A theoretical note on Gray's model of personality and Signal Detection Theory: Personality as decision-making.

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Personality has been defined as a person's typical response to a situation (Pervin, 1980). This suggests some decision-making mechanism is critical to personality processes for the purpose of selecting a response in a given situation. Gray's (1981) model of personality strongly articulates with this assumption. It specifies sensitivity to reward and punishment as the causal basis of personality. This is chiefly afforded by a series of comparators which determine if stimuli presently in the environment differ from expectations, or more specifically, if any signal of threat or reward has occurred (Gray & McNaughton, 2000). This paper explores the role of decision-making within personality by noting the theoretical overlap of Gray’s model with Signal Detection Theory, a decision-making paradigm. I also report two experiments demonstrating that Anxiety can be predicted by a decision-tendency to minimise punishing feedback, and Impulsivity by a decision-tendency to maximise rewarding feedback. In terms of Gray & McNaughtons (2000) comparators, this suggests that anxious individuals more readily respond to a stimulus as if it were a source of threat or frustration, and impulsive individuals as if it were a source of reward or relief. More broadly, it supports a basis of personality in decision-making processes.