# **New Research From Psychological Science**

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# High Level of Trait Anxiety Leads to Salience-Driven Distraction and Compensation

## John M. Gaspar and John J. McDonald

Individuals with high anxiety levels exhibit an impaired ability to filter out irrelevant information, even when that information is emotionally neutral. Gaspar and McDonald used electroencephalograms (EEG) to measure electrical indicators of brain activity while individuals with high and low trait-anxiety scores followed instructions to search and identify the position of a yellow target and ignore a salient red target in a visual display of stimuli that varied only in their colors. Although visual search performance did not differ between individuals with high and low anxiety, electrical brain activity indicated that individuals with high anxiety paid attention to the salient distractor before they were able to suppress it, whereas individuals with low anxiety did not pay attention to the distractor. This suggests that individuals with high anxiety might be able to suppress irrelevant information only after their attention has already been diverted to it, whereas individuals with low anxiety may prevent the distraction before it happens. Therefore, in this type of task, the performance of individuals with high anxiety might be as good as the performance of individuals with low anxiety if they make the effort to compensate for their impaired ability to initially focus attention.

#### School or Work? The Choice May Change Your Personality

Jessika Golle, Norman Rose, Richard Göllner, Marion Spengler, Gundula Stoll, Nicolas Hübner, Sven Rieger, Ulrich Trautwein, Oliver Lüdtke, Brent W. Roberts, and Benjamin Nagengast

Our personality traits may predispose us to choose particular career paths, but can choosing a particular career path also shape our personality traits? To find out, Golle and colleagues compared the Big Five traits (i.e., neuroticism, conscientiousness, openness, agreeableness, and extraversion) and vocational interests (i.e., artistic, social, enterprising, conventional, investigative, and realistic) of German students

who had chosen an academic track with those of German students who had chosen a vocational track when they were 15 to 16 years old. Participants who had similar traits at the beginning of the study seemed to diverge after choosing a path: Students who selected the vocational track were more conscientious and had less investigative, social, and enterprising interests 6 years later compared with students who continued on the academic track. Having relatively well-defined work demands and more experienced colleagues might lead those who choose a vocational path to mature faster but could also diminish their interest in activities that fall outside the scope of their work. The different environmental pressures that come with staying in school versus entering a work path may influence personality development in early adulthood, the researchers conclude.

## Attentional Selection Mediates Framing and Risk-Bias Effects

Moshe Glickman, Konstantinos Tsetsos, and Marius Usher

Humans' preferences and choices are not always rational and can change depending on how a task is framed. Glickman and colleagues examined the role of attention in these biases. Participants saw number sequences that represented payoffs from slot machines. In one experiment, they reported which sequence had a higher average payoff; in another, they reported which had a lower average payoff. In both experiments, they also indicated whether they saw a red dot on one of the numbers. Participants looking for higher average payoffs were more likely to detect the dot on higher numbers; those looking for lower average payoffs were more likely to detect the dot on lower numbers. Thus, participants allocated their attention according to the goal determined by the task framing. In another experiment, when the distribution of payoffs reflected riskier sequences (greater variance) or safer sequences (less variance), participants opted to draw an extra sample from the riskier sequences. In addition to this risk-seeking bias, they were also more likely to detect the red dot on higher payoffs. Hence, irrational choices may stem from an attentional-selection mechanism that is biased toward goal-congruent information, which can lead to risky decisions.