

Biopolitics: Science denialism transcends party differences

A study published last week in [PLOS ONE](#) attempts to better understand how the US public comes to form opinions and judgments about embryonic stem cell research, and what the process means for those communicating scientific information. The authors write in [The Scientist](#):

Even as conflict over human embryonic stem cell (hESC) research has largely subsided, controversies may resurface as such investigations move forward, and as political conditions change. High-profile debates at the national and local levels over synthetic biology, personal genomics, and various reproductive technologies may also emerge. Public discussion is likely to focus on a recurring set of questions that blur traditional partisan and ideological differences: Do scientific breakthroughs promote or undermine social progress? Is research being pursued too cautiously or too quickly? Do scientists respect or cross moral boundaries? Does research serve the public interest or private interests?

How the public answers those questions in relation to embryonic stem cell research has less to do with political party identification, ideology, religious identify, self-rated knowledge, or abortion views, the study found, and is more strongly correlated to to an individual's beliefs about science and society, the authors write. "Moreover, identifiable segments of the public differ substantially in how they perceive the social implications of science, and traditional political labels do not easily define these groups." By using nationally representative surveys collected between 2002 and 2010, the authors separated the public into four groups with the following qualities:

- **Scientific optimist:** Approximately 1/3 of Americans. Overwhelmingly supportive of scientific advances such as hESC research. Hold a strong belief in the promise of science and technology. On average: highly educated, financially well off, 50/50 gender split, disproportionately white. Split almost evenly by partisan identity, trended slightly more Democratic
- **Scientific Pessimists:** Approximately 1/4 of Americans. Most likely to oppose hESC research. Strong reservations about moral boundaries that scientists might cross, concerned science could create more problems. On average: lower educational attainment and income than “optimists” and trended more female and minority in background. Split almost evenly by partisan identity, trended slightly either moderate or conservative.
- **Conflicted:** Approximately 1/4 of Americans. More than 60 percent came to eventually favor hESC research between 2002 and 2010. Socially similar to pessimists but tended to be older. Appeared open to accepting the arguments of scientists and advocates who emphasized the benefits of research.
- **Disengaged:** Approximately 1/6 of Americans. Between November 2008 and May 2010, there was a 20-point shift in support for hESC among this group, from approximately 50 percent to 70 percent support. (This swing correlated with President Barack Obama winning the 2008 election, his decision in 2009 to expand funding for hESC research, and the subsequent decline in media attention to partisan conflict over the issue.) May be most susceptible to swings in opinion and relied on political messages and events.

When it comes to stem cell research, it's clear that many Americans don't fall clearly into the a “for” or “against” category. So what can scientists and those trying to communicate scientific studies do with this knowledge? They can “look beyond partisanship and ideology to deeper factors influencing judgement,” the authors write, and “broker respectful dialogue and debate about the social implications of science.”

Additional Resources:

- [Promise of “easy” stem cells comes under investigation](#), Genetic Literacy Project
- [The latest on rewriting genomes, humans' included](#), Genetic Literacy Project
- [Pointing to breakthrough, human stem cells used to create tiny new livers](#), Genetic Literacy Project