

Aha! The 23-Across Phenomenon

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For decades now, I have spent a chunk of my Sunday mornings puzzling over *The New York Times* crossword. Anyone who shares in this particular diversion knows that, while puzzlers do in fact “puzzle” out some of the answers painstakingly, many others pop into mind in a flash of insight. Dedicated puzzlers savor these eureka moments — they’re effortless and mysterious and they come with an absolute sense of certainty. They are also — there’s no other word for it — joyful.

I’m describing my subjective experience, of course, but new evidence is suggesting that I’m not alone in this sensation. Ongoing studies of the “**aha**” experience are beginning to show that the phenomenon is a peculiar mix of abrupt surprise, easiness, clarity, confidence and warm feelings. No wonder that some of us describe our Sunday morning habit as an addiction.

But what would account for this strange cognitive and emotional experience? Why does it *feel* so good when we suddenly see something that we didn’t see before? Two cognitive scientists believe they may have part of the answer, which they describe in the most recent issue of the journal *Current Directions in Psychological Science*. Sascha Topolinski of the University of Würzburg and Rolf Reber of the University of Bergen believe that the richness of the “**aha**” experience comes from the fluency of information processing. When a solution to a problem suddenly pops into mind, the switch from slow cognitive grinding to effortless understanding triggers both the sureness and the goodness that we associate with those delectable moments of insight.

Topolinski and Reber review many converging lines of research to back up this theory. For example, in one study volunteers were asked to judge the truth of statements like “Osorno is in Chile.” Sometimes the statements were presented in a dark typeface on white background, so they were easy to read and process — in other words, more fluent. Other times, they were presented in a grayer typeface on a grayer

background; still readable, but with more effort. The easy-to-read statements were judged more truthful than the difficult-to-read statements.

Osorno is in Chile. But it doesn't matter, because cognitive fluency has nothing to do with content or meaning, accuracy or truth. It has to do only with the palatability of information, the dynamics of processing. The results explain the absolute sense of certainty and confidence people experience in an “**aha**” moment. Other studies have shown that people have a preference for information that is easily and rapidly processed — it's judged *better* than difficult information — which could explain the good feelings that come with insight. This happens even without conscious awareness: Undetected but real changes in fluency trigger automatic facial responses that are linked to aesthetic joy, according to yet another study.

Of course, none of this explains why flashes of insight occur when they do — or why they occur at all. But it does explain why thinking sometimes feels like a rush of feeling — and that in turn might explain why we choose thinking as a Sunday morning pastime.