FRAMING ACADEMIC SOURCES IN THE UNITED STATES HEALTH CARE DEBATES 1993 AND 2009

by

Ryan Elias

B.A., The University of British Columbia, 2005

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Abstract

Academic sources are among the most potent sources a journalist can bring to bear on a subject, carrying auras of both authority and objectivity. Yet as serious flaws in the media's coverage of issues like climate change and the health consequences of cigarettes show, they are not always well used. This project is based in the belief that who sources are and how they are portrayed to the public is of at least equal significance to the content of their quotations. It will thus examine the framing of academic sources, the types of information used to explain to readers why a scholar was quoted in a news article. In examining these techniques, it concludes that academia's internal system of validation, peer review, was effectively never taken advantage of in *New York Times* coverage of health care reform, an extremely high-stakes political topic, during its uptake in the Clinton and Obama administrations. Over the approximately year-long period when health care was at the forefront of the news in 1993-1994 and 2009-2010, academics were framed with their institutional affiliations and broad areas of study, but not by way of their areas of academic specialization or peer-reviewed research on the topics of discussion. As a consequence, it seems likely that readers of the *New York Times* did not have any reliable metric by which to judge the credibility of academics quoted in the paper on a topic of supreme national interest.

Table of Contents

List of Tables

Introduction

At the 2010 Jack Webster Journalism Award ceremony in Vancouver, B.C., keynote speaker and Canadian war correspondent Adrienne Arsenault said that she felt like she succeeds as a journalist when her audience invests emotionally in the conflicts she covers.

This came as a bit of a shock to me.

We spend a lot of time in the study of media bloviating over definitions. What is journalism? What is its purpose? In a world of freelancers and bloggers and commentators, who, then, is a journalist? These are difficult questions, not because we don't know journalism when we see it, but because it is not exactly easy to come up with a definition broad enough to include everyone whom we feel intuitively belongs, while still managing to exclude those we feel do not.

In an essay I wrote for a media ethics course in February of 2011, I strongly criticized Bill Kovach and Tom Rosenstiel for the following phrase, which is prominent in the introduction to their book on media ethics: "The primary purpose of journalism is to provide citizens with the information they need to be free and self-governing" (2007, 12).

This is a nice thought, I wrote, but I don't feel it to be very fair to sports reporters -- I don't place an inordinate amount of value in what they do, but I'll defend to the death their right to call themselves journalists. Same goes for food writers, gossip columnists, and paparazzi. I suppose that means that I fall on the expansive side of the journalism-definition debate.

But here is Adrienne Arsenault, undoubtedly one of Canada's media stars, saying that for her the point of journalism is to make people care about wars in countries they'll never visit. That certainly doesn't include sports writers either, but I really dig it. What gives? Am I just a hypocrite?

Well, maybe. But the point, which shocked me then and seems incredibly obvious now, is that journalism is complicated and can serve a variety of purposes. There might be one big, articulable idea out there that covers all of them, but there doesn't need to be, and it might not even matter either way. A corollary to this is that working journalists don't necessarily need to know the answers to the big questions to do their jobs ethically, effectively and with purpose. Indeed, when considering topics of research in the field of media, it seems clear that the more specialized the question, the more likely it is to be applicable to real journalistic work.

We'll come back to this. But let's shift topics for a bit to the question of sources.

Journalists quote sources when producing news. It is a relationship so basic as to defy notice, but like most elements of an enterprise as epistemologically complex as reporting, closer scrutiny yields a wealth of complexity.

I got to thinking about the relationship between journalists and sources in the wake of “Message Machine,” a 2008 article by David Barstow in the *New York Times*. Barstow wrote about a Pentagon program that briefed retired military officers on the administration’s policies and plans; those officers would then appear regularly on radio and television news programs as “military analysts.” The result was an effective dissemination of the Pentagon’s media messages into the public conversation on the wars in Iraq and Afghanistan, but through the mouths of ostensibly neutral commentators. Many of the analysts partook because of “ideological and military allegiances,” and some had ties to defence contractors that stood to profit from a prolonged war effort (Barstow 2008).

The analysts were presented as experts, individuals with specific knowledge relevant to the discussion. Reasonable enough; on the topic of military conflicts, retired military officers are a natural source choice. Certainly in a world of spin, counter-spin and duelling pundits, “expertise” seems like exactly what the media needs more of. Indeed, there is nothing particular in the Barstow piece to indicate that the sources lacked knowledge; they really were experts, but they had also participated in a program, or had financial interests, that called their credibility as *neutral* sources of information into question.

Leaving aside the rather clearer-cut issue of undisclosed financial entanglements, that this Pentagon program caused a scandal shows how both the public and the media itself expect "expert" sources in the news to be held to different standards than those who are explicitly framed as advocates for a political position or faction (Page et al. 1987, 35-36). It is not really in question that a Republican operative, for example, called to comment on the Bush administration's policy in Iraq might have had any amount of contact with the Pentagon. It is simply not an issue.

Given the principles of loyalty that members of the military are expected to internalize, I think there is probably some interesting research to be done into whether or not a retired officer could ever be portrayed as purely objective; indeed, it is an open theoretical question as to whether any source can.

This study is not about the peculiar difficulties inherent in military sources, however, so much as the question of how expertise is portrayed and adjudicated in the media. To examine this in detail I would like to turn to quotations from a segment of society much more familiar to both me and, I presume, my readers. For just as quoting from the military presents clear concerns, so too does using academics as sources -- this thesis will attempt to identify some of the specific concerns and practices surrounding scholarly sources. And getting back to the idea that I would like to do research that produces results with immediate applicability to journalistic tasks, it will also attempt to relate those concerns to coverage of a particular area of interest for me:

American politics.

Though I feel that pairing it inextricably with the idea of promoting freedom and self-governance is problematic, the basic idea of informing the public put forward by Kovach and Rosenstiel (2007, 12), and countless scholars before and since, is sensible. To speak normatively, though one who informs the public may not necessarily be a journalist, journalists should, in the course of their duties, inform the public (Lippmann 1922, XXIV).

In the area of politics this is particularly relevant, since the basic functions of a democratic system rely on an informed voting public. It seemed to me as I started this project that the role of experts is that of explaining complex concepts related to policy, from a standpoint based more in the scientific method than overt partisanship.

Since digging into the literature surrounding the use of sources I have come to think that I was somewhat mistaken. It is now my belief that the role of expert voices in the popular press is often less to provide informational content than to leverage the source's authority. So the quality of neutrality is not subordinate to expertise, it is in fact a requirement for a journalistic source to be treated as an "expert" as opposed to as an advocate or some other type of stakeholder in the news. In other words, that experts are external to the story is not an incidental quality of expert sources, but core to the role they play.

Being outside the story is a source of credibility, because it means that experts are assumed to be if not unbiased then at least without specific personal entanglements that might colour their opinions on the topics of discussion; this combined with some presumed amount of relevant knowledge is a potent formula for persuasion, one that can raise or lower a proposed piece of policy considerably in the public's regard (Page et al. 1987, 39).

Reporters will sometimes, inevitably, label as "experts" sources who do not fit these criteria, sometimes by accident and sometimes, as in the Barstow military analyst story, when they are either deceived or choose to withhold information that would exclude their source due to unacceptable partisan ties. This is significant because it can lead to information entering the public discourse with more credibility than had the source been portrayed accurately.

This is precisely what the well-trodden journalistic doctrines of honesty and verification are meant to combat, of course. But reading through the history of climate change and public health media coverage, it seems clear that the realities of news reporting procedures have allowed grave, systematic errors to enter the public discourse (Allan 2009; Boykoff 2007a; Hoggan and Littlemore 2009; Oreskes and Conway 2010).

Academic knowledge is by no means exempted from these errors; indeed, most of the deceptive coverage introduced by Hoggan, Oreskes et al. stems from manipulation of academic credentials and public misapprehension about the nature of scientific knowledge (Oreskes and

Conway 2010, 267-268). Other errors creep into the discourse by way of an overemphasis by journalists on organizational prestige (Conrad 1999, 290-291).

But unlike other varieties of expertise, the institutional backing of academia has a built-in mechanism for credibility, namely the system of peer-review. Unlike degrees or administrative positions, the completion of peer-reviewed research indicates, with some certainty, that others in the same field, themselves also the authors of peer-reviewed research, see the researcher's scholarship as intellectually and academically sound (Oreskes and Conway 2010, 269).

This is not to pretend that peer-review is in any way flawless; indeed the process has decidedly mixed reviews from the community it exists to support (Henderson 2010, 738), and has been subject to such critiques for a great many years (Mahoney 1977). For the purposes of this project, though, it is less important that peer review be perfect than that it be the mechanism through which academic credibility is adjudicated within the academic community itself -- at least journalists quoting scholars can then claim to be faithfully portraying academic consensus if they disclose their sources' peer-review credentials.

Broadly speaking, then, this project will look into the tactics journalists writing about a major policy issue in the United States, health care reform, used to frame academic sources in the debates in 1993-1994 and 2009-2010. What were the tactics used to introduce and quote academic sources? Were readers of the *New York Times* during the periods analyzed adequately informed as to who in the academic community was assigned expertise and why? What are the ramifications of the framing techniques currently in use for public policy discourse?

There are, conversely, several important issues this project does not address; it refrains from grappling with the more fundamental question of whether academic expertise is well-suited to explicating the health care debate, or indeed any other issue of complex public policy, in the news. It also does not address the relative merits or different journalistic applications of practical, on-the-ground expertise versus scholastic knowledge – there is a large and growing body of work showing that classic academic modes of inquiry can sometimes undermine much older, though less codified, bodies of knowledge, while simultaneously coming to less sound conclusions (Davis, 2005). Just as pressingly, even when its data is good academia has proven itself often unable to effectively communicate its findings because it has difficulty as an institution engaging in discourse with other forms of knowledge (Wynne, 1992).

I should note as well that the framing techniques I will be looking for in this project lie outside those laid out in the manuals of style that constitute the basic standards by which reporters operate. Beyond rules for the abbreviation of degrees and titles, *The Associated Press stylebook and briefing on media law* notes only that an academic degree might be mentioned to "establish someone's credentials" (Goldstein 2002, 5, 207). *The New York Times Manual of Style and Usage* contains only guidelines on when to refer to a source with the title of "Dr." (Siegal and Connolly 1999, 111) as opposed to "Professor" (1999, 270) or "Professor Emeritus"

(1999, 120), and notes that to establish authority, sources will ideally be introduced by their names and titles (1999, 32-33). Though certainly nothing in these guidelines would prohibit more informative framing of sources, I do not wish to imply negligence on the part of the reporters or editors whose articles in my sample met the existing professional standards of their industry; it is rather to those standards' inadequacy that I wish to draw attention.

Finally, this project excludes scholastic knowledge from beyond the academy, such as think tank or government research, unless that knowledge is produced in tandem with clearly framed academic institutions or actors. Insofar as these types of research follow much the same rules and by many of the same people as in academia, and are thus subject to all the same problems, this is a somewhat artificial distinction. I have chosen to make it because non-academic scholarship lacks both a consistent relationship to peer-review processes and the assumption of objectivity that I feel is key to how academics are perceived in reporting.

Acknowledging these concerns, though, I have chosen to address herein only the narrower question of, practically, how academic knowledge itself was adjudicated in this date and topic range.

Methodology

This study will attempt to examine the techniques by which academic frames are established, with an eye for how adeptly reporters tap into the specific safeguards academia provides for accountability. This lies in the presence of key identifiers that show credibility within the institution of academia, namely the subject's peer reviewed research in an appropriate area of study and the currency of their research (Hoggan and Littlemore 2009, 231; Oreskes and Conway 2010, 272).

This type of analysis has not, to my knowledge, been done in the past. This is not to put on airs, it is simply that I do not believe this narrow technique has been applied to the use of academic sources in policy debates, as it certainly has in examining coverage of science. The question of how to sample is thus less pressing than it might be otherwise; the primary goal of this study is simply to dig in to some data. However, in the interest of procuring a range of results, I have elected to sample from two very similar policy debates in two very different media environments. To be clear, the purpose in this selection is thus not to isolate a sample that is necessarily broadly representative, but instead to generate data on one that is intrinsically interesting: coverage by the United States of America's preeminent newspaper of one of the country's great policy debates.

The decision to examine both 1993 and 2009 initially hinged on curiosity as to what, if any, broad differences might become apparent in two debates that were in many ways extraordinarily similar (Blendon and Benson 2009, 1) yet which took place in two very different media environments. Most particularly, they fall before and after the advent of internet news. However, as few systemic differences in the data were discovered, this vector of analysis was left largely by the wayside.

I mined articles for data about the academic sources they used, especially upon a source's introduction. The following were documented: source's names, institutional affiliations and positions, academic disciplines, specific topics of study or explanations of actual research projects performed, if that research was current, if it was peer reviewed (either in a scholarly journal or through presentation at a convention), and its source of funding.

Information about quotations directly from academic research, bypassing the authors entirely, was also collected.

Literature review

Epistemological categories of journalistic data - why do we need sources?

Drawing on a series of interviews, Peter Conrad writes that most science journalists feel that "they themselves can usually articulate the points more clearly in the story" than the sources they interview (199, 292). So what function do quotations from experts play in a news story at all? The answer lies in the fundamentals of journalistic practice: how journalists manage and convey different types of knowledge.

In *Public Opinion*, Walter Lippmann notes a distinction between reporting on events that can be accurately recorded and on those that cannot. On subjects like stock prices or the scores of sports matches where there are clear records, he says, "the modern news service moves with great precision", whereas on matters that cannot be comprehensively recorded its efforts are less reliable and more prone to criticism. As an example he mentions the 1921 Dempsey-Carpentier world championship boxing match, wherein observers initially differed as to which blow knocked-out Carpentier, before moving pictures removed any doubt (1922, XXIII.2).

So Lippmann highlights a difference between topics on which no observer will disagree, because they are apparent and recordable, and those which require some manner of interpretation or recollection and thus are prone to differences of opinion. He notes a variety of reasons why a given event might not be recorded, including censorship, privacy, neglect, or the lack of “an objective system of measurement” (Lippmann 1922, XXIII.2). In all these situations news is not a simple transmission of observed facts, but instead amounts to the construction of a narrative based on subjective perceptions and available data, and thus subject to a variety of concerns about bias and accuracy. The sum of these concerns, of course, broadly comprises a significant portion of media theory, as journalists and academics attempt to identify the personal and structural biases which are interwoven through all but the simplest reporting.

Likewise there are many issues where records, no matter how complete and perfect, will never fully convey inarguable factivity. An example Lippmann raises is that of a labour dispute; no matter how full a reporter’s knowledge, even the simple statement that work conditions were “bad” can only be made authoritative by a prohibitively large investment of time and resources. And the results of such an investigation would be massive, far too lengthy and complex to have been included in a newspaper column of the day (Lippmann 1922, XXIII.3). Even today, with space concerns lessened by the advent of internet publication, it is still unrealistic to expect readers to wade through thousands of words of exposition to defend simple judgements.

Gaye Tuchman reaffirms that this Lippmann ideology of objectivity is still in effect more than 50 years later in her 1978 book *Making News*, where she writes that “for newsworkers (as for scientists), having witnessed an occurrence is not sufficient to define one’s observation as factual” (1978, 82-83). When this is the case a reporter cannot simply register his or her own observations but must rely on third parties, or sources, for input. Tuchman calls the assemblage of quotations to cover a lack of verifiable fact the “web of facticity”, whereby what is true is relocated to the utterance of a source -- that is to say, even when a reporter cannot write authoritatively that a thing is true, she can still definitively state that someone else said that it was (1978, 90).

From a theory of knowledge perspective, then, sources aren’t merely providers of information; they are necessary for corroboration even when the journalist herself already knows the facts. Within a journalism that pays credence to objectivity, sources are “an essential form of evidence” (Carlson 2009, 527).

Sometimes, if the reporter considers a source to be prominent enough, a statement might be considered newsworthy no matter whether it is true or not; the utterances of the powerful are often treated as news in and of themselves (Gans 1979, 241). In most other circumstances, though, a reporter, or his or her editors, will probably attempt to determine if something a source has said is true. For example, when a surgeon describes to a journalist the steps of a new procedure, or a witness to a crime relates what he or she saw, the statements produced will usually be of limited scope and thus evaluable, at least in theory, as true or false. In some of these cases, such as that of the witness, normal news practice might require further investigation to confirm what the source has said, particularly if it is controversial or potentially libellous (Tuchman 1978, 84). In other cases, like that of the surgeon, the broad metric of common sense will allow a source’s claims to be taken at face value. In some cases the assembled facts might even reinforce each other, such as several witness accounts (Tuchman 1978, 86). But in all these instances, the utterance can ultimately be judged either true or false. When the facts are verifiable, it might be argued that the reliability of the source, or how likely their utterances are generally to be true, is of little import beyond the accuracy of the specific statements that they have made.

But not all statements are easily verified, and many are not verifiable at all. There are issues which are abstract (e.g. future trends), technical (e.g. scientific experiments), or both (e.g. scientific theories). Moreover, there are statements that have little or no informational content that can be verified, yet are still of interest to reporters (e.g. "This is really important." or "This is a terrible idea."). Many issues and statements like this require not the simple conveyance of already known factual information by a source but instead active evaluation or interpretation -- for example when an economist prescribes policy adjustments based on employment statistics or a sociologist encapsulates the state of the nation's school-system as "good" or "terrible" (exactly the function which Lippmann writes a reporter may not perform herself; 1922, XXIII.3). In these cases, a source's comments might be *more* or *less* reliable, depending on their level of expertise and their biases among a bevy of other potential concerns, but they won't be simply true or false (Lippmann 1922, XIV.2).

We can thus see a stratum of types of knowledge, from the simplest facts, reportable via first-hand observation, to the most complex topics, navigable only with the help of expert sources.

The former answers the question “what happened?”, which is easily answerable by the press but of limited use to the public (Lippmann 1922, XXIII.3), while the latter might be a response to “what does this mean?”, which is more valuable but also far more difficult (Lippmann 1922, XXIV). It is primarily the latter sort of knowledge that necessitates the use of expert sources to convey information to the public by way of the news.

How expert analysis fits into the news

Though between them Tuchman and Lippmann provide the epistemological tools to define it, both have qualms about the role of expert analysis in news. Lippmann writes that such endeavours are most successful when they operate in tandem with social institutions to disentangle issues, clearly represent concerned interests, and present objective criteria for their evaluation, but he records doubts about reporters’ ability in their routines to do justice to complex issues. He alleges that a model of the press that attempts to much, “charged with translating the whole public life of mankind” is “bound to fail” (Lippmann 1922, XXIV). Tuchman meanwhile writes that she does not believe that news routines can easily overcome their predisposition to privilege legitimated social institutions in marshalling sources, resulting in wide-spread systemic bias that is unhelpful to public discourse (1978, 4-5 91).

Without minimizing these concerns, for the next step towards describing the function of expert analysis in news we can turn back to Conrad. As mentioned above, Conrad writes that most science journalists believe that they are better able in most cases to explicate specific scientific points in their own words than through those of a source (1999, 292). Expert quotes are instead used primarily to contextualize a study by explaining why it is important or even that it is important in the first place, to add legitimacy to the findings of a study by putting personal or institutional weight behind it, to describe the implications of a study, or to provide a balancing perspective (Conrad 1999, 296-298).

It can be readily seen that most of these types of expert quotes will not be factive. Indeed in many cases the actual semantic content of a quote might be minimal; often reporters will quote a source simply saying that a finding is “the greatest thing since sliced bread” (Conrad 1999, 292). Conrad therefore emphasizes choice of source over quote content in assessing a study’s source use.

The framing of sources

Ervine Goffman defined frames in his book *Frame Analysis* as the elemental blocks of “understanding available in our society for making sense out of events” (1974, 10). For our purposes in analyzing frames as they crop up in media, however, a slightly more specialized definition put forward by Robert Entman should suffice: “To frame is to select some aspects of a perceived reality and make them more salient in a communicating text.” (1993, 52). Frames are thus “contextual cues” by which media consumers understand the broader societal place of an idea in a piece of media, prioritizing some facets of the information they are presented with and deprioritizing others (Iyengar 1991, 11). Framed differently, two news articles carrying identical informational content can provoke vastly different responses in readers, by, for example, placing emphasis on the lives a policy might save rather than lives it will be unable to save (Entman 1993, 54).

The sources journalists choose and the quotes they elect to print from those sources are two ways by which media frames are constructed (Tankard 2001, 100). However, sources themselves are subject to their own frames: it would be nonsensical for a reporter to include a quotation from somebody without telling the reader who that person is and why their utterance is significant. The types of sources journalists choose to incorporate into their stories vary wildly, from otherwise unexceptional citizens who happen to have witnessed something deemed newsworthy, to those highly placed in “the hierarchies of nation and society”, whose very prominence makes their utterances presumptively judged worthy of inclusion (Gans 1979, 241-242). Another category might be the “affected”, those whose lives are directly impacted by the issue being covered (Conrad 1999, 301). And, of course, there are experts. The utterances of each of these carry different weights: for example, a succinct, punchy quote like “this is the best thing since sliced bread” clearly carries different weight and implication if it is said by a someone who is described as directly affected by the policy, by an advocate for a specific political cause, by a teenager approached on the street, by the President of the United States, or by a scholar. In some of these cases we might take such an utterance very seriously, and in others disregard it entirely.

Like all sources, academic experts are selected broadly to maintain the credibility of journalistic claims of truth (Carlson 2009, 527-528). However, unlike members of the public or public figures, experts are generally assumed to be nonpartisan and in possession of uncommon insight into the topics they comment upon (Page et al. 1987, 39). Not all experts are scholars, of course, but scholars have particular credibility; in some cases, most notably on questions of narrow scientific knowledge, academics may be the *only* people qualified to speak authoritatively on a subject (Oreskes and Conway 2010, 272).

Scholarly quotes are among the most influential and authoritative a journalist can print (Page et al. 1987, 35-36; Oreskes and Conway 2010, 272), and the institution of academia relies on peer review to enforce accountability on behalf of its members. Unless an academic's claims have passed through the process of peer review, they are nothing more than claims; they may be well-argued or convincing, they may even be correct, but they do not have the endorsement of the academic community from which they spring, and it is that community, and through it the broader institution of the academy, that provides the credibility, or proof of expertise, that distinguishes academic from non-academic knowledge (Oreskes and Conway 2010, 269). The substantial persuasive weight carried by the academic frame, in other words, is within the institution of academia itself legitimated only via regular submission to the process of peer review.

As Lippmann noted, there is almost never space within media discourse for factual claims to be exhaustively argued (2004, XXIII.3). And Conrad writes that the actual quotes from academics used can be subjective, speculative, or extremely informationally scant (1999, 292-293). But if the quotes themselves are problematic to evaluate, and peer review is the only real measure of an academic's credibility within his or her field, then frames which introduce academic voices without showing readers that those voices have successfully navigated the process of peer review on the topic at hand are clearly lacking -- without that clearly demonstrated relationship, readers have no reliable way to judge which sources have earned academic credibility and which have not.

I suspected that this was problematic coming into this project because I suspected that the most common technique used to frame an academic source in a news article is by way of the source's organizational position, which is not necessarily particularly meaningful. Certainly this proved to be the case in the specific time and issue spans I analyzed. This mismatch seems a likely culprit for many of the instances documented by Oreskes, Hoggan et al. of academic credibility being granted when it is not merited, i.e. when the subject has an organizational title or an impressive resume but no current research, or none at all ever, in the topic under discussion (Oreskes and Conway 2010, 271; Hoggan and Littlemore 2009, 103).

Problems with expertise

Lest we become too gung-ho in endorsing the powers of academic expertise, backed up by peer review or otherwise, we should turn briefly to some of the consequences for misuse of academic sources, and some further cases where the academic system as a whole has failed to produce useful results.

The fundamental constraint on journalists in choosing a source is accessibility; a source must be someone who is willing and able to talk to reporters. More fundamentally, a source must also be someone the reporter knows about and thinks of as an "expert" (Gans 1979, 241). Practically recognizable experts will usually be part of a legitimated social institution (Gans 1979, 246), of which academia is the prime example. Academic experts have the advantage of coming backed by a system of checks and balances: their degrees, organizational stature and most importantly their peer reviewed research all help prove their credibility to the public (Oreskes and Conway 2010, 269).

But journalists do not see all organizations as equal, nor all positions within them. Harvard is generally seen as a more prestigious institution than the University of Iowa, for example, and a quote from a scholar at the former may thus be seen as more valuable than one from the latter (Conrad 1999, 291). Likewise a quote from a dean will usually be seen as more valuable than one from a lab researcher. In both these circumstances journalists have a preference for experts with prestigious titles over those without, as this fosters a sense of legitimacy for the story and is believed to be more persuasive (Conrad 1999, 291). But it is often the less prestigious bench scientists performing on the ground research that have the highest levels of technical knowledge, and it is entirely possible that the world expert on any given subject will be at the University of Iowa rather than Harvard. So though sources must have useful input into a topic, in each case the journalists Conrad interviews emphasized that the prestige and persuasiveness of a source often trumps specific expertise (1999, 290-292).

Conrad writes that “balance” in science stories need not follow the same norms as in standard reporting because they are so often based around peer reviewed studies, which are presumptively valid. So though introducing cautionary notes or acknowledging controversy is not only appropriate but may, in some cases, be necessary to “round out a story”, “fringe” views need not be given equal weight with consensus views to satisfy some artificial ideal of balance (1999, 293).

But fringe views aren’t necessarily easy to distinguish. The literature is peppered with instances of expertise being misassigned: Stuart Allan documents coverage of an inventor affiliated with a local university who claimed to be able to use a “combination of a... DNA sample and GPS satellite technology” to locate a missing child. Though there was nothing but “hocus-pocus” science behind the purported invention and the inventor was not in fact an academic of any variety, failure to fact check by one news outlet led to the story behind picked up by many more (Allan 2009, 280-281).

Similarly but more seriously, Diana Davis documents how scientific and media consensus about desertification in southern Morocco differed systematically from what was reported by the indigenous herdspeople who actually lived there (2003, 511-519) – here too an echo-chamber effect allowed academic claims to quote and build upon each other even though their conclusions were contradicted by the facts on the ground. This, combined with strong economic incentive for policy-makers to emphasize the severity of the problem, allowed questionable data to persist in both media and academic views of the region (Davis 2003, 520).

Equally troublingly, Maxwell Boykoff showed in a pair of studies in 2007 how coverage of climate change was very responsive to political and economic currents; in the 1990s coverage systematically highlighted “contention rather than coherence”, even though in the scientific consensus in that period was rapidly converging (2007a, 486). Meanwhile, he also showed that in the mid-2000s media coverage and scientific consensus came together only as the political environment in the United States changed around 2005 to become more receptive to scientific claims of anthropogenic climate change (2007b, 10).

Though Boykoff touches on the deliberate misinformation sewn into the debate on climate change by various aspects of the energy industry, he is more concerned with macroscopic effects than specific details. Hoggan and Littlemore lay out, from a Canadian perspective, specifically how economic entities threatened by climate change were able to sustain doubt in the public discourse long after it had been largely dispelled in the scientific community. Businesses with interest in averting meaningful action on climate change accomplished this primarily by injecting expert voices into the media conversation in a variety of ways. Some were scientists who had legitimate credentials in other disciplines like Frederick Seitz, an acclaimed physicist and former president of the National Academy of Sciences who in his later career became a leading global warming sceptic, although his area of expertise was unrelated to climate science (Hoggan and Littlemore 2009, 41). Others, like Christopher Walter, have little if any formal academic prestige but are able to claim expertise either by outright fraudulence (Hoggan and Littlemore 2009, 114) or by way of positions within industry funded organizations with deceptive titles -- Walter is a spokesperson for the industry-backed “Science and Public Policy Institute” (Hoggan and Littlemore 2009, 113). Such “Experts” are able to persuade because they are able to lay claim to the mantle of academic credibility despite lacking research in any relevant disciplines.

Oreskes and Conway examine those same processes, but on a variety of issues beyond global warming. Similar campaigns of misinformation have been waged, often through the same constructed “experts”, to cast doubt on findings that cigarettes are harmful to health (which Oreskes identifies as the original such campaign), the existence of acid rain, the risks of the Reagan-era Strategic Defense Initiative, and the dangers of pesticide use (Oreskes and Conway 2010, 6). In each case Oreskes and Conway show that successful strategies were less focused on spreading actively false information, which can be refuted, but instead on sowing confusion, relying on the theory that policy-makers, faced with an apparent lack of certainty, would choose not to act (2010, 267). In effect industry-hired academics were employed to issue deceptive, non-factive analysis which resulted in media coverage that obscured matters of relative scientific certainty.

The health care reform debate in the United States

There have been a great many attempts to implement legislation that would defray and control the perpetually rising costs of health care for citizens of the United States for at least a century. Health care reform has been a signature issue of, at the very least, Presidents Theodore and Franklin D. Roosevelt, Truman, Kennedy, Johnson, Nixon, Carter, Clinton and Obama. Of these the only resounding success before Obama was the Kennedy/Johnson administration, which passed Medicare in 1964. In that same century practically every other industrialized or industrializing nation in the world implemented universal health coverage of some sort, but such measures were repeatedly stymied in the United States (Jacobs and Skocpol 2010, 2-5).

It is thus unsurprising that health care reform was the most significant non-economic issue to the American public at the beginning of both recent Democratic administrations, Clinton and Obama in 1993 and 2009 respectively (Blendon and Benson 2009, 1). Effective management of a country's health care system is generally considered vital from a policy perspective (Berman 1995, 26), and the United States' in particular is widely judged as badly flawed in its failures to achieve universal coverage (Mechanic 2001, 35) and control costs (Inglehart 1992, 742). Coverage of health care reform in the United States differs from coverage of health care itself because though the latter is generally criticized as sensationalistic (Dan 1992, 1027), inconstant

(Angell and Kassirer 1994, 189), and incomplete (Moynihan et al., 2000, 1647-1648), coverage of reform tends instead towards the conservative, emphasizing risks rather than rewards (Mechanic 2001, 36).

It is also a debate with very high degrees of interest group involvement, both in the form of well-funded advertising campaigns (West et al. 1996, 63-64) and in funding for research both on the reform proposals themselves and media coverage of the reform, all of which made it into media coverage of the issue (West et al. 1996, 41). As this saturation of viewpoints increased, media coverage of the reform debate, in 1993-1994 at least, became less and less focused on specific policy issues and more on the meta-coverage of the debate itself (Jamieson and Cappella 1998, 110).

Findings

News articles from the sample very rarely framed academic sources in terms of their research, let alone with clear reference to their work's peer review. Instead academics were overwhelmingly introduced using a combination of their institutional affiliations and positions, fields of study, and occasionally in terms of their specific areas of specialization. These constructions followed certain clear patterns, for which I have devised and named categories in order to discuss them at more length below.

Table 1 – Distribution of frame types

	Frequency	Percentage of all sources
All quotes	**186**	**100.00**
Author frame	8	4.30
Authority frame[1]	39	20.97
Discipline frame	40	21.51
Positional frame	96	51.61
Research frame	3	1.61
Specialist frame	22	11.83
Studies quoted directly	17	9.40

[1]Authority frames were each also counted as another frame-type.

Strikingly fewer academic sources total were found in a somewhat larger pool of articles in 2009-2010 than 1993-1994. Within articles that quoted at least one academic source, those from the 1993-1994 period also quoted a slightly greater number of academics on average. Given the relatively small size of the samples I don't feel that this difference is large enough to state conclusively that academic sources are quoted less frequently now than they were in the early 1990s, but this is a potential avenue for future research. I did not find any other strong patterns of difference between data from the two time periods.

Table 2 –Rates of academic quotation in the two sampled time periods

Time period	Sampled articles on health care reform	Articles quoting academics	Rate of academic quotation	Number of academic quotations	Quotes per article
1993-1994	663	70	0.1056	118	1.69
2009-2010	792	48	0.0606	68	1.42

I also found a distinct lack of diversity when it comes to who was quoted. Fully fourteen of the 120 academic sources located in the 1993-1994 sample were Dr. Uwe Reinhardt; on November 14th 1993 alone he was quoted in four different articles by four different authors. Interestingly, Reinhardt was only quoted twice in the 2009-2010 sample despite still being very active academically (indeed, his research in the last two decades has turned to American health care where previously he appears to have mostly studied the German system). Several other academics, namely Sara Rosenbaum, Kathleen Hall Jamieson, Robert Blendon and Ross Baker, were quoted four or more times. Academics from prestige universities also occupied a disproportionate share of the sample: 25 of the 186 total quotations were from Harvard alone, for example, and in total 68 of the 186 were from the eight Ivy League universities.

In those articles that included reference to discrete pieces of research, funding was disclosed relatively infrequently: just once in the specialist frame, three times in the author frame and five times in quotations directly from research. However, though not all academic research is externally funded, no article disclosed an *absence* of external funding; in many of the cases which lacked any mention of funding this can be presumed to be the case. A study of funding disclosures would need to cast its net more widely than I have in order to round up an adequate quantity for analysis.

To look at the ways that academics actually were framed and discuss the ramifications of those choices, I have identified and named the following categories of frames:

The research frame

Of the 186 sources identified, only 11 were framed with clear reference to peer reviewed studies they had done in relevant fields. Eight of those were quoted to discuss their own research in articles specifically about that research -- those I have analyzed separately under the heading “The Author Frame” below.

Of the remaining three, two were in the same article, Reed Abelson's "When Legislation Goes Into Overtime", printed on December 27th 2009, which drew historical parallels to a quickly repealed Reagan-era attempt to prevent the medical bills of the seriously ill from spiralling out of control, the Medicare Catastrophic Coverage Act of 1988. Jon Gabel and Thomas Rice were introduced in the article as follows:

> ''What is similar is a lack of understanding,'' said Jon Gabel, a health researcher who helped write a post-mortem of the repealed bill for the journal Health Affairs in 1990.
>
> The support of groups like AARP is also a critical difference, said Thomas Rice, a health policy expert at the University of California, Los Angeles, who is also one of the authors of the 1990 Health Affairs piece.

Uncommonly, Abelson's framing of Gabel does not make his institutional affiliation clear; though he is a senior research fellow at the University of Chicago the bulk of his work appears to have been done by way of the non-profit sector, so perhaps this is a deliberate omission. This highlights the power of the author frame, though, and indeed the broader points about peer review upon which this project is based: despite knowing almost nothing else about him, a reader encountering the passage above would have clear justification to give credence to his opinion. On that same note, though Rice's framing contains additional information about his academic career, it does not seem like Abelson intends him to have more credibility than Gabel.

Regardless, both introductions are succinct; providing sufficient information to back up Gabel and Rice’s expertise does not disrupt the flow of the 1039-word article.

As an aside, though only four other sources quoted by Abelson were found in the total sample (two of them in this same article) all were somewhat more informatively framed than the norm.

The other academic framed in terms of her peer reviewed research is a somewhat marginal case, as it appears possible that it was incidental, and refers only to research that would undergo peer review in the immediate future, rather than a finished study. In Adam Clymer, Robert Pear and Robin Toner’s August 29th 1994 article “What Went Wrong? How the Health Care Campaign Collapsed”, we find this passage:

> And newspapers and television failed to cut through the din and educate people, said Kathleen Hall Jamieson, dean of the Annenberg School at the University of Pennsylvania. Instead, they merely elevated public skepticism.
>
> "Everything the press did appeared to engender cynicism," she said, citing a study that she and a colleague, Joseph N. Cappella, plan to present next Saturday to an American Political Science Association convention in New York.

Jamieson's introduction in the article, then, begins as an absolutely typical example of the authority and professional frames (described in more detail below). While the authors' work-process can only be guessed at, it seems possible that Jamieson herself made spontaneous reference to a paper that was going to undergo peer review -- its inclusion thus appears more likely to be an accident than a deliberate effort on behalf of the authors to establish Jamieson's academic credibility. Coincidentally, the study mentioned is almost certainly the same one by Jamieson and Cappella that is referenced in this paper's literature review, "The Role of the Press in the Health Care Reform Debate of 1993-1994".

Within a sample of 186 sources, three examples over two articles, and one of them marginal, can only be considered outliers. In sum, academics were effectively never framed with reference to their peer reviewed work in 1993 and 2009 when called to comment in anything save articles actually about their own research.

The discipline and professional frames

The two most common methods of framing academic sources in the sample were also the most informationally scant. As they are very similar in their ramifications, I will deal with them together.

In the first, which I'll call the discipline frame, sources were introduced by a combination of their institutional affiliations and disciplines of study. Of the 186 academic sources I examined, 40 were framed this way.

Here is an example, from Gina Kolata’s August 12th 2009 article “Insurers' Survey Points to Big Bills as Health Care Problem”:

> The situation is so irrational, said Uwe E. Reinhardt, a health economist at Princeton, that it simply cannot go on. “We will not emerge out of this decade with this lunacy,” Dr. Reinhardt said, adding, “You worry about credit card charges, you scream for consumer protection -- why not scream for it here?”

As is quite typical for this sort of article, the above is the entirety of Reinhardt’s participation in the article -- here he is agreeing with the basic conclusion of an insurance industry survey that pointed to inordinately high doctor’s fees as a key contributor to the country’s health care cost crisis. But especially with such an inflammatory quote, and one which is effectively impossible to fact-check, who he is is very important despite the brevity of his contribution. A “health economist from Princeton” seems, at first blush, someone who should have great deal of credibility on this topic. On closer examination, though, it doesn’t necessarily mean much; a reader doesn’t know if Reinhardt is a post-doc, a researcher, a professor, or indeed a hobbyist affiliated with the university in some other capacity (Allan 2009, 281). Nor does the reader have any way to know if he has done any research relevant to the topic, nor, if he has, if it was done in the last 30 years. A "health economist" might be someone who studies outcomes and efficiency, or how demand works in the health care system, or any number of esoteric topics that might have little or no bearing on whether the fees doctors charge in the United States are rational. The discipline frame offers little by which a reader can judge the credibility of a source save a vague sense that they study something in the field, and of the credibility of their academic institution.

Very similarly, the professional frame introduces an academic source by their field of study and specific institutional positions (but excluding positions of authority, which I have chosen to discuss separately below under "Authority frames"). At 96 sources within the 186 collected, this was the most common type of frame used to present academics. The most common position by a considerable margin (50 total) was, unsurprisingly, "professor"; most of the rest were similarly generic titles like "lecturer", "teacher", "researcher" and "physician".

A scattered few were introduced using more specific titles like "associate professor", "senior fellow" or "professor emeritus". Many of these titles carry quite a lot of information for those who understand their ramifications – for example, "associate professor" is a tenured position, which usually means that its holder has published a certain amount of peer reviewed research. However, though these carry more value for the reader, their use is limited by their impenetrability to those outside the academy (they are in effect jargon terms) and by the different standards academic institutions use to determine qualifications. A reader conversant with the university faculty career path will find them informative, but there's little reason to believe that they will carry much weight with the public at large.

Here is an example of this type of frame from Peter Kerr's September 13th 1993 article "Doctors and Insurers Say Program Would Tread Too Heavily on Their Turfs; Cap on Premiums Is Seen as Stifling Real Competition":

> "What might happen if you have too tight a cap on insurance company premiums is that their profit margins get wiped out," said Uwe D. Reinhardt, a professor of political economy at Princeton University and a medical economist.

This is materially almost identical to the discipline frame example above, with the single additional piece of information about Reinhardt: that he is a *professor* at Princeton. This clears up a single question a reader might ask about Reinhardt's credentials, he is some variety of professor rather than a less prestigiously positioned academic (however, to refer back to Peter Conrad as quoted in the literature review above, in reality institutional prestige does not necessarily reflect actual expertise; 1999, 291). Professors and other instructors might also be presumed to carry a broader base of knowledge than academics who do not teach, such as administrators or researchers. But the positional frame doesn't help at all to prove his specific expertise.

As it turns out, Reinhardt, Princeton's James Madison Professor of Political Economy, has done a significant amount of research in the areas he is commenting on here. He published an article in *Health Affairs* in 2006 titled "The Pricing of U.S. Hospital Services: Chaos Behind A Veil Of Secrecy" which, at somewhat greater length, expounds much the same point of view that he expresses in the first example above, backed by substantive research -- notably, in that article Reinhardt explicitly thanks his anonymous peer reviewers for their "constructive criticism on an earlier draft" (2006, 68). And he wrote an article for the *American Journal of Law and Medicine*'s first issue in 1993 examining, among other things, various schema for the pricing of health insurance titled "Reforming the Health Care System: The Universal Dilemma Implementing U.S. Health Care Reform".

So in both these cases the source quoted appears to be one whom the academy would readily recognize as qualified to discuss the topics he is commenting on, but a conscientious reader might be forgiven for entirely disregarding Reinhardt's opinions for lack of information as to who he is. Casual readers, of course, will presumably see "Princeton" and pay attention to what he has to say, but that in this case their confidence would be well-placed does not change that they could have as easily been wrong to do so.

An example of where such a reader's faith may have been misplaced can be found in the article "Christian Leaders Unite on Political Issues" written by Laura Goldstein and published November 20th 2009. Therein, a Princeton "professor of jurisprudence", later reintroduced as a “legal scholar”, named Robert P. George is quoted regarding health care reform that “the dangers to religious liberties are very real.” This quotation is set against one from Ira Lupu, a “law professor at George Washington University”, who characterizes suggestions that religious institutions might somehow be forced to accept abortion or embryo-destructive research as “fear-mongering”.

In this case, Lupu has written several peer reviewed articles in the last decade on the ability of the American government to impose behaviour on religious institutions. But George doesn’t appear to have any current scholarship, and those articles of his I was able to locate address questions of natural law and Catholic morality; the case for his expertise on the question of how health care reform might impede religious liberty in the United States seems much weaker. Within the limited frame presented in the Goldstein article, however, a reader has no tools to make such a distinction. Indeed within the article the two are explicitly equal in stature as professors of law.

As someone with no personal knowledge of either of these scholars, or indeed any deep knowledge of law scholarship, it is very difficult for me to declare that Lupu is more credible on this topic than Robert. Moreover, it is of course entirely unrealistic to expect that any reader will do even the small amount of background investigation into the two that I have done. But this is precisely the bind that an article’s author, who has direct access to the sources and an existing obligation to verify their expertise, could have resolved for readers simply by explaining what research these sources have done that leaves them qualified to comment.

The authority frame

In the authority frame reporters introduce an academic by way of a position of authority or prestige, most often director of a centre or institute. While in many ways this carries much the same ramifications as an ordinary professional frame, constructions of this type carry a few interesting characteristics that merit separate attention.

There were a total of 38 examples of authority framed academics in the sample, including the above mentioned 29 professional frames, plus three in specialist frames and six in author frames (see below).

As a side note, despite Conrad's assertion that all else being equal journalists prefer to quote scientists with prestigious titles over those without (1999, 291), this means that academics who did not hold prestigious titles were quoted approximately five times as frequently as those who did. Moreover, recall that this is in the *New York Times*, a newspaper whose reporters surely do not have difficulty gaining access to those in positions of authority (especially remembering that usually one of the duties of a director of an academic institution is to be available to the media). I would not have been surprised to find a far greater proportion of managers and executives in the sample; that there were as few as there are implies to me that the Times reporters were considering more than just a source's prestige when choosing whom to quote.

For an example of the authority frame, and how choosing an academic with a prestigious title can actual confuse issues of credibility, see this passage from David Herszenhorn's October 12th 2009 article "Soaring Costs Remain a Bugaboo in Expert's Eyes":

> Can all that money really be saved without rationing care or lowering the quality of treatment?
>
> "In three letters: yes," said Elliot G. Fisher, director of the Center for Health Policy Research at Dartmouth College, which produces an atlas showing how Medicare spending varies widely across the country with no evidence that higher expenditures achieve better outcomes for patients.

Fisher is then quoted at length through the article. This formulation raises three distinct issues:

First, though Fisher is director of a college centre for health policy research, his area of research and the currency of his expertise is not clear. This is basically similar to problems raised above with the professional and discipline frames, but problems of currency in particular are exacerbated in the case of a source in a managerial or executive role: though in many cases the opposite will certainly be true, these roles conceivably risk pulling even the most diligent scholars away from their own research. In Fisher's particular case this may not be the case: he is listed as the co-author of quite a few articles in the last decade on quality of care, for example "The Implications of Regional Variations in Medicare Spending", a two-part article printed in the *Annals of Internal Medicine* in 2003. None of this is clear from the article, however, and a reader could be forgiven for guessing that someone in Fisher's position might not have much time to pursue his or her own research.

Second, Fisher's connection to the atlas mentioned, a significant research endeavour even if it isn't subject to peer review, is opaque: the reader, knowing nothing about the size or composition of the Dartmouth centre, has no real way of gauging his personal level of involvement in the research which produces it. Even had Fisher's precise position within the Dartmouth Atlas of Health Care, "co-principal investigator", been disclosed it would not be clear what his day-to-day role in its work is, sitting as he does atop a staff of about 20 other scholars plus assorted analysts. Barring a digression into the inner workings of the atlas, this is not an easily solvable problem; unlike "professor", which carries a strong implication of both research and instruction, none of Fisher's many titles necessarily imply that he is active in the production of knowledge.

Third is the issue that, unlike academics generally, executives in academic organizations are expected to be advocates, and thus advance agendas. Regardless of whether this is true on a case by case basis, this makes them very different from "ordinary" academics, who are quoted because they are seen as neutral (Page et al. 1987, 39) and are probably no more or less agenda-driven than any other randomly selected individual. In his first quote alone Fisher is making a very bold assertion. The paragraph that follows implies that he has access to research to back it up, but because he is also clearly identified as the director of a health policy research centre I would expect a sceptical reader to take his assertion with a grain of salt -- what is he trying to gain for his centre by saying what he is saying?

This is not to imply that Herszenhorn should have concealed Fisher's position from his readers, of course, nor that academics who attain managerial or executive positions shouldn't be quoted when appropriate. But these three issues do suggest that such positions can actually be disadvantageous when attempting to establish an academic source's expertise and neutrality, contrary to the perception (Conrad 1999, 291) that they are more desirable. This in turn emphasizes that when academics who have attained prestigious positions are quoted, effective and informational frames are even more important than for ordinary academic sources.

The specialist frame

In somewhat fewer instances, 21 total in the sample, academics were introduced by way of their specific topics of study. This I have called the specialist frame, since it emphasizes not just the source's discipline (though it includes it), but also their area of specialization. For example, see this passage from David Rosenbaum's July 24th 1994 article on Newt Gingrich, "A Republican Who Sees Himself as a Revolutionary on the Verge of Victory":

> This could hurt Mr. Gingrich's effort to win control of the House for Republicans, said James Thurber, a political scientist at American University who studies Congress and the Presidency. “The middle has shifted for the Republican Party in the House,” Mr. Thurber said. “The data don't show that the middle has shifted in the country.”

Though it is still not clear from this frame if Thurber has relevant and current peer reviewed research into the topic of discussion, it is at least much clearer than if he had simply been identified as a “political scientist” that he is in the right ballpark. A reader knows that Thurber studies Congress, rather than some unrelated topic of political science like international aid to the developing world or the emergence of the feminist movement.

This an improvement over the discipline frame, though readers still don’t really know precisely what it is that Thurber studies. As it happens, Thurber’s research on Congress in the decade or so before this article was printed was mostly concerned with congressional/presidential relationships, which seems at least broadly appropriate; again, though, Rosenbaum would have been the best positioned, when writing the article, to make that even clearer.

Here is another effective example of the specialist frame, from Monica Davey’s September 29th 2009 article “Health Care Overhaul and Mandatory Coverage Stir States' Rights Claims”:

> Mark A. Hall, a law professor at Wake Forest University who has studied the

> constitutionality of mandates that people buy health insurance, said, ''There is no way this challenge will succeed in court,'' adding that the state measures seemed more “sort of an act of defiance, a form of civil disobedience if you will.”

On the one hand, a reader of the above passage has substantial assurance that Hall has applicable research to the topic at hand, in this case laws passed in some states pre-emptively attempting to outlaw, a significant part of the health care reform legislation that was then pending in Congress (Manchikanti et al. 2011, 35). But on the other, it also highlights the absurdity of not telling the reader, in so many words, precisely what that research is -- Mark Hall’s “The Constitutionality of Mandates to Purchase Health Insurance” was published in the *Journal of Law, Medicine and Ethics* about a month before this article was written; the article could have explicitly stated this while barely changing a word.

Indeed, it seems quite clear that the authors of the news articles chose not to relay what they knew about the source’s research -- indeed, it seems very likely that Bailey contacted Hall because of the article he had just published. When the title of the article is paraphrased almost verbatim, why not make that connection transparent?

The author frame

As mentioned above, I found a small number of academic quotes in the sample from articles that were pegged on a piece of research or a study. There were eight instances of this, all but one of which contained clear reference to the peer review status of the article.

Here is an example, from a July 21st 1994 article without a by-line entitled “Study Predicts Large Surplus of Physicians”:

> The United States will have a surplus of 165,000 doctors by the year 2000, researchers at the Johns Hopkins School of Public Health reported today in an article in the Journal of the American Medical Association.
>
> More than 90 percent of the surplus doctors will be specialists and 40 percent of all medical specialists could be unnecessary by the year 2000, the author said, adding that that underscored the need for medical schools to push students into family and community medicine.
>
> "Many medical students, given the choice of high-paying specialties with salaries two to three times that of primary care, make the obvious choice," said Jonathan Weiner, associate professor of health policy and management.

While this example bears many of the characteristics of the sort of peer review framing I was looking for, it is manifestly different for one simple reason: in the constructions I was examining primarily, academic sources are quoted because they provide expertise but are not stakeholders in the stories they are commenting on. Conversely, in articles that are actually *about* discrete works of research (which in my cataloguing of the data I have been referring to as "study articles"), authors are not outside commentators but instead key actors in the story.

All that said, however, the small number of examples collected here of study articles suggest that this format of news article is far more likely in its existing conventions of reporting to provide readers with sufficient information to evaluate their academic credibility. This is a clear avenue of future research.

Quotations directly from research

Additionally, academic studies were quoted 17 times in the sample without any direct commentary from their authors. As with study articles I recorded these but considered them to be a substantively different phenomenon from academic commentary. That said, I was surprised to find that, like academic quotations and unlike study articles, direct quotation of academic research contained reference to its peer review status relatively infrequently: in only three of these instances was the peer review status of the studies quoted clear. I say surprising because I had supposed that a study's place of publication would be considered essential information when quoting from it.

Certainly it did not seem onerous or intrusive to include in the articles that did so. For instance this, from Craig Whitney's November 14th 1993 article "How Others Do It: Germany; Coverage

For All, With Choices”:

> Also, according to a study by John K. Iglehart in The New England Journal of Medicine, "German hospitals have fewer pieces of high-technology equipment than most big urban hospitals in the United States."

For a counterexample, a study quotation without reference to its peer review status, see this article by David Rosenbaum from October 26th 1993, called “Economic Outlaw: American Healthcare”:

> To illustrate that point, researchers at Dartmouth Medical School tried to determine how patients would respond if they were thoroughly informed about various possible treatments. The researchers found, for example, that when they used videotapes and other techniques to explain carefully the advantages and disadvantages of prostate surgery, the number of patients at the Veterans Administration hospital in White River Junction, Vt., who decided against having such surgery increased significantly.

It is clear in this example that it would not have been difficult for Rosenbaum to have included a simple phrase telling readers what the study was called and where it was published, but he chose not to. As it stands, there is not even enough information for an interested reader to look up the article independently; after some sleuthing I believe that the study being referred to was “Developing shared decision-making programs to improve the quality of health care” by Kasper, Mulley, and Wennberg, published in 1992 in *Quality Review Bulletin* 18:6. But I’m only somewhat confident in this guess -- certainly it can be said, though, that knowing next to nothing about the study based on only the article itself, it is hard to give its much credibility to what it reports it as saying.

However, in this example and indeed all the other studies quoted directly there was at least a short description of either how the study worked or what it found; at the very least this can be said to be at base more informative than the professional and discipline frames.

Conclusions and recommendations

When a journalist quotes someone, it is essential that it be clear for the reader who the source is and why their opinion matters -- academic expertise is only one of a myriad of reasons a journalist might choose to quote an individual in a news story, but it is a potent one, carrying substantial authority (Page et al. 1987, 39).

But unlike that of many types of expertise, academic credibility is derived from a fairly cohesive institution, and within that institution there is a system by which to determine who is qualified to speak on which topics: peer review.

Peer review is the preferred method of internal validation in the academy for good reason; it is also a very good way for readers and journalists to reassure themselves about an academic source's expertise; it is not infallible (Henderson 2010, 738), but it seems likely that it is the best mechanism easily available for such a function (Oreskes and Conway 2010, 269).

In a perfect world, how credible a source is wouldn't matter because everything they are quoted as saying would be independently verifiable. In reality, the things academic sources are actually quoted saying are often non-factive or otherwise difficult to evaluate (Conrad 1999, 292). In these cases sources' personal credibility is the only metric by which a reader can decide how much stock to place in their utterances. Thus, how sources are presented to readers is incredibly important; scant information could lead readers to doubt trustworthy sources, or conversely trust the expertise of a source who might not merit it.

However, it is clear from the data that in coverage by America's preeminent paper of one of the highest-stakes political discussions in the country, the health care debate, academics were simply not framed clearly or transparently. Most were portrayed by way of their institutional positions and/or their broad disciplines of study, methods dramatically inadequate to express how and why an academic has applicable expertise on a topic.

This broad failure to adequately back up claims of academic expertise leaves readers vulnerable to active attempts to spread misinformation, as documented in coverage of climate change and tobacco health by Conway and Oreskes (2010) and Hoggan and Littlemore (2009). On a topic as politically heavy as health care reform, it is by no means difficult to imagine that similar attempts to misinform were made.

Even without deceptive behaviour, opaque framing also risks simple mismanagement of academic sources. Academics are highly educated and will thus often be broadly knowledgeable in a variety of fields, and as human beings many will have opinions on subjects that they in fact know nothing about at all. But actual academic expertise is an inch wide and a mile deep, subject at least in theory to constant checks and updates. A journalism which fails to recognize this will fail to take advantage of the real advantages that academic knowledge can provide, while misassigning academic prestige where it is not warranted.

The public discourse suffers when the information presented by the news media is unreliable – a journalism that aims to inform the public would therein be failing if its sources, vital to the construction of journalistic knowledge, could not be trusted.

There appears to be a journalistic format already in existence which is more inclined to portraying academic knowledge transparently and credibly: the study article. Perhaps as a simple accident of the work process that generates them, or perhaps due to different beliefs about their intended audiences, articles of this genre seem much more inclined to take the time to explain study's content and pedigree. Though the study article format is not universally applicable – if nothing else it is of no use to a journalist who wants to report on a topic that hasn't already been through academic inquiry – it is nevertheless noteworthy that there is a genre of news that appears, at least from this small sample, to already manage academic sources quite adeptly.

But even in conventional news articles, it would not take a revolution in reporting technique to close this gap. In many cases, perhaps even most, it seems likely that the reporters were personally aware of their source's peer reviewed research, but simply chose not to pass that information on to their readers. If a reporter walks into an interview without already knowing anything his or her source's academic background, it doesn't seem unreasonable to simply ask to be directed to some of the source's research in the field, or indeed to look it up back at the office. Information about a source's scholarship is not difficult to obtain, and it would require minimal changes in a journalist's professional routines to start incorporating it into the frames used to present academic sources to the public. But such a change would greatly improve the transparency and thus, I believe, enhance the credibility of the articles produced.

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