Scientific American

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Why Bronze Medalists Are Happier Than Silver Winners

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This blog appears in the In-Depth Report [Science at the Sochi Olympics](http://www.scientificamerican.com/report/science-at-the-sochi-olympics" \t "_blank)

*So we have the paradox of a man shamed to death because he is only the second pugilist or the second oarsman in the world. That he is able to beat the whole population of the globe minus one is nothing; he has “pitted” himself to beat that one; and as long as he doesn't do that nothing else counts.*

[](http://laist.com/2010/02/16/scientist_when_less_is_more.php)In 1892, psychologist William James wrote these words in this foundational book, *[The Principles of Psychology](http://books.google.com/books?id=9Pt9AAAAMAAJ&pg=PA310&lpg=PA310&source=bl&ots=wuj-VPAng2&sig=jz-mixf9W95xomj3LWQBNnYf7Zc&hl=en&sa=X&ei=xoghUJ3fAYPQ2wWV-ICQCQ&ved=0CEcQ6AEwAA" \l "v=onepage&q&f=false" \t "_blank)*.

James’s observation echoes a sentiment that is well known in psychology: a person’s achievements matter less than how that person subjectively perceives those achievements. For example, you might be thrilled over a 5% raise at work until you learn that your colleague down the hall earned a 10% raise. But is there ever a case when the individual with the 5% raise is happier with his or her outcome than the person with the 10% raise? Perhaps if Arthur only expected a 3% raise but received a 5% raise, while Emily expected a 15% raise but only received one worth 10%, then indeed Arthur would be more satisfied with his outcome, despite it being objectively lower than Emily’s outcome.

In the video above are the gold, silver, and bronze medalists at the medal ceremony for women’s moguls at the Vancouver 2010 Olympics. First, bronze medalist Shannon Bahrke, of the USA. Then, silver medalist Jennifer Heil of Canada. Finally, gold medalist Hannah Kearney, also of the USA.

In athletic competitions there are clear winners and losers. In the Olympics, the gold medalist won the competition; the silver medalist has a slightly lower achievement, and the bronze medalist a lower achievement still. One might expect that their happiness with their performance would mirror this order, with the gold medalist being happiest, followed by the silver medalists, and then the bronze. You might expect that Jennifer Heil, having won the silver medal, would be happier than Shannon Bahrke, so why does it appear as if Bahrke is so much more pleased with her bronze medal? Similarly, American gymnast McKayla Maroney (below), who took silver this year in London, looks positively displeased with her performance.

Psychologists Victoria Medvec and Thomas Gilovich of Cornell University, and Scott Madey of the University of Toledo think that this phenomenon can be explained by [counterfactual thinking](http://en.wikipedia.org/wiki/Counterfactual_thinking" \t "_blank). This means that people compare their objective achievements to what “might have been.”

The most obvious counterfactual thought for the silver medalist might be to focus on almost winning gold. She would focus on the difference between coming in first place, and any other outcome. The bronze medalist, however, might focus their counterfactual thoughts downward towards fourth place. She would focus on almost not winning a medal at all. The categorical difference, between being a medalist and not winning a medal, does not exist for the comparison between first and second place.

It is because of this incongruous comparison that the bronze medalist, who is objectively worse off, would be more pleased with herself, and happier with her achievement, than the silver medalist.

To scientifically investigate this question, the researchers took video footage of the 1992 summer Olympics in Barcelona, Spain. Specifically, they recorded the medal ceremonies and showed them to undergraduate students, as well as footage from the athletic competitions immediately following announcements of the winners. They asked them to rate the happiness displayed by each of the medalists on a 10-point scale, with 1 being “agony” and 10 being “ecstasy.”

On average, the silver medalists scored a 4.8, and the bronze medalists scored a 7.1 immediately following the announcement. Later in the day, at the medal ceremony, the silver medalists scored a 4.3 on the happiness scale, while the bronze medalists scored 5.7. Statistical analyses proved that both immediately after winning, as well as later at the medal ceremony, bronze medalists were visibly happier than the silver medalists.

In 2006, psychologist David Matsumoto of San Francisco State University, together with Bob Willingham of *The World of Judo* magazine teamed up to see if this pattern would hold up when considering facial expressions following judo matches at the 2004 summer Olympics in Athens. They collected data from eighty-four athletes and thirty-five countries at three different times: immediately after their matches, when they received the medal, and when they posed on the podium.

Altogether, they found that thirteen of the fourteen gold medal winners smiled immediately after they completed their winning match, while eighteen of the twenty-six bronze medalists smiled. However, none of the silver medalists smiled immediately after their match ended. More interestingly, the facial expression that were recorded among silver medal winners ranged from sadness (43%) to contempt (14%) to nothing (29%). This means that it wasn't just that the silver medal winners were less happy than gold medalists; instead, as Matsumoto and Willingham write, "those who displayed something displayed discrete, negative emotions."

When it came to the medal ceremony and podium pose, however, silver medalists were more likely to smile. Indeed, 96.4% of the athletes displayed some sort of smile at this time. However, careful analysis of smile types indicated that the smiles displayed by the silver medalists were less genuine and more forced on both occassions than those of the gold and bronze medalists. In particular, both gold and bronze winners were more likely to display [duchenne smiles](http://en.wikipedia.org/wiki/Smile" \l "Duchenne_smiling" \t "_blank), which scientists have described as particularly associated with positive emotions.

Taken together, the researchers concluded that "those who showed signs of genuinely enjoyable emotions at the end of the match were more likely to show those same signs of enjoyable emotions when they received the medal and posed on the podium. Conversely, those who did not display signs of enjoyable emotions at the end of the match were likely to not display such signs during the medal ceremonies, despite the fact that most athletes smiled."

There may, indeed, be times when less really is more.

**Medvec VH, Madey SF, & Gilovich T (1995). When less is more: counterfactual thinking and satisfaction among Olympic medalists. *Journal of personality and social psychology, 69*(4), 603-10 PMID:**[**7473022**](http://www.ncbi.nlm.nih.gov/pubmed/7473022)

**Matsumoto D, & Willingham B (2006). The thrill of victory and the agony of defeat: spontaneous expressions of medal winners of the 2004 Athens Olympic Games. *Journal of personality and social psychology, 91* (3), 568-81 PMID:**[**16938038**](http://www.ncbi.nlm.nih.gov/pubmed/16938038)

**Note:** This revised and expanded post is based upon an earlier one that was [originally posted](http://laist.com/2010/02/16/scientist_when_less_is_more.php) at LAist on February 16, 2010.