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### Championing a spirit of genuine inquiry to combat social fragmentation

Albert Einstein told stories using everyday objects and familiar concepts that challenged our most basic intuitions, ultimately changing the way we think about science and the universe. But in examining his contributions we are quickly led to several other great thinkers — particularly Gauss and Riemann — whose prior mathematical contributions in differential geometry and the theory of curved surfaced enabled Einstein to successfully prove general relativity after 10 years of conviction and effort. Einstein himself acknowledged the essentialness of their contributions, stating "the importance of Gauss for the development of modern physical theory and especially for the mathematical fundamentals of the theory of relativity is overwhelming indeed" (1).

It is common practice for scientists to seek knowledge from others, even those with whom they disagree. Yet in today's age of geopolitical fragmentation, the act of turning to someone else who doesn't share our perspectives and opinions has become increasingly rare, as evidenced by recent events like Brexit, the 2016 US Presidential Election, and the 2017 Turkish Referendum, among others. Our media diets shape our worldviews, but are largely a function of who we choose to befriend on Facebook and other social networks. As a result, we increasingly surround ourselves with people who share our beliefs (2), intensifying our filter bubbles (2) and —ironically — shrinking the pools of information from which we source our understanding of the immense world accessible at our fingertips (4).

We believe hope for a less polarized, more peaceful future lives in creating education ecosystems that prepare young people to face the world with intellectual humility, while still maintaining strong convictions of their own. Challenges abound in pursuing this objective. Intellectual humility entails an openness to learning from others, even when they do not support our personal beliefs. However, much like general relativity required a new mathematical frame, we believe education systems can help inspire both conviction and intellectual humility by reframing the purpose of education as cultivating a learner's joy in the process of searching for knowledge, rather than in her capacity to amass information in the form of unquestioned truths.

While there are no silver bullets, there are nudges to existing curricula and teaching practices that could help. For example, students who study the mathematical and computing sciences may benefit from periodically shifting their attention away from the technical aspects of these disciplines towards their ramifications on society — e.g. questions of technology and ethics, the use of mathematics and algorithms in designing social systems, etc. They may thereby discover that true scientific progress requires a commitment to probing and searching with no guarantee of finding tidy solutions. In fields like history and philosophy, encouraging teachers to augment discussions of influential ideas with

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stories about the people responsible for those ideas — including their processes of inquiry and personal histories — can help students better-understand the (often ambiguous and ill-defined) contexts within which these ideas were developed. This sort of nudge may, in turn, inspire students to reflect on and further refine their own processes of inquiry.

Amid a global resurgence of racism and intolerance, young people are at risk both of victimisation and of being manipulated into victimising others. While education can play a vital role in challenging this problem, evidence-based arguments alone are unlikely to be effective.

By drawing on modern communications techniques to "reframe" the discussion, we can tackle intolerance by tapping into commonly-held values, building empathy and a sense of shared identity.

Within both the traditional press and a profusion of new media, there has been a proliferation of stories demonising migrants, refugees, Muslims and other groups. Often such stories have involved systematic distortion or fabrication. While there is nothing new about the phenomenon of so-called "fake news", there is growing concern at the degree to which financial incentives - the need to drive "clicks" and boost newspaper sales at a time of declining print circulation - may be making the problem worse.

In the UK, experts have warned that hostile media coverage has fuelled a rise in hate crime. Young people have been among those experiencing verbal and physical abuse on the basis of their religious or ethnic identity - but others have also, tragically, been the perpetrators of such attacks.

Stop Funding Hate began as a small online campaign in August 2016, but has since reached an audience of millions. Our campaign videos, challenging the demonisation of minority groups within the UK media, have been shared widely shared through Facebook and Twitter, but have also been shown in schools and faith communities.

By speaking in a language that draws people together - emphasising friendship, neighbourliness, family, civility and community - we have sought to appeal to a broad audience that crosses religious and political divides. In drawing on well-established concepts within human rights - while seeking wherever possible to express these ideas in an everyday, accessible way - we have sought to ground our campaign in universal ethical values.

The public response to Stop Funding Hate reflects growing awareness of the role of established media outlets in fuelling division and intolerance. By equipping young people with a greater understanding of the factors that shape and create the news - both online and offline - educators can help to counter this manipulation and promote a more critical and engaged public debate.

#### References

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