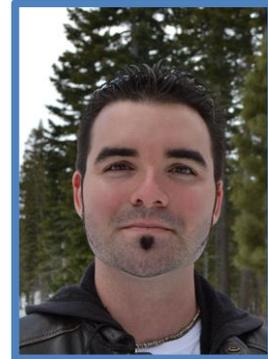


Public Engagement Case Study Neuroscientific diagnosis of the “zombie brain”

Name: Bradley Voytek

Title: Associate Professor

Affiliation: Department of Cognitive Science, Halıcıoğlu Data Science Institute and Neurosciences Graduate Program at the University of California, San Diego



Bradley Voytek

Category/type of activity: Social Media: A humorous blog post that turned into a popular science book and nearly 1 million YouTube views.

Web links related to activity:

- **Book: *Do Zombies Dream of Undead Sheep?***
<https://www.amazon.com/Zombies-Dream-Undead-Sheep-Neuroscientific/dp/0691157286>
- **TED-Ed Video: Diagnosing a zombie: Brain and body (Part one):**
<https://www.youtube.com/watch?v=dACNHRPdggc>
- **TED-Ed Video: Diagnosing a zombie: Brain and behavior (Part two):**
<https://www.youtube.com/watch?v=XNjvpiJTjY>

1. Goal for the activity:

Use a pop culture hook to help demystify neuroscience.

2. Audience for the activity:

Anyone interested in science, but who may not normally engage in the process of scientific research or scientific thinking.

3. Key messages for the activity:

Our key message was that zombies won't be writing the next great American novel or making any major scientific breakthroughs! In seriousness, our key messages were that science can be fun (and funny) and that even complicated scientific concepts can be made approachable.

4. How did you become involved in this activity?

While working toward our PhDs at Berkeley, my friend and zombie-brain co-conspirator Tim Verstynen and I bonded over, among other things, our mutual love of zombie films. We got to talking about what kinds of neural changes would have to occur to cause zombies to walk with a slow shuffle, to make them not eat each other, and so on. This eventually led us to write some blog posts in late 2010 detailing our zombie brain hypotheses. Things snowballed from there, leading to pretty broad media attention, a book deal, and two TED-Ed videos (see links above). This culminated in our book published by Princeton University Press in 2014, [*Do Zombies Dream of Undead Sheep?*](#), and nearly 1 million combined views on our two-part TED-Ed video series on the zombie brain.



5. Who were the key collaborators?

Timothy Verstynen, Associate Professor of Psychology at Carnegie Mellon University and the Center for the Neural Basis of Cognition at Carnegie Mellon University.

6. How did the activity invite and engage in dialogue with the audience?

Both Tim Verstynen and I were invited to give talks about our zombie brain “research” all over the United States, ranging from middle schools and universities to dive bars and the San Diego Comic-Con. At these events we got a lot of feedback by talking with people one-on-one, with comments such as “you accidentally made me start liking science stuff.”

7. How was the activity evaluated? How was feedback incorporated and any changes to the activity as a result?

We took a lot of constructive criticism from our friends about how to best give our presentations and how to write our book. We were both pretty significantly worried about the negative professional consequences of engaging in this kind of public science communication but, luckily, we received very little of that (at least directly to our faces).

8. How long did it take to plan and implement this activity?

We began talking about this in 2010, got our first media attention in late 2010 and 2011, and in 2012 were contacted by Princeton University Press about the book and by TED-Ed about the videos. The book was published in 2014. So, it slowly came together over the course of 3-4 years.

9. What resources did you need to implement this activity?

A lot of time and patience! And a willingness to accept honest criticism from friends and colleagues, and to put up with all the personal and professional pulls on our attention that distracted us from writing our book.

10. What lessons did you learn about public engagement as a result of this activity?

This experience taught me a lot about both *how* to better engage with the public, as well as how to deal with academic push-back about such engagement. From the public side, I learned to be more careful with what I say, and more mindful of my role in the conversation. For example, it’s very easy for a passing joke to come across as offensive, or potentially even frightening when it’s coming from a person of certain authority such as a PhD scientist. Explaining how knowing about the zombie brain can help us “prepare for the inevitable zombie apocalypse” is, on its face, a joke. However, for some, especially in conjunction with other public engagement activities such as the [CDC’s “Zombie Preparedness” guide](#), such statements can be worrisome.

From the academic side, I learned that there is a lot of *fear* among science popularizers of reprisal from other scientists. Thankfully the negative connotations with public science engagement appear to be waning and, at least in my specific case, the University of California, San Diego, has been very supportive, even citing this work in my recent tenure advancement.