Application of the Affective Certainty Model to Affective Decision-Making in the Workplace

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ABSTRACT

We apply a new model of evaluative processing, known as the Affective Certainty Model (ACM) as a potential further explanation of performance and satisfaction at work. The ACM maintains that when state (mood) and trait (personality) sources of emotion knowledge are consistent, people should find it easier to make affective judgments than when sources of emotion knowledge diverge. Accordingly, the model seeks to examine the interactive effect of neuroticism and mood states on the speed with which individuals are able to make self-relevant affective decisions with reference to self-perceived task performance and task satisfaction. The proposed model is suitable to empirical research using a randomised experimental design, and has implications for productivity and job satisfaction in the workplace.

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Although much research has been conducted into the effects of personality and mood on evaluative processing, relatively little is known about how these constructs interact to influence decision-making. Recently, Tamir, Robinson and Clore (2002) proposed a new cognitive model of evaluative processing known as the Affective Certainty Model (ACM), which predicts that when personality trait and momentary state (mood) match, a person experiences affective certainty, which directly influences the speed with which they make evaluative decisions about new objects in the environment. Put simply, the model posits that state-trait congruent individuals should be faster to make self-relevant affective judgments than individuals whose state and trait are incongruent.

In line with this notion, the model proposed in the current paper seeks to explore the effect of neuroticism and negative mood on cognitive efficiency. Specifically, the relationship between neuroticism and mood will be explored in a work-related scenario, in which ratings of self-perceived performance and task satisfaction will be measured, with a focus on the speed with which individuals are able to make self-relevant affective decisions. Given that employees are required to make such judgments (e.g., “Do I want to work with this person?” “How do I feel about completing this task?” “How do I feel about my job performance?”) daily, such research has important implications for motivation, productivity and job satisfaction in the workplace.

CONCEPTUAL DEVELOPMENT

Evaluative processing

According to Musch and Klauer (2003: 1), “evaluative and affective information processing in individuals has long been a fundamental issue in social and cognitive psychology.” However, it was not until the late 20th century that strong research interest began to emerge, which has resulted in a dramatic increase in the number of studies in this area. The relative lack of attention to evaluative processing theory and mechanisms until this stage is somewhat perplexing, particularly given that the ability to make fast, accurate and unbiased judgments of social situations is important to individuals in
both their personal and working lives (Forgas, 1995). As already mentioned, being able to make such
decisions quickly and accurately is especially important in an organisational setting, as employees and
managers must consistently engage in both self and peer evaluations as part of their job performance.

**Congruence and Cognitive Efficiency**

Much empirical evidence exists to support the notion that congruence is associated with
greater cognitive efficiency, one measure of which is increased speed of processing. Specifically,
cognitive efficiency may be generally defined as effectiveness in selection and decision-making
(noticing, processing and evaluating important stimuli from the environment), effectiveness in
knowledge retrieval (identifying and activating relevant information from memory), and effectiveness
in the application and maintenance of optimum processing strategies (Jordan, 1998).

Most of the recent research examining the effect of congruence on the speed of processing has
involved the study of mood, emotion and affect. For example, in an experiment investigating the effect
of induced mood on a lexical decision-making task, participants were faster to respond to words
congruent with their affective state (i.e., participants in a happy mood responded faster to positive than
negative words, see Ferraro, King, Ronning, Pekarski & Risan, 2003), and similar research has
demonstrated that congruence between the vocal expression of emotion (i.e., tone of voice) and type of
emotional word results in faster identification of words (Vakoch & Wurm, 1997).

**The Affective Certainty Model**

The Affective Certainty Model (ACM) (Tamir, Robinson & Clore, 2002; Tamir & Robinson,
2004) extends previous research in the area of congruence and affective processing, and is based upon
the assumptions that: (1) affect is used to inform decisions when making affective judgments; and
(2) state and trait sources of emotion knowledge are distinct and separate from each other. The model
also proposes that people use both emotion sources of knowledge when making affective judgments,
and further suggests that when state (mood) and personality (trait) source of emotion knowledge are
consistent, it should be easier to make self-relevant affective judgments, versus when they diverge.
Central to the model is the argument that self-reported personality represents a set of stable beliefs about the self, which people seek to confirm as a means of predicting and understanding their social interactions. In accordance with this view, personality may be conceptualised as “a hypothesis about the self, whereas momentary experience might be viewed as a potential test of that hypothesis” (Tamir, Robinson & Clore, 2002: 663). It is further suggested that these beliefs about the self are associated with a set of expectations. When these expectations are met, the individual experiences a sense of affective certainty, and information processing proceeds efficiently; in contrast, when expectations are not met, processing slows down, the individual feels uncertain and is temporarily required to re-evaluate their expectations. In line with this reasoning, it seems reasonable to conclude that, when personality trait and affective state are congruent, the affective certainty associated with this match facilitates speed of evaluative processing (Tamir, Robinson & Clore, 2002).

In a recent test of the ACM, Tamir and Robinson (2004) examined how personality and mood state influenced speed of processing within the context of neuroticism and negative mood states. The authors argued that, because high levels of neuroticism are associated with maladaptive outcomes, including psychological distress (Suls, Green & Hillis, 1998) and increased susceptibility to anxiety and depression (Clark, Watson & Mineka, 1994), affective congruence for these individuals should involve being in a generally negative mood state.

In one of the reported studies, participants were required to categorise words as positive versus neutral on one hand or as negative versus neutral on the other. The results revealed that people high in neuroticism were faster to make evaluative decisions when in a negative mood, and people low in neuroticism were faster to make decisions when in a non-negative (i.e., neutral) mood. Subsequent studies revealed similar results were obtained regardless of whether the mood states were naturally present or manipulated. As noted by the authors, the significant interaction between neuroticism and negative mood raises the interesting possibility that negative mood states, which are generally considered to be maladaptive and detrimental to performance, can actually be beneficial for some individuals.
PROPOSED MODEL

The theoretical model we propose here is intended to investigate the effect of personality and mood on the speed with which individuals make self-relevant affective judgments. This represents one type of evaluative processing, and is considered to be a general measure of cognitive efficiency. Similarly to Tamir and Robinson’s (2002) study, the effect of neuroticism and negative mood on affective processing will be investigated. Moreover, the model will also examine the effect of neuroticism and positive and neutral mood states on processing. Although Tamir and Robinson (2002) included a neutral mood state in their study, the effect of neuroticism and positive mood does not appear to have been explored in any literature to date, and represents a significant departure from traditional studies of personality traits and affective states. On the basis of the ACM, it is expected that an interaction between neuroticism and positive mood will have a similar effect on speed of processing as an interaction involving a neutral mood state.

As mentioned earlier, the current model will explore the effect of personality and mood on the speed with which individuals rate their self-perceived performance and task satisfaction. These dependent variables were selected because both clearly involve making an evaluative decision and have strong practical relevance, as employees regularly engage in judgments of their own performance and their satisfaction with their duties and tasks as part of their working lives. A brief discussion of the independent and dependent variables and their relationship to the other variables in the model is provided as follows.

Mood and Speed of Processing

Researchers have generally found that mood and speed of processing are positively correlated, such that positive mood is associated with faster processing (Huber, Beckmann & Herrmann, 2004; Forgas & Bower, 1987). In the proposed model, however, we suggest that neuroticism will moderate this relationship.

Some studies have also implicated arousal as an important factor to consider when exploring speed of evaluative processing and cognitive efficiency, as situational stress has been found to interact
with trait anxiety in predicting performance (Sorg & Whitney, 1992), and higher levels of arousal and stress have been linked to increased motivation and efficiency of cognitive processing (e.g., storage and retrieval of information) (Anderson & Revelle, 1994). In one of the first studies investigating the validity of the ACM (Tamir, Robinson & Clore, 2002), however, the authors demonstrated that mood, rather than level of arousal, was responsible for the interaction with neuroticism which influenced speed of evaluative processing.

**Task satisfaction**

Much research suggests that a positive relationship exists between mood and job satisfaction, such that employees who experience positive, uplifting moods at work will report feeling more satisfied with their jobs, duties and tasks than employees who experience more negative moods. For example, Weiss, Nicholas and Daus (1999), using an experience-sampling methodology with frontline managers, found that mood at work contributed to job satisfaction, and Fisher (2002) found that state affect (mood) was more strongly correlated with job satisfaction than trait affect. Similarly, Staw, Sutton and Pelled (1994) reported that positive emotions in the workplace contributed to positive organisational outcomes.

**Self-perceived performance**

The research literature indicates also that mood and self-perceived performance are positively correlated (Fisher, 2002). It has been suggested that this may be because positive mood facilitates performance on certain kinds of tasks, specifically those which require a high degree of creativity (Isen, 1999). A recent study by Barsade (2002), however, supported the general relationship between mood and self-ratings of performance, such that participants who reported a more positive mood also provided higher ratings of self-perceived task performance.

Additionally, it is necessary to note that self-perceived performance and task satisfaction are likely to be positively correlated, as participants who rate their performance highly are also likely to express greater satisfaction with the task. For example, Fisher (2003) conducted a series of studies and reported that the average within-person correlation between momentary task satisfaction and
concurrent perceived task performance was 0.57, providing support for the relationship between task satisfaction and performance.

**Propositions**

In accordance with the Affective Certainty Model (Tamir & Robinson, 2004) and the literature discussed above regarding the relationship between mood, task satisfaction and perceived task performance, we present the propositions:

*Proposition 1a:* There will be a positive relationship between mood and self-perceived performance.

*Proposition 1b:* There will be a positive relationship between mood and task satisfaction.

*Proposition 2:* There will be a positive relationship between self-perceived performance and task satisfaction.

*Proposition 3a:* Participants high in neuroticism and in a negative mood will be faster to make evaluations of self-perceived performance and task satisfaction than participants high in neuroticism and in a positive mood.

*Proposition 3b:* Participants low in neuroticism and in a neutral mood will be faster to make evaluations of self-perceived performance and task satisfaction than participants low in neuroticism and in a negative mood.

*Proposition 3c:* Participants low in neuroticism and in a positive mood will be faster to make evaluations of self-perceived performance and task satisfaction than participants low in neuroticism and in a negative mood.

*Proposition 4:* Speed of processing will partially mediate the relationship between mood and ratings of self-perceived task performance and task satisfaction.

*Proposition 5a:* Speed of processing will be positively related to self-perceived performance.

*Proposition 5b:* Speed of processing will be positively related to task satisfaction.

Currently, the propositions regarding the relationship between speed, self-perceived performance and task satisfaction are only speculative in nature, as there is little empirical research to
support the suggested relationships. Nonetheless, it is proposed that speed will be related to both dependent variables, such that participants who find it easier to reach a decision are also likely to report higher performance and greater task satisfaction.

Figure 1 provides a model of the variables included in the current study and the proposed relationships between each:


DISCUSSION

In summary, the model we have described in this paper posits relationships between mood, neuroticism, speed of self-relevant affective processing, and the two dependent variables, self-perceived performance and task satisfaction. In brief, level of neuroticism (high versus low) is expected to moderate the relationship between mood and speed of self-relevant affective processing, such that individuals who are in a negative mood and high in neuroticism will be faster to make judgments of self-perceived performance and task satisfaction than individuals who are in a negative mood and low in neuroticism. The interaction is expected to be crossover in nature, such that speed of processing should also be facilitated in low neuroticism individuals in a neutral or positive mood. Further, mood is expected to have both a direct effect and a mediated effect, specifically by means of speed of self-relevant affective processing, on both dependent variables. There is also expected to be a relationship between speed of processing and both self-perceived performance and task satisfaction.
Implications for Research

The model that we have proposed is ideally suited to research using an experimental approach based on a randomised groups design. We suggest initially testing the model using a sample of undergraduates, followed by replication in an organisational setting. High and low neuroticism participants can be identified using a personality measure such as Goldberg’s (1999) Big Five International Personality Item Pool Scale. We envisage that, during the experiment itself, task difficulty will be manipulated to induce positive, negative and neutral mood conditions. After completing the task, participants should then be asked to make judgments about their own performance and their satisfaction with the task, preferably using a computerised reaction time measure to directly assess speed of processing (Wilson & Thornton, 2002). The results can be analysed using ANOVA and multiple regression, using the principles set out by Baron and Kenny (1986). In this instance, note that partial mediation only is expected, in that mood has a direct effect on the dependent variables in addition to the mediation of speed of self-relevant affective processing.

Implications for Theory

The model put forward in the current paper represents the first applications of the ACM, which was developed only recently, and as such has only limited empirical support. It would also contribute to the growing body of literature which argues that individual differences in affective processing should be considered in the context of the interaction between trait and state affect. Further, research into the proposed model would increase our theoretical understanding of the relationship between mood, speed of processing, task satisfaction and self-perceived performance.

Practical Implications

From a practical perspective, particularly if the research is found to support the interaction between negative mood and neuroticism identified by Tamir and Robinson (2004), it would suggest that some employees may actually function more efficiently and productively when they are in a negative versus a positive mood. Indeed, it makes intrinsic sense that those employees who are faster to make evaluative decisions will experience a greater sense of efficiency, motivation, and general
well-being, which are associated with increased job satisfaction and employee morale (Argyle, 1989; Adler, 1991). This research study will also inform practitioners with respect to the relationship between mood and speed of processing, task satisfaction and self-perceived performance, all of which are relevant to general performance in an organisational setting.

It is necessary to note that there are limitations to the proposed model. Firstly, in line with the Affective Certainty Model, the proposed model is expected to apply to the response-selection stage of information processing only, and specifically to the processing of new events in the environment (Tamir, Robinson & Clore, 2002). Currently, no research exists as to whether processing of familiar events is influenced by affective certainty. Furthermore, affective certainty is expected to influence the speed with which individuals make self-relevant affective judgments, rather than simply affective judgments or decision-making in general. It is suggested that it is when individuals are making an evaluative judgment about something personally and emotionally relevant to them that they are most likely to notice a sense of affective congruence (state-trait match) or incongruence (state-trait mismatch) within themselves, resulting in either affective certainty or uncertainty (Tamir, Robinson & Clore, 2002).

In conclusion, the model we propose in this paper has potential to further research into the relationship between personality, mood and speed of self-relevant affective processing in work settings. It should serve both as a test and an extension of the Affective Certainty Model. This is because it includes an interaction of neuroticism and mood in the context of ratings of self-perceived task performance and task satisfaction, neither of which have been explored in previous research. It also has important implications for management, leadership and the composition of work teams, insofar as it suggests that some employees may work more efficiently under certain conditions than others.
REFERENCES


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