

Neuroscience of Emotions

The approach (reward)-avoid (threat) response: a survival instinct

This principle represents the likelihood that when a person encounters stimulus their brain will either tag the stimulus as 'good' and engage in the stimulus (approach), or

Their brain will tag the stimulus as 'bad' and they will disengage from the stimulus (avoid).

If the stimulus – positive emotions and rewards it will lead to an 'approach' response.

If the stimulus – negative emotions or punishment it will lead to an 'avoid' response.

This model becomes clearer when we discover the dramatic effect that these states can have on perception and problem solving, and the implications of this effect on decision-making, stress management, collaboration and motivation.

Translating this effect to the social world, someone feeling threatened by a work colleague or superior who is undermining their credibility is less likely to be able to solve complex problems and is more likely to make mistakes.

This reduced cognitive performance is driven by several factors. Firstly, when a human being senses a threat, resources available for overall executive functions in the prefrontal cortex decrease. There is a strong negative correlation between the amount of threat activation, and the resources available for the prefrontal cortex (Arnsten, 1998). The result is literally less oxygen and glucose available for the brain functions involved in working memory, which impacts linear, conscious processing. When feeling threatened by one's boss, it is harder to find smart answers because of diminished cognitive resources.

Secondly, when threatened, the increased overall activation in the brain inhibits people from perceiving the more subtle signals required for solving non-linear problems, involved in the insight or 'aha!' experience (Subramaniam et al, 2007).

Thirdly, with the, the tendency is to generalize more, which increases the likelihood of accidental connections. There is a tendency to err on the safe side, shrinking from opportunities, as they are perceived to be more dangerous. People become more likely to react defensively to stimuli. Small stressors become more likely to be perceived as large stressors (Phelps, 2006). When the boss appears threatening, perhaps they just do not smile that day, suddenly a whole meeting can appear threatening and the tendency can be to avoid taking risks.

Clearly the threat or avoid response is not an ideal state for collaborating with and influencing others. However, this response is the default situation that often occurs in teams.

The threat response is often just below the surface and easily triggered. Just speaking to one's supervisor, or someone of higher status is likely to activate this response.

On the other hand, an approach response is synonymous with the idea of engagement. Engagement is a state of being willing to do difficult things, to take risks, to think deeply about issues and develop new solutions. An approach state is also closely linked to positive emotions. Interest, happiness, joy and desire are approach emotions. This state is one of increased dopamine levels, important for interest and learning. There is a large and growing body of research which indicates that people experiencing positive emotions perceive more options when trying to solve problems (Frederickson, 2001), solve more non-linear problems that require insight (Jung-Beeman, 2007), collaborate better and generally perform better overall.

For example, you may wish to think about a real-life scenario from your current workplace. In the space provided, write down an observation from your workplace. This may be an interaction with one of your colleagues, your employee or your boss

Consider a time where you had to manage an employee's performance as they were performing below-expectations.

Who was involved?

What was discussed during the conversation?

What was the outcome of this conversation?