

When words get hot, mental multitaskers collect cool

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How useful would it be to anticipate how well someone will control their emotions? To predict how well they might be able to stay calm during stress? To accept critical feedback stoically?

Heath A. Demaree, professor of [psychology](#) at Case Western Reserve University, finds clues in what [psychologists](#) call "hot" and "cold" psychology.

"People differ with regard to how well they can control their emotions, and one factor that predicts it is non-emotional in nature – it is a 'cold' cognitive construct," Demaree explains referring to [Working Memory Capacity](#).

Working memory capacity, or WMC, is the "ability to process a stream of information while engaging in a separate task or while being distracted" he said. For example, taking notes during a lecture: you must listen to what the lecturer is saying at the moment, remember what has already been said, and write it down.

People with a high level of working memory capacity were best at using a coping mechanism to make themselves feel better and control negative emotions after being harshly criticized.

This kind of research where "cold" cognitive psychology meets "hot" emotional psychology is a new route providing the foundation for Demaree's recent study: "Working Memory Capacity and Spontaneous

Emotion Regulation: High Capacity Predicts Self-Enhancement in Response to [Negative Feedback](#)," published in *Emotion*.

In the study, Demaree and Brandon J. Schmeichel, a professor of psychology at Texas A&M University, test connections between high WMC and the control of emotions.

Demaree explains that this research is "rare because it predicts how emotional functioning is related to WMC... and ours is some of the first research that shows that cold cognition predicts hot emotion."

This research follows a 2008 study, "Working [Memory Capacity](#) and the Self-Regulation of Emotional Expression and Experience" conducted by Demaree, Schmeichel, and Rachael N. Volokhov. The researchers found that though emotions can be controlled, people with higher WMC were better at managing their emotions when directed to do so.

"The 2010 study employs the same ideas, but it additionally showed that people with high WMC control their emotions more naturally – when NOT directed to do so, as well," Demaree said.

To determine WMC, participants were asked to solve mathematical problems while remembering words; those who had the most correct were identified as having a higher WMC.

The researchers then gave each person a test, then provided either negative feedback or no feedback, and determined whether the emotional reaction to the feedback affected their responses on a subsequent test.

This negative feedback consisted of exaggerated claims on the individual's character such as "your responses indicate that you have a tendency to be egotistical, placing your own needs ahead of the interests

of others" or that "if you fail to mature emotionally or change your lifestyle, you may have difficulty maintaining these friendships and are likely to form insecure relations."

Immediately after receiving negative or no feedback, participants were asked to rate their familiarity with a list of people and places.

This list had 72 real items such as Mae West and hydroponics, as well as 18 fake items including Queen Alberta and plates of parallax.

These foils were put on the list to check if any person would "over claim" – meaning they would exaggerate their familiarity with the object. Such over claiming is well known to make people feel better about themselves and control their reactions to criticism.

While over claiming in a public place may be viewed as boastful and immodest, over claiming when criticized or belittled is an effective tool for calming heated emotions.

Researchers found that among those who received negative feedback, people with higher levels of WMC over claimed the most.

Importantly, at the end of the study, it was those people who over claimed the most who also reported the least negative emotions such as being ashamed, upset, or distressed.

Stated differently, people with higher WMC automatically used a strategy that made them feel better and remained controlled when confronted with a negative situation such as criticism or a personal attack, Demaree explained.

Being able to predict emotional responses can be useful in multiple ways.

Emotion regulation techniques can be tailored to individuals based on how likely they're able to employ them.

Emotional reappraisal strategies, such as controlling one's facial expression or changing negative situations into positive ones using coping methods, can be taught to help people better handle everyday [emotional](#) stressors. These strategies are often more beneficial than suppressing emotion.

In addition to its practical applications, this exploration into emotions – how and why they are managed – is intriguing. As Demaree explains, "It should be interesting. Who doesn't think about their emotions? It's engaging; it's life."

Provided by Case Western Reserve University

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