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The Moral Mind

Moral framing is more than simply telling right from wrong. Moral narratives shape people's worldview, influence social dynamics and provide insight into society as a whole. Morality and moral narratives have long been the purview of religious leaders and philosophers, but more recently psychologists and communication scientists have turned their attention toward devising an empirical account of how people make moral judgments.

Last year, UC Santa Barbara's René Weber published a groundbreaking study that reexamines how we conduct research into moral intuitions and recommends a new way forward. In the same article he introduced a sophisticated software suite that demonstrates how moral theory can be investigated and applied to the processing of real-world narratives at a large scale. The paper has won the Best Article of the Year Award for 2018 from the journal Communication Methods and Measures and the Association for Education in Journalism and Mass Communication.

"All members of UC Santa Barbara's Media Neuroscience Lab are very honored and excited about this award and the recognition that comes with it," said Weber, a professor in the university's communication department and principal researcher at UC Santa Barbara's Media Neuroscience Lab.

His group collaborates with computer scientists and psychologists in this line of research. "We are an interdisciplinary campus. We are proud that UCSB holds interdisciplinarity in high regard," said Weber, who holds doctorates in both medicine (psychiatry/cognitive neuroscience) and the natural sciences (psychology).

Moral intuitions are a part of every society, but their specifics can differ between cultures and individuals. Upbringing, personality and life experiences are interconnected with an individual's inbuilt moral intuitions. However, social psychologists recognize five broad moral foundations that all humans share. These are issues dealing with

- - Care or Harm
- - Fairness or Cheating
- - Loyalty or Betrayal
- - Authority or Subversion
- - Purity or Desecration

According to Weber, these foundational categories are represented in varied systems of moral judgment and decision-making we see in the world. And different people may see the same issue through different lenses depending on which moral foundation they're most sensitive to.

"It's a little bit like language," he explained. "All humans have the capacity for language, but there are different languages with different words and grammar. Something similar applies to humans' moral judgment. All humans possess inborn moral intuitions that can be categorized along five broad categories, but then the environment and cultural context influence how these capacities become relevant," he said.

In order to study moral intuitions, researchers first have to distinguish between moral and non-moral content and behavior. For instance, a behavior or message might be unusual, but not inherently good or bad. Eating dessert before the main course may be judged as unusual and inappropriate, but not as inherently right or wrong.

Scientists then need to make sense of moral behaviors and messages they find. This is not at all a straightforward task. Each individual has different moral sensibilities that can change in different contexts. An individual's intentions and the outcome of actions also influence moral judgment. All these individual differences make it difficult to find agreement on how to assign specific behaviors and messages to the various moral foundations. Different reviewers, or coders as they're called, may assign different categories to the same content.

Past research tried to solve this complexity by training a group of “expert” coders. But Weber claimed this misses the point. Moral intuitions are just that: intuitions, deeply ingrained in human nature. Training coders encourages them to make choices consciously rather than tapping into their subconscious. In this light, too much training can actually be counterproductive, Weber said.

A New System

Out of this realization Weber and his lab developed MoNa, the Moral Narrative Analyzer, a system that combines computer algorithms, large-scale text mining and evaluations from a large, diverse group of humans to analyze real-world moral behaviors and messages. And it was this unique innovation, as well as their argument against the status quo, that earned the team the Best Article of the Year Award.

Their paper points out the folly of relying on just a couple of quickly trained coders to extract moral information, which has been the standard practice for years. “This, of course, poses the critical question of how valid this literature is,” Weber said, quickly pointing out that this corpus includes his own previous work.

Using MoNA, Weber can peer into the global zeitgeist in real time. The system can process content from up to 30,000 online news outlets every 30 minutes, sourced from the Global Database of Events, Language, and Tone, a Google and National Science Foundation-funded database that stores the world’s news and events every 15 minutes. MoNA filters this torrent into a stream of high-quality information from 1,000 to 1,500 sources. The system also allows specific analyses of moral framing for major regional and global events or for specific locations, organizations, and people.

MoNA combines the power of natural language processing and crowd-sourced moral coding in a single package. Natural language processing can scan a large number of messages for moral content and categorize it according to the five moral foundations. The program can run at super-human speed, provided the complexity of moral information and moral conflict is relatively low. The program uses statistics to gauge its confidence, and outsources the more challenging pieces to some 600 human crowd coders. These individuals process the tricky content and provide additional information via a crowd-coding task that Weber’s group has specifically designed and tested for this purpose.

Weber and his MoNA team, which includes communication graduate students Frederic Hopp and Jacob Fisher, are interested in understanding how people make sense of messages containing moral information and how moral conflict motivates them to action. The information MoNA provides illustrates how people are framing stories and events at different times and across different regions of the world. This offers the researchers unprecedented insight on group dynamics, popular sentiment and social movements.

And this knowledge lends itself to a diverse array of potential applications. MoNA promises to help scientists probe topics such as the effectiveness of moral messages in groups with different identities in ways they never could before. For instance, researchers already know that framing a topic as a moral issue can drastically change a debate. “Moralizing debates can make people pay more attention, take sides, makes people engage and sometimes act,” Weber said. “Sometimes even against their own individual interests,” he added.

This makes some sense because moral judgment and decision-making is a matter of both deliberation and intuition, but intuitions tend to come first. So when debates become moralized, people are at first less inclined to examine the issues rationally. Understanding how moral themes are entering public discourse could help media and policymakers steer conversations in more productive directions.

Weber received funding from UC Santa Barbara’s Institute for Collaborative Biotechnologies and the Army Research Lab for this work. The Army Research Lab is particularly excited about the information advantage MoNA could provide. Understanding the dynamics of events, and the moral framing of messages about these events, could aid in diplomacy and serve as an early warning system for conflict and unrest.

The team has even been approached by the film industry to use MoNA to analyze moral narratives and moral conflict in movies scripts. This could help us better understand the features of a compelling story and lead to innovations in film production.

“Many of our ongoing lab projects are extensions of this award-winning work,” Weber said. “This award motivates us to further refine MoNA and demonstrate the important influence of moral framing and moral conflict in narratives on real-world outcomes.”

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.