

the way, because a person whose brain is being scanned must lie perfectly still. To overcome this problem, Sam and his colleagues put a long plastic tube into the mouth of each participant, and from a distance injected the appropriate drink (Pepsi or Coke) through the tube into their mouths. As the participants received a drink, they were also presented with visual information indicating either that Coke was coming, that Pepsi was coming, or that an unknown drink was coming. This way the researchers could observe the brain activation of the participants while they consumed Coke and Pepsi, both when they knew which beverage they were drinking and when they did not.

What were the results? In line with the Coke and Pepsi “challenges,” it turned out that the brain activation of the participants was different depending on whether the name of the drink was revealed or not. This is what happened: Whenever a person received a squirt of Coke or Pepsi, the center of the brain associated with strong feelings of emotional connection—called the ventromedial prefrontal cortex, VMPFC—was stimulated. But when the participants knew they were going to get a squirt of Coke, something additional happened. This time, the frontal area of the brain—the dorsolateral aspect of the prefrontal cortex, DLPFC, an area involved in higher human brain functions like working memory, associations, and higher-order cognitions and ideas—was also activated. It happened with Pepsi—but even more so with Coke (and, naturally, the response was stronger in people who had a stronger preference for Coke).

The reaction of the brain to the basic hedonic value of the drinks (essentially sugar) turned out to be similar for the two drinks. But the advantage of Coke over Pepsi was due to Cokes’s brand—which activated the higher-order brain mechanisms.