Finding the Findings Behind the News

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In this article I discuss the very real challenge of trying to assess research findings as presented in the popular press. The popular news media, be it television, print, or the web, abounds with interesting and titillating "findings" from studies done all over the world. When you read or pay close attention to the research as it is presented in the news, it is often hard to tell what the researchers actually did, which makes it hard for us, as consumers of statistical information, to evaluate their research design and decide for ourselves whether or not we accept their findings. Below I offer two things: first, a list of questions that, if you can satisfactorily answer, will allow you to evaluate almost any kind of research; and second, some suggestions on how to go about answering those questions starting with something as flimsy as a brief newspaper article or web headline.

Assessing Research Findings

In my efforts to be a good consumer of research (quantitative or otherwise), I always try to answer five questions whenever I seriously consider a piece of scholarship. These five questions are directly derivative of Maurice Zeitlin's (2000) "four questions," which I first encountered during my graduate study in the UCLA Department of Sociology. If you can answer these five questions, then chances are you have carefully read and understood an article or research presentation, have a good assessment of it, and are ready to talk or write about it.

1) *What is the research question?*
All research is trying to answer some question. Good presentations make clear what the question is within the first two paragraphs. Media reports often skip the question and go straight to the findings that the reporter finds interesting, often divorced from the researcher's original line of inquiry. Knowing what the actual central research question was is a big step toward understanding the research.

2) *What is the originating question?*
Where did this line of inquiry come from? Is there some social significance to the question? A problem to be solved? A policy to be evaluated or advocated? Is there a theoretical model being tested, or is it a question that is the logical next step in an ongoing strand of research? Understanding what motivates the research in the broadest possible way may help you make sense of things that might otherwise seem odd about the work or its findings, and may also help you maintain an appropriate skepticism if the research is clearly part of some kind of political or business "agenda."

Note that the *researcher's* originating question is the reason the *researcher* undertook the research, which may have absolutely nothing to do with why some *reporter* chose to write an article about that researcher's findings. While it is usually pretty easy to figure out why a reporter chose a topic (it is interesting to his audience and might help sell papers), it is often much more difficult (and more valuable) to figure out what a researcher's originating question was.

3) *What is their answer?*
In a good presentation, the answer follows the question. Equally frequently, the answer will be fairly clear, and the question can be inferred from it. This can be rephrased as "what did they actually find?"

4) *What evidence do they offer to support their answer?*
This is pretty self explanatory, and is where "the rubber meets the road," so to speak. Here is where all the methodological information you've learned gets tested out. What was their study design? Their

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method of data collection? Their population? Their sample? Did they effectively control for confounding factors? Note that this general question (like all of these questions) is not constrained by disciplinary boundaries. This is an equally valid question to ask of the results of a clinical trial or an historical argument; "evidence" is defined differently in different disciplines, but still needs to be reflected on in all of them.

5) *Do you accept that evidence?*
This final question is an invitation to think, evaluate, make a judgment, and form an opinion. Based on the evidence you have just enumerated (and not based on a general sense that published research must be correct), do you accept their answer?

I find that these five questions give a great foundation from which to begin talking or thinking about a finding or set of findings. Unfortunately, virtually no news article contains enough information to satisfactorily answer the five questions. With the five questions as a "gold standard," what can be done?

Hunting Down the Answers

The answer is simple: the execution, less so. In order to find the answers to the five questions you need to track them down. The news article by itself likely just has tantalizing clues as to what the answers are, but does not provide sufficient detail to answer that fifth question, "Do you accept that evidence?" To answer those questions, you will need to go beyond the newspaper article. Tracking down and evaluating the source is a skill, and a skill worth having. Fortunately, in this, the information age, it is a considerably less daunting task than it once was. If you can identify the researchers and their institute, organization, or agency, you can find their web page, see their press release, and, more often than not, view the full text of their report. While research reports often run over 100 pages, after developing some skill at evaluating a table of contents, it is remarkable how few of those 100+ pages you actually have to look at in order to answer the five questions. Here I hope to demonstrate the process with a single example. This demonstration will not provide you with a recipe for tracking down five answers for every news presentation, but it should give you some idea of how to try to go about it, and about an idea about how much effort is likely to be required.

An Example From My Own Reading

In this section, I describe the general process of tracking down research in the context of a specific example. While I use a specific (and reasonably interesting) article from my own reading as an example, this general approach will work on almost any news article reporting research findings.

Step 1: The original article

Articles discussing research results often present some core claim or finding without any of the information necessary to substantiate that claim or finding. Fortunately, they also usually present *whose* finding it is. This makes it possible to get more information, but before moving on, it is useful to spend some time puzzling over the newspaper article itself to see what can be learned. Trying to answer the five questions just from a summary of findings in a newspaper can be frustrating, but can be an interesting exercise. The five questions take for granted that you know who is asking the research question. However, in a newspaper article, there can be two lines of inquiry. The first is the one we want, the researchers who actually did the study. The second is the reporter (and the newspaper they work for). What about these findings is newsworthy? Does the newspaper article present the findings the researchers thought were most important, or the ones the reporter thought would be most interesting to his/her audience? Newspapers usually have different originating questions than the ones that actually drove the research, and may disagree with the researchers about what the central question was. This can make making sense of the answers, to the extent that they are given, potentially problematic.

The article I want to talk about is one that came across my Yahoo! news headlines on the Reuters wire on February 26, 2002: "Teens drink quarter of all alcohol consumed in US." I had been talking about binge drinking among college students in one of my classes, so I printed the article out and filed it for later examination, without really reading it. The next day (the 27th) I saw the same piece of research being reported both in the *Wall Street Journal* and in the *UCLA Daily Bruin*. I captured both of these, as I like to show students how different media write entirely different articles based on the same released findings. At this point I actually read the articles, and was intrigued to find a controversy right in the article! The reported study, conducted by a team of researchers at the National Center on Addiction and Substance Abuse at Columbia University had reported that 25% of all alcoholic beverages were consumed by teens, but the Distilled Spirits Council disputed the findings and claimed that, due to a methodological flaw, the correct percentage was something like 11-12%. This controversy demanded further attention. Who was right? Any time you want to know more than the news article tells you, you are going to have to look beyond it. Fortunately, that isn't that hard.

Examining all three articles together, I noticed that the same facts were reported differently in each. I made a list of core claims and information about the study as presented in the news pieces so I would be able to proceed. I learned that the National Center on Addiction

and Substance Abuse at Columbia University was the source of the report, and that the most publicized claim was that 25% of all alcoholic beverages consumed in the U.S. were consumed by teens. I was unable to tell, however, if that claim was *the* answer to the central question of the report, or if it was just *an* answer to a question asked in the report, seized upon by the press and opposed by the liquor industry claim of 11 or 12%.

Step 2: Going to the source

Once as much information (and as many questions as possible) have been gathered from the newspaper article, it is time to dig: Take the name of the center, organization, or study group (in our example "National Center on Addiction and Substance Abuse at Columbia University") and type it into your favorite internet search engine. You will usually find a link to their homepage. The National Center on Addiction and Substance Abuse homepage is at *www.casacolumbia.org/*. On the front of the homepage, you will likely find many potentially useful items. Generally, an organization will have something like an "about us" link that provides the background for the organization, information that may help explain their motives and define their originating questions. Also on the front page there will usually be something like "what's new" or "recent releases" or something that will have a link to the information you want. It may, however, be buried in "press releases" or "publications." If you don't see what you want immediately, try one of those.

Entering the url above took me to the National Center on Addiction and Substance Abuse homepage. Right on their main page there was a link to CASA REPORT ON UNDERAGE DRINKING (which is, as of this writing, now under the "Newsroom" link). Since the center's name told me everything I really needed to know about their motives and reason for being, I followed that link right away. The link brought me to the press release.

Usually there will be a link to the relevant press release somewhere on an organization's main page. You can see pretty easily how everything that was mentioned in the news came straight from the press release. It is noteworthy when there is much more information in the press release than was in the newspaper, which shows that the news reporters were pretty selective about what they chose to report. Usually, based on the press report, you can answer questions 1, 2 and 3 of the five questions, deducing the originating questions, the central questions, and the answers. Maybe you can make a start on question 4, about evidence, but usually you only get vague methodological information that does not tell you enough about the sample design or the data collection to really assess the evidence.

On the CASA press release, I found all kinds of interesting information, including the somewhat quizzical information that their survey was a random sample of 900 adults (how do they know anything about teen drinking from adults?) *and* that they re-analyzed existing data from five other surveys (Ah-ha! some of those must be about teens). I found quite a few interesting claims about the drinking habits of children, a major section called "A CASA Checklist for Parents" and another called "Recommendations for Policy Makers, Educators and Prevention Experts." Just these headings, without actually looking at what's under them, gave me some clear insight into what the goals of this report are – to encourage policy that decreases potentially harmful alcohol use among teens. Interestingly enough, the highly contentious "25% of all drinks go to teens" claim, that headlines the newspapers, is hidden.

Normally after examining the press release I would be ready to go to the report itself to answer the last two of the five questions. There is usually a link to the full report or something similar. In this case, however, I had the "25% of drinks consumed by teens" controversy in the forefront of my mind. I saw at the bottom of the press release a link to the full report and another link to CASA's statement on the release of the report. Since I knew the report itself would be large and potentially difficult to pull good information out of, I decided to give the latter a try first. In this separate statement they admit that the 25% figure is that 25% of the *drinks consumed by their sample* were consumed by teens, but the study those numbers are based on has a teen oversample, and if you weight the sample (as you must) you end up with a figure closer to 11 or 12%. So, the liquor industry was right! The 25% claim is totally bogus. Did that keep it off the Reuters wire? No. Did I know that it was a false claim until I went to the trouble of looking it up? No.

Step 3: Examining the report

Now, in my example, we've already reached the climax. Since they debunked their own claim (and it wasn't that important of a claim to them anyway), we may not feel compelled to examine their evidence. However, in more conventional explorations of findings, you would still be wondering: what evidence have they got? Is this a well executed and designed study, or not? Now is when we take the plunge and click on the report.

When I did this, I saw that the report is over 100 pages (152 printed pages in the CASA report) and it is in hypertext .pdf format (some .pdf documents are fully searchable and often indexed as well; others are just images and can only be searched visually). Fortunately, I only really needed about five of those 152 page, and the report writers made it convenient for me to find them. The first page is the title page, followed by some acknowledgements, neither of which is useful to us. Then, finally, the first treasure: the table of contents. The table of contents will tell us where to look for what we want to know. Now, even though this is the roadmap

to what we want, it is still rather daunting. The table of contents usually fills two or three pages. Most of it is stuff you don't care about, or, at least, don't care about at this phase. Generally there are two things I look for: the abstract or executive summary (useful if you want a good quick summary of what they think is important in their findings), and an appendix about methods. In the CASA report, sure enough, there is Appendix C – Survey Methodology, beginning on page 109. Quickly scrolling down to that, I found that it details, in a wholly adequate way, how they conducted their survey of the 900 adults. At that point I saw and accepted their evidence for claims based on adult attitudes. What about the 25% cum 12% claims? How can I evaluate those data? Well, looking back at the table of contents, I also saw Appendix A – Survey Descriptions. Scrolling to that, I found that I had found what I was looking for: a detailed description of the other studies CASA pooled for their report, and the organizations that conducted them. If I were still curious, I had at that point identified other organizations whose homepages I could visit, and repeat the process.

Step 4: Conclusions and take-away

It took me less than 10 minutes to track down everything I needed to answer the five questions. I solved my riddle, got adequate five questions answers, and all with a few mouse clicks. I believe that you could do this too. I suspect your internet skills are better than mine, based solely on generational advantage. I've just described how these things are generally organized in terms of the agency or organization web page, the press release, and the actual report. All that is left is for you to get out there and start asking, and answering, those five questions.

The next time you hear or see a news agency report research findings that are amazing, interesting, or incredible, don't just take their word for it or remain uncertain. Follow it up and find the findings for yourself!

References

Daily Bruin Wire Service (2002), "Underage Drinking an American Epidemic," *Daily Bruin*, 2/27/02.

Soares, C. (2002), "Teens drink quarter of all alcohol consumed in US," Washington: Reuters, 2/26/02

Wall Street Journal Staff Reporter (2002), "Underage Drinking Study Has Liquor Industry Riled," *Wall Street Journal,* 2/27/02.

Zeitlin, M. (2000), "The Four Questions Elaborated." Los Angeles: University of California.

Web Resources

Here are some of the websites visited in my search. Unfortunately, the articles on the news websites are no longer available.

National Center on Addition and Substance Abuse: *http://www.casacolumbia.org*

CASA Report on Underage Drinking: *http://www.casacolumbia.org/newsletter1457/newsletter_show.htm?doc_id=103334*

CASA Statement on the release of the report:

http://www.casacolumbia.org/newsletter1457/newsletter_show.htm?doc_id=103428

Teen Tipplers: America's Underage Drinking Epidemic (full report): *http://www.casacolumbia.org/user_doc/Underage1.pdf*