

## Psychology

# Our Unfolding Happiness

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### ABSTRACT

*Would you be happier without antibiotics, functional plumbing, and a car? What if you had never heard about these things in the first place? Might you be happier then?*



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Questions about happiness are a tricky subject. As Daniel Gilbert points out in his book *“Stumbling on happiness,”* “Few of us can accurately gauge how we will feel tomorrow or next week. That’s why when you go to the supermarket on an empty stomach, you’ll buy too much, and if you shop after a big meal, you’ll buy too little.” If we don’t even understand our own happiness, how can we be expected to understand the happiness of others?

One way to do this is to study the history of happiness. But how can you do this? The best way we know of, also noted by Daniel Gilbert, is to ask people. The UN’s World Happiness Report in cooperation with many nations has been doing this for quite a few years. This has come to be called Gross National Happiness, and some nations have been measuring it in various forms steadily since the 1970s. For example, [you can see here](#) that the proportion of survey respondents in the

Netherlands, France, and the United Kingdom claiming to be “very satisfied” with their lives has been rising since roughly the 1980s.

But what about before that? Can we see whether people were more or less happy before or after the World Wars? Obviously, we can’t go back and ask them. Not yet, anyway. But new methods developed by psychologists and computer scientists allow us to examine written text to reliably predict the emotional state of the author. This is called sentiment analysis, and it involves using words rated on scales of positivity and negativity. When one takes thousands of such rated words and applies them to thousands of words of written text, one can compute the overall positivity and negativity of the text. This, in turn, has been shown to correlate with the emotional attitude of the author.

In recent work, my co-authors (Eugenio Proto, Daniel Sgroi, and Chanuki Seresinhe) and I used this method to compute a measure of sentiment for four nations (Germany, the USA, Italy, and the UK). We then asked if our measurement correlated with the 'ground truth' survey measures noted above, taken from the Eurobarometer data. They did with a positive correlation of about 0.53, which is promising, if not ideal. Future work may improve that.

In the meantime, however, we asked if our National Valence Index, computed for each country separately, might also correlate with historical events, such as wars, the roaring 20s, and other economic indicators such as gross domestic product (GDP) and longevity. Things look about as one might expect here. Wars tend to reduce sentiment, dramatically, unless there is censorship (well known in WWII Germany). The Roaring 20's leap upwards and the British Winter of Discontent is a trough, mirrored fascinatingly by a similar bust in American sentiment.

Sentiment also tends to be quite resilient over time. People bounce back from wars and fall predictably from highs. German sentiment, especially since WWII, seems to have roughly flat-lined at a reasonably positive value, relative to their history.

Gross domestic product (GDP) is often assumed to be correlated with subjective wellbeing. The data on this is mixed, however. Several [recent studies](#) have

shown the opposite. And our data support a similar reticence. Though GDP has increased roughly across all the nations over the last 200 years, the national valence index fails to show a similar rise.

Indeed, longer, presumably healthier lives, are a good match for GDP. One extra year of life is worth about a 4.3% rise in GDP in happiness-equivalents. Though lifespan also has increased over the last 200 years. In the 1900s in the UK, the average lifespan was about 50. It is now around 80.

One goal of having a measure like this is to help policymakers see how their policies and other historical events (that might be prevented) influence the subjective wellbeing of their constituents. And since subjective wellbeing has also been shown to improve economic output, one may get double the bang for one's buck by attending to happiness over economic output.

Still, the question of what makes us happy is rather open. The lack of antibiotics is probably not what made the writer happier in the 1800s. Indeed, comparisons across time like this are rife with unlikely assumptions. The writers were not the same kind of people, for example. In our work, we deal with many of these kinds of problems by comparing across nations at the same time and doing this across many years. Though our study helps open the doors on the history of our happiness, our understanding of our happiness in the past, present, and future, is still unfolding.