

***JAMA* RESEARCH OPPORTUNITIES FOR  
EATING BEHAVIOR STUDIES**

Brian Wansink, Ph.D.

## **TABLE OF CONTENTS**

Overview	3
Which Research Questions Might Be Most Useful to Answer?	4

### **RESEARCH TOPICS**

Do Large Serving Bowls Make You to Eat More?	5
Do “Clean Plate” Kids Turn into Overeating Adults?	7
Can Brand Logos Encourage Kids to Eat Heathy Foods?	9
Do Hungry Shoppers Buy More or Just Buy Worse?	11
Does Preordering Lead to Healthier Lunches?	13
Do Different TV Shows Influence How You Eat?	15

### **APPENDICES**

Appendix A. JAMA Request to Cornell for Research Validation	17
Appendix B. Peer Review Form for Research Integrity Investigation Reports	20
Appendix C. Investigation into Possible Errors in Six JAMA Papers	22

# An Overview of JAMA Papers

Brian Wansink, PhD.

In 2018, six of my research articles in JAMA-related journals were retracted. These retractions offer some useful lessons to scholars, and they also offer some useful next steps to those who want to publish eating behavior research in medical journals or in the social sciences.

These six different papers offer some topic-related roadmaps that could be useful. First, they were originally of interest to journals in the Journal of the American Medical Association (JAMA) network, and they would probably be of interest to other journals in medicine, behavioral economics, marketing, nutrition, psychology, health, and consumer behavior. Second, they each show what a finished paper might look like. They show the positioning, relevant background research, methodological approach, and relevance to clinical practice or to everyday life.

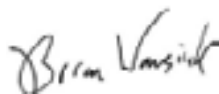
I think all of these topics are interesting and have every-day importance. This document provides a two-page template for each one that shows 1) An overview why it was done, 2) the abstract (or a summary if there was no abstract), 3) the reason it was retracted, 4) how it could be done differently, and 5) promising new research opportunities on the topic.

Table 1 provides an estimate of how much effort it might take to do studies on these topics, and Appendix B lays out other issues related to how these specific papers were investigated. I've also estimated what I think the practical impact each research project might have. These are my own subjective estimates, but you might find them a useful starting point if you're looking for a tie-breaker between two different topics.

I would strongly encourage anyone who's interested in publishing in these areas to closely follow the principles of open science. You can start by preregistering hypotheses and planned analyses, and following the other steps along the road to publication. Making specific hypotheses and testing them followed by open science principles will be the best next way forward on these topics.<sup>1</sup>

Academia can be a tremendously rewarding career both you and for the people who benefit from your research. Best wishes in moving topics like these forward, and best wishes on a great career.

Sincerely,



<sup>1</sup>A useful description of these principles can be found at Klein, O., Hardwicke, T. E., Aust, F., Breuer, J., Danielsson, H., Hofelich Mohr, A., ... Frank, M. C. (2018). A Practical guide for transparency in psychological science. *Collabra: Psychology*, 4 (1), 20.

**Table 1**  
**Which Research Questions Might Be Most Useful to Answer?**

Research Question	Original Publication	Year	Potential Practical Usefulness <sup>1</sup> (1=Lower; 5=Higher)	Potential Effort Required <sup>1</sup> (1=Easier; 5-Harder)	Page Number
Do Large Serving Bowls Make You to Eat More?	<i>JAMA</i>	2005	4	1	5
Do “Clean Plate” Kids Turn into Overeating Adults?	<i>Archives of Ped &amp; Adolescent Medicine</i>	2008	3	1	7
Can Brand Logos Encourage Kids to Eat Heathy Foods?	<i>Archives of Ped &amp; Adolescent Medicine</i>	2012	3	2	9
Do Hungry Shoppers Buy More or Just Buy Worse?	<i>JAMA Internal Medicine</i>	2013	4	1	11
Does Preordering Lead to Healthier Lunches?	<i>JAMA Pediatrics</i>	2013	5	4	13
Do Different TV Shows Influence How You Eat?	<i>JAMA Internal Medicine</i>	2014	2	3	15

<sup>1</sup>Estimates of potential usefulness and effort are subjective.

# DO LARGE SERVING BOWLS MAKE YOU TO EAT MORE?

Suppose you're at a Super Bowl party and you are surrounded by an endless supply of snacks. Will you serve and eat more if the snacks are in large bowls or would you eat more if the same volume of snacks were in twice as many bowls half that size? This has implications for dieters as well as for health conscious and thrifty hosts who don't want to encourage too much festive overeating.

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## The Original Findings

The original study was based on a field study involving MBA students at a Super Bowl party in a sports bar in Champaign, IL in 2000. It was published as a two-page research letter in JAMA.<sup>1</sup> Here's what was found:

Forty MBA students at a Super Bowl party in a bar were randomly led to serving tables of a snack mix that was either presented in 2 large serving bowls (4-liters total capacity) or 4 medium servings (also with 4-liters total capacity). Those serving from larger bowls unknowingly served and consumed about 53% more snack mix, and this was primarily driven by males.

The paper was retracted because JAMA asked Cornell to provide an independent evaluation of this and five other articles to determine whether the results are valid. In their retraction notice, JAMA wrote, “[Cornell’s] response states: ‘We regret that, because we do not have access to the original data [original coding sheets or surveys], we cannot assure you that the results of the studies are valid.’ Therefore, the 6 articles reporting the results of these studies that were published in JAMA Pediatrics, JAMA, and JAMA Internal Medicine, are hereby retracted”<sup>2</sup> (Appendix B).

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## Other Ways to Answer this Question

**1. Hypotheses and Extensions:** Let's say that people do eat more from bigger bowls. Do they know they are doing so? One extension of this would be to intercept people after they party was over and ask whether they believe the size of the serving bowl had any impact on how much they served and ate. Causal conversations with people after studies like this surprisingly seem to suggest they don't think the size of a bowl could influence how much they ate, and even when it's pointed out, they have alternative rationalizations why they might have eaten more than average (“I was hungry,” “I didn't eat lunch,” and so forth).

<sup>1</sup> Wansink, B; Cheney, MM (13 April 2005). “Super Bowls: serving bowl size and food consumption”. JAMA. 293 (14): 1727–8. doi:10.1001/jama.293.14.1727. PMID 15827310.

<sup>2</sup> <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2703492>

A second interesting extension of follow-up to this would be whether bowl size influences them more if they are in a bad mood or in a good mood. Major sporting events offer an opportunity to do this. Knowing which team a person is cheering for can be used to see if happy winners celebrate more when given big bowls, or whether unhappy losers drown their sorrows in big buckets.

**2. New Methodology Ideas:** This particular study was conducted in a noisy sports bar under realistic conditions. Other than being randomly assigned to a serving table and inconspicuously led to that table, everything else was natural. Another approach would have been to more tightly test this as a lab study than as a field study in a bar.

As a rough guideline, most of these field studies indicate that people serve and eat around 20% more from larger containers and plates. Seldom more than 30% and seldom less than 10%.

But scholars have also hypothesized that bowl and plate size effects are less strong (or even nonsignificant) when conducted in lab settings, and systematic meta studies have also shown that this effect is much stronger in the field than the lab. Yet what has been missing to date is a very explicit test of a field study versus lab study comparison. An excellent study of this would be useful in resolving some of the effect size differences in these studies.



We followed up this “Super Bowls” study with other ones at this same sports bar.



We did about eight of these studies in Jillian’s Sports Bar in Champaign, IL.

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## Conclusion

Bowl sizes and plate sizes have been a fertile ground for lots of useful studies that have led to new dinnerware lines, changes in hotel and restaurant chain buffet plates, and eating behavior changes among dieters. Things are now at a stage when it would be useful to learn what are the limitations and boundary conditions around using dinnerware to perceptually change how much is served. Knowing the point at which smaller and smaller dinnerware backfires or the circumstances when it does and doesn’t work will provide a new level of impact.

Additionally, there might be very practical situations where dishware sizes clashes with a perception of quality or value. It would be important to identify these because they are a different type of boundary condition. For instance, serving a 10-oz steak on a 10-inch plate might make it seem huge compared to when it is served on a 12-inch plate. But is this something a restaurant should do? That is, does it make the steak look like a better value, or does it make it look cheap? Answering these questions would have immediate implications.

# DO “CLEAN PLATE” KIDS TURN INTO OVEREATING ADULTS?

Kids can be really smart. That’s why some of our best ideas as parents back-fire. Take the Clean Plate Club, for example.

Some parents insist their kids clean their plate. Other parents are more relaxed about it. If a parent regularly insists their child clean their plate, will it alter the amount of food a child decides to serve themselves? Maybe they serve less of new foods because they don’t want to have to eat them if they don’t like them. Or maybe they serve themselves a lot more of the unhealthy and indulgent foods they love because they know that once they get on their plate, they’ll be able to eat them all.

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## The Original Findings

This was published in 2008 as a two-page letter in the Pediatric Forum of what is now JAMA Pediatrics.<sup>1</sup> It was based on a lab study with preschoolers. There’s no abstract to the paper, but here is what we found.

Sixty-three preschool children were asked to indicate how much of a sugared cereal they wanted scooped into their bowl (either 16- or 32-oz) for their morning snack. Children with larger bowls requested nearly twice as much cereal and the volume they took was correlated with their parent’s answer to the scaled question (1-9) such as “I tell my child to clean their plate.”

The paper was retracted because JAMA asked Cornell to provide an independent evaluation of this and five other articles to determine whether the results are valid. In their retraction notice, JAMA wrote, “[Cornell’s] response states: ‘We regret that, because we do not have access to the original data [original coding sheets or surveys], we cannot assure you that the results of the studies are valid.’ Therefore, the 6 articles reporting the results of these studies that were published in JAMA Pediatrics, JAMA, and JAMA Internal Medicine, are hereby retracted”<sup>2</sup> (Appendix B).

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## Other Ways to Answer this Question

- 1. Hypotheses and Extensions:** Although a lot of people think they are members of the Clean Plate Club, when this article was first published there wasn’t a lot of research on it. One set of questions that would be promising to explore

<sup>1</sup>Wansink, B; Payne, C; Werle, C (October 2008). “Consequences of belonging to the “clean plate club””. Archives of Pediatrics & Adolescent Medicine. 162 (10): 994–5. doi:10.1001/archpedi.162.10.994. PMID 18838655.

<sup>2</sup> <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2703492>

are those which would examine the long-term consequences forcing kids to clean their plate. That is, maybe they learn to take smaller portions of healthier foods and larger portions of desserts. Maybe they grown up to be a heavier adult. Maybe they grown up to be less adventurous eaters because they are afraid to try new foods for fear that they would have to finish all of them (just like they did as a child).

- 2. New Methodology Ideas:** Many of the basic questions asked above could be at least preliminarily examined by simply using surveys. It's not always that compelling, but in an area as under-researched as this, it will give some toeholds for subsequent researchers who want to examine it more causally.

To this end, there can be causal experiments done with children, and the one here represents a gateway into doing so. The idea would be to look for the behaviors that we think kids from Clean Your Plate households would demonstrate compared to those in normal households. After being able to determine what household a child was from, the study would examine how much new foods or how much of a favored food they served themselves and ate when their parents weren't around. A good place to do this research would be in a daycare setting.



An effective way to do food studies with preschoolers is to separate them from their friends but keep their friends within view.

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## Conclusion

The Clean Plate Club is something everyone knows about. Doing more research in this area would have a lot of appeal a lot of immediate applications. Looking at some of the long-term consequences would be great, but in the meantime, there's a lot of useful insights that could be examined immediately.



# CAN BRAND LOGOS ENCOURAGE KIDS TO EAT HEALTHY FOODS?

Brand names and logos are used to sell cookies and candy. Can they also be used to sell more fruit by making fruit seem more hip, interesting, or tasty? If so, instead of banning branded products or logos in school cafeterias, it might be better to redirect the branding and logos to the healthier products.

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## The Original Findings

This 2008 study was published as a two-page research note in what is now JAMA Pediatrics in 2012.<sup>1</sup> It involved a week-long study with Head Start preschoolers. There's no published abstract, but here is what was found:

The study involved 208 preschool children in Head Start afterschool programs (most of which met in elementary schools). Over the course of a week, children were presented the choice between apples or cookies that were either unbranded or branded (with an Elmo sticker) in different combinations on different days of the week. Having a branded Elmo sticker on an apple greatly increased the likelihood children would select it, but the same sticker had no impact on cookie selection.

This paper was retracted because “Following the notice of Retraction and Replacement, the funder of this study informed us of another important error. We had erroneously reported the age group as children ranging from 8 to 11 years old; however, the children were 3 to 5 years old...

“Given this additional substantial error in reporting the correct ages of the children and the inadequate oversight of the data collection and pervasive errors in the analyses and reporting, the editors have asked that we retract this article. We regret any confusion or inconvenience this has caused the readers and editors of the journal.”<sup>2</sup>

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## Other Ways to Answer this Question

- 1. Hypotheses and Extensions:** One of the reasons that branding helps increase fruit selection so much more than cookie selection is that most kids naturally love cookies – even without a brand. Therefore, there's not much higher their likelihood of selection can go. It's reached a ceiling.

From a nutrition or public health standpoint, one immediate set of studies that could be conducted would be to examine this with different ages of students (toddler, preschool, and elementary students) to see if this is

<sup>1</sup> Wansink, Brian; Just, David R.; Payne, Collin R. (1 October 2012). “Can Branding Improve School Lunches?”. *Archives of Pediatrics & Adolescent Medicine*. 166 (10): 1–2. doi:10.1001/archpediatrics.2012.999. PMID 22911396.

<sup>2</sup> <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2659568>

differentially effective at some ages than others. Also, it could be examined whether different types of stickers or logos (familiar vs. unfamiliar; colorful vs. less colorful) are more effective with some ages or genders than with others.

From a psychology standpoint, what would most interesting would be to better understand why we might expect results such as these. Seeing a brand – such as an Elmo logo – on an apple might make a child take it simply because it looks different or curious. But it might make someone take the apple because they think it might taste better than an unbranded apple. If taste expectations can bias real taste experiences, it might even end up being that seeing a brand sticker on a piece of fruit, not only leads more people to take the fruit, but it also makes them think it tastes better.

- 2. New Methodology Ideas:** This study used a within-subject design and although within-subject designs can control for a lot of factors, they also come with another host of problems such as reactivity. This can be especially concerning if the experiment seems too artificial or fake. An opposite approach to this would be to use a between-subject design and to rotate the four different conditions (apple x cookie; branded x unbranded) across these schools. Yet this seems like it would be way too much overkill to answer a fairly simple question. In addition, it potentially suffers from the noise of a bandwagon effect. A child may be more likely to take the same item his friend ahead of him took, regardless of what the food or branded condition was.

An alternative to either might be to rotate conditions within one school and to have children make their selection between the apple and the cookie alone as they came out of the lunch line (or during a break). On one day each week, the combination of choices could be rotated, and the spacing out would probably nullify reactance, but the context would still be very real. Setting up the study in this way would also allow to ask the child a couple quick questions after they selected the item.



This prestudy showed that even putting stickers in front of foods, such as in a buffet line or on a platter led kids to choose healthier foods.

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## Conclusion

Over the last few years there have been some promising steps in this direction of trying to brand fruits. McDonald's use of Cuties Mandarin Oranges is a one example of the promise that smart branding can have for fruit.

In order for this to become more widespread, we can try and imagine what type of research would be most useful in helping inform this trend:

- What ages and gender of kids are most influenced by branding?
- Do colorful but unfamiliar brands or images work just as well as familiar ones?
- Does branding make kids believe the branded food tastes better?

Some of these questions are the ones already noted above. We need to be mindful that the more realistically our studies are, the more they are likely to be compelling to the people making these decisions to brand healthy foods.

# DO HUNGRY SHOPPERS BUY MORE OR JUST BUY WORSE?

The hungrier you are the more food you buy, right? Maybe not. Being hungry might lead you to buy ready-to-eat foods that you can quickly and conveniently eat – like in the car on your way home. However, it might not lead you to buy more total food (such as foods that can't be eating quickly, like vegetables and meat). If true, the advice to dieters and fasters is not to avoid shopping when hungry so you'll buy less. Instead, it's to avoid shopping when hungry if you can't discipline yourself to buy better foods (the non-ready-to-eat foods).

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## The Original Findings<sup>1</sup>

This was published in 2013 as a three-page research letter, and there is no abstract. It was based on a lab study and a field survey conducted with shoppers after they completed their grocery store check-out. Here's a summary of the findings:

There was both a lab study and a shopping study. In the lab study, people who had been instructed to not eat 5 hours before the study chose more higher calorie snacks, but no more of the healthier snacks (than those in the control condition). Consistent with this, a shopping survey showed people shopping late in the afternoon (4-5 hours after last eating a meal) tended to buy a total basket that was less healthy than those shopping right after lunch.

The paper was retracted because JAMA asked Cornell to provide an independent evaluation of this and five other articles to determine whether the results are valid. In their retraction notice, JAMA wrote, “[Cornell’s]response states: ‘We regret that, because we do not have access to the original data [original coding sheets or surveys], we cannot assure you that the results of the studies are valid.’ Therefore, the 6 articles reporting the results of these studies that were published in JAMA Pediatrics, JAMA, and JAMA Internal Medicine, are hereby retracted”<sup>2</sup> (Appendix B).

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## Other Ways to Answer this Question

- 1. Hypotheses and Extensions:** This notion that hungry shoppers want to buy the tastiest calories they can quickly buy and eat is compelling. It doesn't seem like such a person would leisurely shop the aisles and price-compare frozen meat.

At this point, I think there are two big extensions that can be made. One is to combine the hunger and time element. If people shop differently when hungry, then people shopping just before lunch (11:00) should shop differently than those shopping just after lunch (1:00), and those shopping mid-

<sup>1</sup> Tal, A; Wansink, B (24 June 2013). “Fattening fasting: hungry grocery shoppers buy more calories, not more food”. JAMA Internal Medicine. 173 (12): 1146–8. doi:10.1001/jamainternmed.2013.650. PMID 23649173.

<sup>2</sup> <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2703492>

afternoons should shop better than those in the late afternoon. Now there are all sorts of other covariates to measure but using time as a surrogate for hunger will give a better process link and it has much broader implications for retailers and for informing health-minded consumers when to shop.

The second extension would be to predict the specific types of foods that are most prone to be purchased by a hungry shopper. Is it cookies, chips, and breakfast cereal, or is prepared foods, or is it candy at the checkout? These results may not be important for theorizing, but they are important as implications for dieters.

- 2. New Methodology Ideas:** We thought it was cool to have a lab study that showed that people didn't eat more of everything when they were hungry, they just ate more of what was easiest to eat – carbohydrate-packed snacks.

The best way to tackle this compellingly might be to forego any lab study and do a really great scanner data study in grocery stores. Taking multiple stores and analyzing shopping baskets content by time (11:00ish vs. 1:00ish or 2:00ish vs. 4:00ish) would be best. Then a field survey of shoppers could be done in one or two grocery stores as a manipulation check to confirm that their hunger corresponded to those time periods. In addition, some self-report process questions can help confirm whether they shopped differently than usual.

- 3. Publishing and Outreach Suggestions:** The results of this are of great interest to shoppers who want to eat healthier, but they are also of interest to retailers. A scanner data study (combined with a small survey of exiting shoppers) would make this a useful public health article or marketing article. Adding the real-world advice of what categories are most important to avoid when hungry would make this a useful article to lots of different people.



We also ran a food sampling study with hungry shoppers, but it made this paper too long and didn't add anything new.

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## Conclusion

Having some scanner data analysis prowess would make this a relatively easy hypothesis to examine by using shopping time as a surrogate for hunger. A short in-store survey for a second group of shoppers would take this from a useful effects article to a very useful and memorable recommendation.

# DOES PREORDERING LEAD TO HEALTHIER LUNCHES?

You might heroically plan on eating a healthy salad for lunch, but when noontime rolls around, the French fries will smell too good to pass up. If you had to pre-order your lunch when you first got to work, would you eat better? If so, work cafeterias and school cafeterias could offer a preordering option. This way they could help their employees or students eat healthier and less indulgent lunches.

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## The Original Findings<sup>1</sup>

The original field research was conducted in a public-school district in the Finger Lakes area of New York. It was published as a two-page research letter, and here's a summary of the results:

In the first two weeks of this four-week study, students ordered lunch entrees as they usually did. In the third week, they pre-ordered their lunch entree using a paper order form. Longitudinal sales data and intake measures (inferred through plate waste) showed healthier foods were selected about twice as often (29% vs. 15%) when students had to preorder their entrée.

The paper was retracted because JAMA asked Cornell to provide an independent evaluation of this and five other articles to determine whether the results are valid. In their retraction notice, JAMA wrote, “[Cornell’s] response states: ‘We regret that, because we do not have access to the original data [original coding sheets or surveys], we cannot assure you that the results of the studies are valid.’ Therefore, the 6 articles reporting the results of these studies that were published in JAMA Pediatrics, JAMA, and JAMA Internal Medicine, are hereby retracted”<sup>2</sup> (Appendix B).

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## Other Ways to Answer this Question

- 1. Hypotheses and Extensions:** This was a small pilot study that has sizable promise. Two useful extensions would be to a) generalize it to other populations (such as employees in cafeterias), and b) determine if this only works in the short run (like for the first couple weeks) or if it can be sustained past the first three months. Some of our research with other interventions has shown a decay rate of up to 40% over a three-month period unless small variations are made to keep it fresh.

<sup>1</sup> Hanks, AS; Just, DR; Wansink, B (July 2013). “Preordering school lunch encourages better food choices by children”. JAMA Pediatrics. 167 (7): 673–4. doi:10.1001/jamapediatrics.2013.82. PMID 23645188.

<sup>2</sup> <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2703492>

**2. New Methodology Ideas:** Using a before-after within-subject study would be one approach that eliminates some individual variation. However, it would also need a large control group to not run the risk that something else could influence the results (weather, midterm exams, other menu changes, and so on). One way to solve this problem this would be to split the group in two and reverse the order of the conditions in each group. That is, one group be a control-treatment group (no preordering during month1 but preordering during month2), and the other group be the treatment-control group (pre-ordering in month1 but no preordering in month2).

It would be great to show how preordering influences how many calories kids eat, and how it influences whether these calories are starch calories. This can be done on an individual level by using the Quarter-plate Method of measuring. Alternatively, if connecting a student's plate waste with his student ID number is too difficult, this can be recorded in the aggregate. At this stage, knowing if preordering leads to healthier meals is the primary message that would need to communicate to health-minded cafeterias. Answering the follow-up issue of who it influences most can be done with more precision in a follow-up study.

**3. Publishing and Outreach Suggestions:** A wide range of journals would find different aspects of this interesting in different ways. Here's two approaches: A) Publish a shorter "Effects" or "Outcome" article in a public health, nutrition, or medical journal, or B) Publish a longer "Process" paper – perhaps with a preceding lab study, and a follow-up study – in a consumer behavior, economics, psychology, or marketing journal. If this is as effective as these earlier studies suggest, I think publishing a shorter piece would get the word out and start getting these changes made in schools and cafeterias sooner rather than later.

The photos in this photo-based order form kept deviating too much from what was actually served, so we used a text-based order form instead.

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## Conclusion

This is a great research question and if the study's done well, it will have directly relevant implications for whatever is found. There are two keys to making this an influential paper. The first key is to do it in a real cafeteria that is really trying to help people eat healthier. Schools and company cafeterias are two examples, and a hospital cafeteria would also be great. The second key is to set up a pre-ordering intervention that is simple and scalable and not overly complicated or artificial. If simple pre-ordering system is shown to be effective – even if it's not 100% perfect – it is likely to make a much more compelling point.

# DO DIFFERENT TV SHOWS INFLUENCE HOW YOU EAT?

Eating while watching TV isn't highly recommended because it's believed to cause you to eat poorly. If this is indeed true, it could either be because something like TV is distracting or because the pacing and stimulation of it speeds up our eating. For instance, exciting shows with lots of cut scenes or noise might cause us to eat more because it's really stimulating, or it might cause us to eat less than a boring news show because we are more engrossed and distracted.

If a dieter or food-loving person absolutely believes they must, must, must eat while they watch TV, they might like to know which types of TV shows don't lead to regretful overeating.

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## The Original Findings<sup>1</sup>

This research was originally published in 2014 as a two-page research letter in JAMA Internal Medicine. It was based on a lab study conducted with undergraduates in Ithaca, NY. Here's a summary of the findings:

Ninety-four undergraduates were shown one of three types of programming: 1) An action movie (The Island), 2) a talk show (Charlie Rose), or 3) the same action movie with the sound turned off. People watching the action movie ate more calories than watching the talk show or the action movie with no volume. This difference was particularly dramatic with males.

The paper was retracted because JAMA asked Cornell to provide an independent evaluation of this and five other articles to determine whether the results are valid. In their retraction notice, JAMA wrote, “[Cornell’s] response states: ‘We regret that, because we do not have access to the original data [original coding sheets or surveys], we cannot assure you that the results of the studies are valid.’ Therefore, the 6 articles reporting the results of these studies that were published in JAMA Pediatrics, JAMA, and JAMA Internal Medicine, are hereby retracted”<sup>2</sup> (Appendix B).

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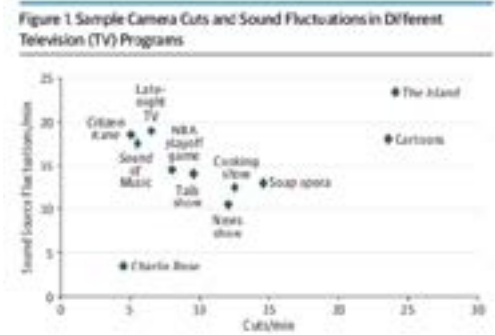
## Other Ways to Answer this Question

- 1. Hypotheses and Extensions:** There are lots of directions to explore how far this could be generalized and what types of foods are most susceptible to being overeaten. As an initial exploration of this, we did this study with small groups of people rather individually, and this raises a number of key extensions. These people had a number of snacks sitting in front of them, and there's a wide range of ways this could be varied. First, the size and gender composition of the groups could be varied, but it's not clear what would happen:

<sup>1</sup> Tal, A; Zuckerman, S; Wansink, B (November 2014). “Watch what you eat: action-related television content increases food intake”. JAMA Internal Medicine. 174 (11): 1842-3. doi:10.1001/jamainternmed.2014.4098. PMID 25179157.

<sup>2</sup> <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2703492>

- Larger groups may lead people to eat less because they are self-conscious, or they might lead people to eat more if they feel anonymous.
- A mixed gender group might lead women to eat less because they don't want to be seen as piggish, but it might lead guys to overeat to show they are insatiably macho.
- The study can also be conducted within subjects where people watch their own programming, and the programming can then be coded and categorizing based on scene cuts and volume fluctuations. The figure shows how this varies across a wide range of programming:



Second, a researcher could examine how the distance of the food influences how much is eaten. Although the general belief would be that food within arm's length will be eaten more frequently, we noticed in pilot studies that the farther a person had to reach for food, the more of it they took each time they served themselves. Also, food placed in front of where they are sitting might also be eaten more or less often than that on the side since it is more obvious to others that you are taking it.

Furthermore, a useful twist has to do the types of snacks offered. If watching certain types of TV programming leads people to not pay much attention to what or how much they eat, this might be a great way to encourage people to mindlessly eat the boring healthy foods they don't typically eat – like raw vegetables and fruit. This could be easily tested.

2. **New Methodology Ideas:** Many of the extensions noted above have different implications for who you recruit, and how you set the viewing environment up. To seem most natural, we arranged the furniture in a manner that was typical for fraternity and sorority TV rooms. This adds realism, but noise. Another way to set them up is to give everyone their own chair.



A segment from the movie, the Island, was compared to an interview on the Charlie Rose show

## Conclusion

Distracting dining is becoming the norm for many people. Preaching snacking abstinence probably won't work. Instead figuring out how to minimize the damage would be useful. An even better idea is to see if this can be used to turn around snacking in a way that encourages more people to eat healthier snacks instead. If people don't pay any attention to what they eat as they watch TV, see if anybody notices when you switch a bowl of baby carrots for their bowl of Cheetos.



# Appendix A.

## JAMA Request to Cornell for Research Validation



Howard Bauchner, MD  
Editor in Chief  
JAMA and The JAMA Network  
330 N. Wabash Ave., Suite 39300  
Chicago, IL 60611-5885  
[jamanetwork.com](http://jamanetwork.com)

April 13, 2018

[REDACTED]

Cornell University  
Ithaca, NY 14863

Dear [REDACTED]

We have received another allegation regarding research reported in an article coauthored by Brian Wansink, PhD, John S. Dyson Professor of Marketing, and Director of the Cornell University Food and Brand Lab:

Wansink B, Payne C, Werle C. Consequences of Belonging to the "Clean Plate Club". *Arch Pediatr Adolesc Med*. 2008;162(10):994-995.  
doi:10.1001/archpedi.162.10.994

The most recent allegation is attached. Please also see the latest critical assessment of the research conducted and reported by Dr. Wansink:

Lee SM. The inside story of how an ivy league food scientist turned shoddy data into viral studies. *BuzzFeed*. February 25, 2018.  
<https://www.buzzfeed.com/stephaniemlee/brian-wansink-cornell-p-hacking?>

Given these concerns as well as the number of retractions and corrections of articles coauthored by Dr Wansink, including one in *JAMA Pediatrics*, as of today we have issued Notices of Expression of Concern for the 6 other articles published in *JAMA*, *JAMA Pediatrics*, and *JAMA Internal Medicine* that include Dr Wansink as an author. As a reminder, we previously retracted an article from Dr Wansink after it had been corrected (retracted and replaced) and after we received assurance from him that the results of the corrected article were valid, only to discover soon thereafter, that the results of the corrected and replaced article were invalid. The citations below pertain to that retracted article.

Wansink B, Just DR, Payne CR. Notice of Retraction. Wansink B, Just DR, Payne CR. Can Branding Improve School Lunches? *Arch Pediatr Adolesc Med*. 2012;166(10):967-968.. *JAMA Pediatr*. 2017;171(12):1230.  
doi:10.1001/jamapediatrics.2017.4603

Wansink B, Just DR, Payne CR. Notice of Retraction and Replacement.  
Wansink B, Just DR, Payne CR. Can Branding Improve School Lunches? *Arch Pediatr Adolesc Med*. 2012;166(10):967-968.  
doi:10.1001/archpediatrics.2012.999. *JAMA Pediatr*. Published online September 21, 2017. doi:10.1001/jamapediatrics.2017.3136

Wansink B, Just DR, Payne CR. Can Branding Improve School Lunches?. *Arch Pediatr Adolesc Med*. 2012;166(10):967-968.  
doi:10.1001/archpediatrics.2012.999

The articles for which we have issued a Notice of Expression of Concern include:

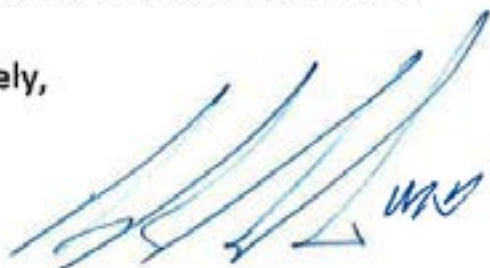
1. Wansink B, Cheney MM. Super Bowls: Serving Bowl Size and Food Consumption. *JAMA*. 2005;293(14):1723-1728. doi:10.1001/jama.293.14.1727
2. Wansink B, Tal A, Shimizu M. First Foods Most: After 18-Hour Fast, People Drawn to Starches First and Vegetables Last. *Arch Intern Med*. 2012;172(12):961-963. doi:10.1001/archinternmed.2012.1278
3. Tal A, Wansink B. Fattening Fasting: Hungry Grocery Shoppers Buy More Calories, Not More Food. *JAMA Intern Med*. 2013;173(12):1146-1148. doi:10.1001/jamainternmed.2013.650
4. Tal A, Zuckerman S, Wansink B. Watch What You Eat: Action-Related Television Content Increases Food Intake. *JAMA Intern Med*. 2014;174(11):1842-1843. doi:10.1001/jamainternmed.2014.4098
5. Wansink B, Payne C, Werle C. Consequences of Belonging to the "Clean Plate Club". *Arch Pediatr Adolesc Med*. 2008;162(10):994-995. doi:10.1001/archpedi.162.10.994
6. Hanks AS, Just DR, Wansink B. Preordering School Lunch Encourages Better Food Choices by Children. *JAMA Pediatr*. 2013;167(7):673-674. doi:10.1001/jamapediatrics.2013.82

These articles will be retracted on August 1, 2018, unless we receive assurances from Cornell University that the results of these studies are valid. We respectfully request Cornell University conduct a formal independent analysis of the studies reported in each of these articles. The formal investigation should provide an objective evaluation of the study results ensuring their validity. Please see an attached Checklist Research Integrity Investigation, which we hope you will find helpful.

Given the extent of the many retractions and corrections of articles authored by Dr Wansink, we have an obligation to the scientific community to clarify our concerns about the remaining articles published by Dr Wansink in *JAMA* and the *JAMA Network* journals.

Please confirm your receipt of this letter by April 20, 2018, along with an indication of your plan for a formal evaluation.

Sincerely,

A handwritten signature in blue ink, appearing to read 'H. Bauchner MD', with a stylized flourish at the end.

Howard Bauchner, MD  
Editor in Chief, *JAMA* and *JAMA Network*  
Senior Vice-President, American Medical Association

cc: Rita Redberg, MD, Editor in Chief, *JAMA Internal Medicine*; Dimitri Christakis, MD, EIC, *JAMA Pediatrics*; Joseph Thornton, JD, Editorial Counsel, *JAMA Network*; Annette Flanagan, Executive Managing Editor, *JAMA* and *JAMA Network*; Brian Wansink, PhD

# Appendix B.

## Peer Review Form for Research Integrity Investigation Reports



### Peer Review Form for Research Integrity Investigation Reports

Check one:	Yes <small>(circle page #)</small>	No	In Part	Cannot Assess
<b>General Scope</b>				
Does the report include an executive summary?				
Is the report clear and understandable?				
Are the allegation(s) clearly presented?				
Is the charge to the committee clearly described?				
Is the scope of the investigation sufficient to address the scientific integrity issues?				
<b>Investigative Committee</b>				
Is the committee appropriately constituted to carry out its charge?				
Are there any external members on the committee?				
Does the report state whether potential conflicts of interest for committee members were reviewed?				
Did the report indicate that standards of due process and confidentiality were followed?				
Did the respondent have an opportunity to identify conflicts?				
Do you have any concern that the investigative committee lacked access to necessary expertise or resources for a thorough investigation?				
<b>Evidence</b>				
Did the report indicate if evidence was properly sequestered and protected from tampering?				
Is there a description of the evidence considered in the investigation?				
Was the respondent offered an opportunity to respond?				
Did the committee consider and address whether important evidence was unavailable to them?				
If seemingly pertinent evidence was not reviewed, is that explained?				
Is there a need for further evidence or additional analysis?				
Is there a list of individuals who were interviewed?				
Were there others who should have been interviewed?				
Are there additional questions that should have been asked or evidence examined in the report to reach a supportable conclusion?				
<b>Conclusion</b>				
Does the report clearly state its findings?				
Does the report clearly state its conclusions?				



Check one:	Yes <small>(99.9999%)</small>	No	In Part	Cannot Assess
Does the evidence fully support the conclusions of the report?				
Does the investigation articulate and apply relevant institutional policies?				
Are the recommendations clear and supported by the report?				
Does the report describe and address requirements of external sponsors regulations and how the requirements are met?				

Reviewer feedback

In addition to checklist items listed above, authors benefit from receiving qualitative feedback from reviewers. Please comment as appropriate on the quality of the report in following areas:

1. Is the charge clearly stated?
2. Was the investigation well designed and executed?
3. Are the conclusions of the report justified by the contents of the report?
4. Other comments:

Please provide your overall assessment of this investigation report, taking into account all the elements included in the previous sections. Please check one:

- |  |   |
|--|---|
| <input type="checkbox"/> Report acceptable as is | <input type="checkbox"/> Major revisions and/or additional investigative actions needed |
| <input type="checkbox"/> Minor revisions needed  | <input type="checkbox"/> Report is not acceptable                                       |

## Appendix C. Cornell's Investigation into Possible Errors in Six JAMA Papers



Cornell University  
Office of the Vice Provost  
for Research

222 Day Hall  
Ithaca, New York 14853-2801  
t. 607.255.7200  
f. 607.255.9030  
www.research.cornell.edu/VPR

July 30, 2018

Howard Bauchner, MD  
Editor in Chief  
JAMA and JAMA Network  
330 N. Wabash Ave., Suite 39300  
Chicago, IL 60611-5885

Dear Dr. Bauchner,

Since receiving your April 13 letter to [REDACTED] we have examined the six articles for which you have issued a Notice of Expression of Concern. The articles, all coauthored by Brian Wansink, PhD, John S. Dyson Professor of Marketing, and Director of the Cornell University Food and Brand Lab, are

1. Wansink B, Cheney MM. Super Bowls: Serving Bowl Size and Food Consumption. *JAMA*. 2005 ;293(14): 1723-1728. doi: 10.1001/jama. 293.14.1727
2. Wansink B, Tal A, Shimizu M. First Foods Most: After 18-Hour Fast, People Drawn to Starches First and Vegetables Last. *Arch Intern Med*. 2012;172(12):961-963. doi:10.1001/archinternmed.2012.1278
3. Tal A, Wansink B. Fattening Fasting: Hungry Grocery Shoppers Buy More Calories, Not More Food. *JAMA Intern Med*. 2013;173(12):1146-1148. doi:10.1001/jamainternmed.2013.650
4. Tal A, Zuckerman S, Wansink B. Watch What You Eat: Action-Related Television Content Increases Food Intake. *JAMA Intern Med*. 2014;174(11):1842-1843. doi: 10.1001/jamainternmed.2014.4098
5. Wansink B, Payne C, Werle C. Consequences of Belonging to the "Clean Plate Club". *Arch Pediatr Adolesc Med*. 2008;162(10):994-995. doi: 10.1001/archpedi.162.10.994
6. Hanks AS, Just DR, Wansink B. Preordering School Lunch Encourages Better Food Choices by Children. *JAMA Pediatr*. 2013;167(7):673-674. doi: 10.1001/jamapediatrics.2013.82

evaluate the integrity and processes followed to produce the articles in question. We were especially interested in research records and work papers that would illuminate the experimental design and the specific hypotheses intended to be tested and the original raw data collected for the studies reported in the articles. Professor Wansink provided some of the data and information requested. However, Professor Wansink has confirmed that in all cases, the original data no longer exist, and the study methodology was as described in the papers, with no further documentation available.

Attached, please find the summary table of information that Professor Wansink has provided related to each of the papers. Also note that not even electronic data is available for paper number 5, the "Clean Plate Club".

In your April 13 letter, you stated "These articles will be retracted on August 1, 2018, unless we receive assurances from Cornell University that the results of these studies are valid." We regret that, because we do not have access to the original data, we *cannot* assure you that the results of the studies are valid. We will be happy to share the electronic files which we have received in lieu of raw data, but as noted, these files lack any means of assuring fidelity to the raw data.

Our review of the papers in question raises any number of issues that we would generally have anticipated to be addressed in the journal's original peer review processes. In case you would like to conduct additional peer review prior to making the journal's final decision on retraction, we offer the following general observations from our review of these papers.

1. The authors describe clearly the specific statistical tests they apply and which data points, if any, are ignored in the text of the papers in question. This information was available to the original peer reviewers in the same way it is available to us.
2. Strongly stated conclusions are drawn from finding significant p values without addressing the large variances also found in the data or the very important technical point that small p values support rejection of a specific null hypothesis only when the experiment is designed narrowly to test that hypothesis. In other words, a question of "p hacking" could arise in the mind of any reader with reasonable knowledge of statistical methods.
3. Alternative hypotheses, or design features that might rule out alternatives, are generally missing while broad conclusions are drawn. For example, in one paper (paper number 4 "Watch what you eat"), the authors caution readers that alternatives "should be examined as contributing causes in future research." However, they none-the-less state "When counseling patients physicians should stress the dangers of overeating while watching TV." Whether such clinical advice was warranted based on the data presented is certainly open to question, but this was evident on the face of the paper at the time it was accepted for publication.
4. The work described in the papers seems appropriate to categorize as preliminary exploratory investigations. Taking them as such reduces the importance of comment 3. However, our review suggests that the authors draw more strongly worded conclusions

than seems warranted by the data and analysis presented. This can, perhaps inadvertently, cause readers to base actions on the results that might be better reserved until more detailed confirmation has been achieved. Again, such an observation or concern would have been possible at the time the papers were originally evaluated for publication.

We hope these comments are useful to you and we would be happy to provide all the materials submitted by Professor Wansink should you decide that additional peer review is warranted at this time rather than relying on our findings that raw data is not available.

Yours sincerely,

A large black rectangular redaction box covering the signature of the sender.

Special Projects Associate,  
Office of the Vice Provost for Research

Cc: Professor Emmanuel Giannelis, Vice Provost for Research, Professor Charles Van Loan,  
Dean of Faculty, Professor Brian Wansink, John S. Dyson Professor of Marketing



Table of Information Received Concerning the Questioned Papers				
Paper	Requested Information			
	Raw data sets, electronic data and documentation of analysis	Statistical software or other program output files	Study Methodology	Additional work papers
Paper 1) Wansink & Cheney, JAMA. 2005;	Electronic copies of data and script files showing the R statistical analysis.	Output files showing the results of statistical calculation performed in R	Authors' statement: Procedure and methodology as described in article.	Work paper in the form of a response to a statistical reviewer
Paper 2) Wansink, Tal & Shimizu, Arch Intern Med. 2012;	Excel file containing data. SAS script file showing calculations done.	SAS output as a word document.	Authors' statement: Procedure and methodology as described in article.	None.
paper 3) Tal & Wansink, JAMA Intern Med. 2013;	Excel files containing data. SAS files containing data and calculations.	HTML files showing SAS calculation output.	Authors' statement: Procedure and methodology as described in article.	None.
Paper 4) Tal Zuckerman & Wansink< JAMA Intern Med. 2014	Excel file containing data and brief annotations explaining the variable names. SAS script file showing calculations done.	SAS output as an htm file.	Authors' statement: Procedure and methodology as described in article.	None.
Paper 5) Wansink, Payne & Werle, Arch Pediatr Adolesc Med. 2008;	Electronic data not available.	None	Authors' statement: Procedure and methodology as described in article.	None
Paper 6) Hanks, Just & Wansink, JAMA Pediatr. 2013;	Electronic copies of data and STATA analysis script	None	Authors' statement: Procedure and methodology as described in article.	None