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"A Beautiful Experiment"

Thank you all for coming and listening, and thank you especially to our student organizers and to Sandy for helping me with this speech.

My name is Andy Leifer. I am a tutor here. And I am also a scientist. A few years ago, I read about an especially beautiful experiment by a researcher at Cornell, named Brian Wansick, who was trying to understand how our minds and bodies determine when we have had enough to eat.

Brian Wansick invited people to his test restaurant for tomato soup. Each person was encouraged to eat as much soup as they wanted. Waiters had more at their ready refill their bowls. Half of the participants received regular bowls while the other half received bowls with a secret hidden tube in the bottom so that as they ate, their soup was slowly and imperceptibly re-filling. As a result, you would have to eat much more soup to empty the re-filling bowl than the regular bowl. (How is it that they didn't notice the tube, you ask? Well they were told that the restaurant was experimenting with new place settings and were asked not to move the dishes around.) In any event, after a tasty meal of soup, they found that the participants with automatically refilling bowls ate almost twice as much as those who ate from normal bowls. Yet when participants were asked to estimate how much they thought they ate, both groups reported about the same amount. Moreover, both groups felt similarly full after their meal. In other words, people ate twice as much food and didn't even realize it, only because their bowls didn't appear to be emptying as quickly! Wansick and his colleagues concluded that we rely heavily on visual cues to determine how much we eat and when to stop.

This is fascinating because it says something about ourselves. But I get even more excited about it because it's a brilliant example of experimental science!

This experiment has all the right ingredients: It addressed head on the question at hand, namely can visual cues effect our eating? The evidence is direct and easy to quantify: The group with refilling bowls ate more. The experiment had a built-in randomized control. And in general it was simple, elegant and straightforward even to the point of seeming obvious in retrospect. Yet the underlying question of how we choose how much to eat is neither simple nor obvious. This was a very clever design.

Moreover, it is this same cleverness of design that is a hallmark of some of the most celebrated experiments in history, like Isaac Newton's two-prism experiment that demonstrated the nature of light and color, or Harvard's own Meselsohn-Stahl experiment which demonstrated the nature of DNA. And it is this simplicity and elegence that I aspire to in my own scientific work.

So, as you can tell, I got really excited about this Brian Wansink guy. I went out and got his book, "Mindless Eating: Why we eat more than we think." And I learned that Wansink doesn't stop with soup. He goes on to show that we eat more popcorn if it is served in a bigger bowl. And that the identical brownies tastes better when they are served on fine china instead of napkins. He also shows that even seemingly minor environmental factors can have dramatic effects on our perception of food. In another clever experiment, two groups were given identical complimentary glasses of 2 buck chuck wine. One group was told that they were receiving California wine while the other was told they were receiving North Dakota wine. The group that received California wine not only claimed that their wine tasted better. They also claimed that their food tasted better. They also ended up eating more and sitting longer and enjoying their meal more.

These are great experimental designs that we as a university should really be teaching our students. But tragically you won't find Mindless Eating in Harvard Library. I know because when I wanted to read Mindless Eating, the library was the first place I checked. After buying my own copy, I did what I've done before when Harvard lacks a book that I think is truly important, I went online and filed a library book request. As you may know, Harvard is the third largest library in the United States. In the past they have readily purchased my recommendations. This time, however, I found the following reply in my Inbox.

"Dear Sir. Widener generally does not purchase self help guidebooks of the type you request below."

I was shocked. Harvard Library seemed to be implying that the Harvard community was too good for self-help!

I think this is a mistake.

Even Harvard can use a little self-help from time to time. And I think this strikes at a bigger issue.

It's very easy to sit in a laboratory or a library and say..." a book about why eat more than we think? Clearly that can't be science! That can't have academic merit!" But the truth is science and good scientific experimentation can be anywhere that someone takes the time and effort to carry them out. And it behooves us to keep an open mind and learn from exemplary work wherever we find if.

So if I ever get to teach a class on experimental methods, this will be the first reading I plan to assign. And in the meantime, if anyone wants to borrow my book, just find me after the talk. I recommend it.

Thanks!