

Neuroscientists must engage in the public debate



Neuroscientists may wish to remain above the fray. But, when policy-makers and judges are deciding on matters that could be informed by their research, neuroscientists must lend their voices to the discussion.

In this issue of *Nature Neuroscience*, a [Comment](#) from Salomons and Iannetti describes how research into the neural basis of human pain perception – including their own – was misrepresented by the State of Mississippi in the US Supreme Court case *Dobbs vs Jackson Women’s Health Organization*. The ruling in that case overturned the Constitutional right to abortion previously guaranteed by *Roe vs Wade* and enabled state governments in the US to ban abortion under all circumstances. Specifically, the Comment discusses how research into whether certain cortical regions are necessary for experiencing pain was distorted into an assertion that fetuses can experience pain before the cerebral cortex has developed. The Comment also delineates the scientific consensus that although fetuses can display behavioral responses indicative of nociception, they cannot experience pain in the way that adults do. It is worth noting that this Comment was peer reviewed by experts in human pain research, human prenatal cortical development, and bioethics.

Importantly, Salomons and Iannetti did not confine their communication on this matter to the pages of our journal, but rather engaged directly with the Court and with the broader public. Both were signatories, along with other experts in pain research and related professional societies, to an amicus brief presented to the Supreme Court in the *Dobbs* case explaining the scientific consensus that fetuses in the second trimester of pregnancy

cannot experience pain¹. Iannetti also spoke out on the matter in several news articles^{2,3}. Ultimately, though, the Court’s decision essentially ignored the information provided by the pain scientists⁴.

Still, this example illustrates the necessity for neuroscientists to share their informed opinions when their work is relevant to policy decisions. Numerous other examples exist of political (or politicized) issues that touch on neuroscience topics, including whether providing or denying gender-affirming hormone treatment to teens affects brain development, whether mental health status should affect one’s ability to access firearms, how COVID-19 prevention policies may affect brain health, and how research into cannabis use and the therapeutic potential of psychedelics should affect policies concerning controlled substances. To allow policies to be made regarding such issues without communicating relevant scientific information leaves the door open for ineffective or harmful outcomes.

The need for neuroscientists to engage in these discussions is especially strong in situations where there is an opportunity for pseudoscience and misinformation to become normalized and influence decision-making. However, attempting to counter misinformation can be fraught because it can risk further polarizing one’s audience. Helpfully, research on misinformation has led to evidence-based strategies for countering it effectively⁵, and professional societies offer guidance on how best to communicate with the public⁶. These dialogues among scientists, stakeholders, and policymakers are also facilitated by open science initiatives that increase access to research findings, including data-sharing and open access publishing.

Moreover, neuroscientists must speak confidently about matters that can be illuminated by their research and expertise, while acknowledging cases in which the scientific evidence

is incomplete or unsettled. All scientific inference comes with a degree of uncertainty, and this, too, must be explained. Scientists should also acknowledge when aspects of a policy matter may be beyond their scope. For example, in the case of abortion, neuroscientists can provide a clear answer to the question, “Can a fetus experience pain?” but answering the question, “Who has personhood?” requires philosophical, religious, and legal perspectives. Last, neuroscientists should acknowledge that their opinions are shaped not only by their professional knowledge but also by their various personal identities and experiences, such as their gender, cultural background, and political convictions. These intersecting identities should be communicated (in the appropriate venue) rather than obscured in the interest of seeming to be unbiased.

Nature Neuroscience is proud to be a platform for informed discourse among the global neuroscience community, and we look forward to publishing more pieces that touch on social and political issues in the future⁷. We also recognize that engagement with policy makers, courts, and the public is necessary to ensure the brightest future for our societies.

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