the person's credentials using affective tags like proud, inspiring, rich, or aggressive.
  - d. Projects and activities may be recalled as inspiring, enjoyable, frustrating, etc.

Affective information associated with a stimulus provides some cognitive cues for guiding decisions and managing the stimulus in memory. Ignoring affective information can impact the decision-making process and lead to sub-optimal outcomes.

## AFFECT & DECISION MAKING: THE SCIENTIFIC METHOD

The study of affect and decision-making is a highly-evolved field with thousands of scientific studies using randomized-control designs. The design is similar to the one used in medical research. It allows the researcher to draw precise and causal inferences.

1. Randomly assign participants to a control group (no treatment) and treatment group (treatment).
2. Have treatment group participants experience affective stimuli using a variety of techniques:
  - a. Participants are given a bag of freshly baked cookies to provide positive affect.
  - b. Participants are asked to recall two scenarios that evoke these moods. They then describe each scenario in detail to activate a consistent state of mood.
  - c. Participants are asked to read a story about a student who did not get an anticipated scholarship and ended up with her girlfriend, achieving a state of negative mood.
3. Give the control and treatment group a decision-making task.
4. Compare the decision-making processes and outcomes to each independently held conclusions about the role of affect in decision-making.

A randomized control design process ensures the conclusions drawn are causal inferences with a high degree of scientific validity. A few examples include:

**Positive and negative mood influences risk taking:** Which experimental decision subject is a negative mood most likely risk taking? There is a negative mood typically

positive information were significantly less than in a positive mood. In fact, their reporting negative mood decreased higher risk is related to higher monetary return, which could potentially mean their mood. This emotional response could potentially be seen with making their participation in a neutral or positive mood state.

Anger and sadness lead to different choices. Participants were asked to choose among two with different conditions. The decision-making task was designed as complex—the two options were similar in each other, making the choice difficult. Each participant was given a default option—the one they had received in a previous round.

In a control group, participants were asked to describe an arbitrary day in their life. In the treatment group, participants described a day that made them angry, and a third group described a sad day. After reactions had been collected, participants made the complex choice. In the control group, 57% chose the default option. Members of the control group were angry participants chose the default option (57%). But because sadness influenced the the control group, with 57% choosing the default option. This study happened because angry because sadness processed information more automatically. They did not consider the two options carefully, and quickly chose the default option, in the **same way** as.

**Disgust leads to cheating.** Disgust is typically induced by something believed to be unhygienic, contaminated, or repulsive. It leads to a flight response so that the decision maker can protect him/herself from the disgust-inducing stimulus. Thus, the decision maker is not as invested in the decision-making task. The researchers therefore reasoned people who feel disgust should engage in higher levels of cheating.

Participants in the treatment group were made to feel disgust by watching a scatological scene from the movie *Trainspotting*, shopping for products like diarrhea medicine and fungal treatments, and other methods. They then engaged in several tasks in which they could cheat. Overwhelmingly, members of the disgusted group cheated more than those in the control group. In a subsequent study, researchers mitigated disgust by showing participants cleaning products. The excessive cheating went away.

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