

Television News: Geographic and Source Biases, 1982 – 2004

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This is a study of news bias in U.S. network television evening news that examines the locus of news stories, who can “make news” or who constitutes a “news source.” It extends the scope of previously published analyses of geographic and sources biases in network television news. The study is based on extensive content analysis of three two-year periods of networks news: 1982 – 1984, 1992 – 1994, and 2002 – 2004. Geographic and source news biases not only existed during the period examined, they largely continued to exhibit the patterns discovered by previous studies, despite advances in newsgathering technologies employed by television news organizations.

We regularly hear claims about “news bias,” particularly when allegations are made about the coverage and content of reporting on U.S. national politics. Claims about news bias are easy to make in specific cases, by pointing to the language used in a specific story, or by noting that some sources were represented in a story and that others who one believes should have been included, but were not. In larger, more general terms, however, such types of news bias are difficult to pinpoint and analyze, if for no other reason than they rely on subjective notions of how something should be said, or about whom should be saying something in a news story.

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The article is dedicated to the memory of Beth Reed.

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There are, however, other types of news bias to be considered, ones that can be objectively measured and analyzed. Among these are the locations from which news stories are reported, the length of stories, their order in which they appear in a newscast, and the types of sources that appear in them. This study examines some of these, specifically focusing on the geographic location of network television news stories (where stories come from, as well as the location from which they are reported) and on the sources that appear in those stories.

Why is studying where news comes from important? Why should things as mundane as news stories' "datelines" be worthy of study? In his classic essay, "The World Outside and the Pictures in our Heads," Walter Lippmann (1965) noted, "The real environment is altogether too big, too complex, and too fleeting for direct acquaintance . . . we have to reconstruct it on a simpler model before we can manage with it" (p. 11). Datelines, or, in the case of this study, pictures in the form of televised images, are a means of reconstructing a simpler model of the world. "News is not merely relaying an objective truth waiting out in the world to be 'gathered,' but is instead selecting, shaping and producing its message" according to MacGregor (1997, p. 78). Whether used as "wallpaper" (pictures in front of which a journalist reports a story), or as foreground scenes of newsworthy events, images from news locations provide pictures of Lippmann's "world outside" that form the images we add to the stock of ones in our heads.

To determine who can "make news" or who is understood to be a "news source" is also vitally important. To turn again to Lippmann (1965), "Great men, even during their lifetimes, are usually known to the public only through a fictitious personality" (p. 5). But who are these people? "They come and go," Lippmann tells us, "coalesce and are forgotten, never organizing perfectly the emotion of the whole group" (p. 8). The news media make attempts to organize them, to show them to an audience. This study investigates who national network news media deem newsworthy and thus worthy of public attention, in hopes of telling us at least which of Lippman's "symbolic pictures" network television news chooses to show.

A content analysis of story location and source does not readily provide for analysis of the treatment of places and people. It does, however, shed light on what is chosen to be newsworthy for broadcast, and whether there is a geographic and/or source bias present. The conceptualization of bias used here is one of "selectivity in news reporting, which may or may not lead to the unbalanced, inequitable, or unfair treatment of individuals or issues" (Gunter, 1997, p. 16).

By extending the scope of previously published analyses of geographic and source biases in network television news from 1982 to 1984 (Whitney et al., 1989), this study is unique. While it is a replication of the analysis conducted by Whitney and his colleagues, it also extends the analysis into the 1990s and 2000s. There are no other such comprehensive and truly diachronic studies of television news time, content, geography, and sourcing. One of its primary goals is to help assess the changes that may have occurred during the 10-year span between the studies, determine trends and patterns in geographic and source bias in network television news, and analyze what geographic and source bias may tell us about network television news. It provides a singular look at nearly two decades of longitudinal research using similar, and in many cases, identical, measures to analyze the content of network news.

Though the present study and the one by Whitney et al. examine newscasts 10 years apart, Whitney and her colleagues based their study on a prior content analysis of network television news from 1973 to 1975 (Dominick, 1977). Whitney and her colleagues took Dominick's study of geographic bias a step further and included source bias in their analysis. However, the Dominick study provided insufficient information with which Whitney et al. could perform a true replication of Dominick, hence Whitney et al.'s assertion that "the Dominick study represented a jumping-off point" rather than a model for precise replication. Though the methods used by Whitney et al. were ones described by Dominick, the Whitney et al. study extended Dominick's work in two significant ways. First, Whitney et al. coded for commentary, non-U.S. news, and U.S. news from "no appropriate location."² Second, Whitney et al. computed an additional, more standardized measure of geographic bias than did Dominick. Unless noted, the present study of network television news from 1992 to 1994 replicated the Whitney et al. study.

Prior Studies: People and Places in the News

The Whitney et al. study found both a geographic bias (global and national) and a source bias. The finding of geographic bias confirmed Dominick's findings that news emanates primarily from Washington, D.C., California, and New York. However, Whitney et al. also found that, during the nearly 10 years since Dominick's research, there "was a decline by more than half in news emanating from Washington and a tripling of news from no single domestic location" (Whitney et al., 1989, p. 172). The authors speculated that such change "may be intentional and deliberate on the part of the networks, an explicit effort to broaden the definition of news and broaden its appeal to a demographically diverse audience" (p. 172). However, earlier in their article, they note that geographic bias may also be "attributable to the networks' having film crews and reporters already stationed in (particular) cities or to their owning and operating television stations in them," and therefore one may find a " 'bias' of television news will be toward metropolitan centers which are routinely and predictably part of the 'news net'" (p. 160). The latter explanation is more likely, or at least, in some sense, "enabling," insofar as technology allowed the realization of the broadening that Whitney et al. claimed may have happened. Similarly, "access to dedicated telephone cables for transmission of stories" being available in urban centers where news bureaus are located makes it "more convenient, cheaper, and quicker than feeding news from other places" (p. 160).

A goal, therefore, of the present study of network television news is to determine if the trend away from Washington and toward "news from nowhere" that Whitney et al. spotted has continued, and whether it may strengthen the technological hypothesis. The availability of news (and particularly of visual images associated with news) via Electronic News Gathering (ENG) technologies has been responsible for the continued dispersion of news locations. The Internet has also become a means by which journalists can share words, sounds, and images from remote locations. MacGregor (1997) noted that "getting the story first . . . is a function of two factors: finding the story and then getting it back to base. (C)ommunication technologies are central to the newsgathering process" (p. 174).

² Whitney and colleagues (p. 189) defined such stories as "'roundup' stories giving no weight to particular states, such as weather and 'reaction' stories to events, or purely 'national' stories such as a political poll (p. 173). Their definition was used in the present study.

In the 10 years between the Whitney et al. study and the present one, ENG technology has not only continued to develop but also has continued to decrease in cost. While no figures are available that show the increasing acquisition of ENG equipment at news stations, it is clear from anecdotal evidence that most stations now have quite mobile news crews. Broadcast news trade publications regularly covered developments in ENG technology in the early 1990s. One report about satellite newsgathering (SNG) noted that audience expectations had changed and viewers expected live coverage (McConnell, 1994). It was noted that SNG (and ENG before it) clearly connected to journalistic routines: "If (a) truck can get to the scene and set up to transmit . . . (a) station usually can be first with the story" (p. 36).

Other developments in technology used for newsgathering and general broadcast journalism might also have consequences for geographic dispersion of news location. Digital technologies for video compression, for example, made it easier in the 1980s to transmit audio and video over satellite and wire. Industrial matters may have also played a role in changes in geographic and source bias. For instance, in the interval between the Whitney et al. study and the present one, the Cable News Network (CNN) showed rapid growth, household penetration, and public awareness. Its maintenance of many news bureaus, deployment of journalists in the field, and emphasis on "breaking news" on location may have pulled network newscasts toward providing similar programming. More recently, downsizing at CNN and other news operations has led to emphasis on "videojournalists," "train(ed) producers (who) . . . shoot and write their own segments with handheld digital video cameras" (Hagan, 2001, p. 64). The deployment of "embedded journalists" using satellite telephones and other new technologies during the 2003 Iraq War showed just how mobile broadcast journalism has become. Even the use of digital cameras and camera phones by citizens to take live pictures on the scene of an event, (as occurred during the southeast Asia earthquake and tsunami in December 2004; the London Underground bombings in July 2005; and the crash of an Air France jet in Toronto in August 2005) might have consequences for a network's ability, interest, and perceived necessity, by bringing more images from areas outside the sites in which reporters and news bureaus are readily available.

Development of syndicated news services (the Associated Press's APTV is but one example) that provide coverage of breaking stories may also alter the places from which news comes. Although network newscasts likely do not often avail themselves of such "packaged" news, it is possible that competitive pressures brought about by local network affiliates' use of them pushes the networks to "up the ante" and provide more live, on location coverage.

The spread of video cameras among the general population in the U.S. has also meant that, particularly in cases of disasters like tornadoes and floods, video from the news scene is increasingly available to news stations. Like Tuchman's (1978) notion of a professional "news net" in a sense, the deployment of human and technological resources by news organizations at places where it is thought news will occur, is thus joined by an amateur "news net," one presently best illustrated by blogging. Concomitantly, the use of satellite and other forms of connection between network news operations has meant that local news stations can easily share video, thereby expanding the professional news net further. In some cases, local television news stations will provide facilities for the networks to report a story (particularly in the case of protracted news stories, such as the Waco, Texas standoff). International

news may be affected as well by these technologies, as was the case when CNN used a videophone hookup to transmit live pictures of a U.S. spy plane crew in Hainan, China (Bauder, 2001). It has also been affected by coverage partnerships. As Seib pointed out, the U.S. news networks “rely increasingly on their partnerships with foreign networks” to gather international news (2001, pp. 45 – 46). The videophone’s use came to prominence when CNN deployed it in Afghanistan in late 2001, as did the networks’ “two decades’ worth of budget cuts in foreign news” that made it difficult for them to get news from a part of the world they “have tended to cover from London” (Barringer, 2001). One can reasonably expect such technological developments to have consequences for the geographic bias of news. Gunter noted that “political and regulatory changes (and) economic forces” (1997, p. 158) in addition to, or in combination with, technological evolution could have consequences for news bias, too.

In regard to source bias, one can reasonably expect a dispersion of sources for the aforementioned reasons of technological change. It is important to note that those changes may alter source bias by altering the locus of decision-making concerning sources. More sources may be found on location rather than be contacted separately from the site of a news story. Whitney et al. found that “news . . . tends strongly to favor established institutional sources, most especially governmental, military, political, business, and professional sources” (p. 172) and hypothesized that “news is news of ‘knowns’ in power centers . . . Where ‘unknowns’ come into the news, they generally do so in a frame provided by the networks – as victims or examples” (p. 172). The Dominick study, however, did not examine source bias, and thus a goal of the present study is to provide comparable trend data that Whitney et al. were unable to provide. The Whitney et al. study also found a strong bias toward male sources (86.4% of sources identifiable by gender were male), and the authors believed such bias may reflect the focus on “power centers.” If the previously mentioned technological changes have had an effect on geographic bias and moved news away (to some extent at least) from power centers, one should expect the bias toward male sources to decline. Indeed, at the very least, one should expect an increase in “unknown” sources from an increase in the use of amateur video and news “in the field.”

Method

The content analysis performed for this study followed the same procedure as that for the 1989 Whitney et al. study, who themselves “followed a procedure equivalent to that employed by Dominick (1977)” (Whitney et al., 1989, p. 162).

A sample of two years of network evening newscasts, Monday through Friday, from May 1992 to April 1994, and from May 2002 to April 2004, was analyzed. Following the procedures established by Dominick and Whitney et al., a composite week for each month was created, creating five sample dates per month representing each day of the week. Doing so yielded a sample of 120 newscasts per network, a total of 360 news programs, for each two-year period. Following Whitney et al., the newscasts were not analyzed from videotape; rather the program summaries from the Vanderbilt *Television News Index* were analyzed. The content coders were the author, six undergraduate students at the University of Illinois at Chicago, two graduate students at the University of Illinois at Chicago, and a graduate of the University of Wisconsin – Whitewater.

A total of 2,638 newscast items were analyzed for the period 1992 – 1994, and 2,921 newscast items were analyzed for the period 2002 – 2004 using the following categories:

- Date of newscast
- Newscast network origin
- Location of the item in the newscast (sequential, first to last)
- Placement of item in the newscast (first third, second third, last third of newscast)
- Total time of item (in seconds)

Story type was coded along two dimensions, whether the item was news or commentary (the latter being identified in the Vanderbilt *Television News Index* as such) and whether the story concerned domestic or foreign news. Foreign/international news was further divided into those stories in which a U.S. interest of any sort was made explicit, those that were entirely international, and those in which no U.S. interest was mentioned.

Following Whitney et al., the content/topic coding system was devised by R. L. Stevenson and colleagues (Stevenson, 1984). Each newscast item is coded into one of 18 topics as a main topic, and may be additionally assigned into one or two additional subsidiary topics. First, however, each story is coded by the location about which it contained the most information. Whitney et al. broke from the Dominick study by coding every story, while Dominick coded only national news. Whitney and colleagues excluded stories without a national focus for purposes of comparison to Dominick. This study followed the strategy used by Whitney et al. and coded every story, and “stories from Canada, Mexico, the Soviet Union, the Falklands, and the United Nations were coded for each, and for stories from other nations, each was assigned to a region” (p. 163). For the present study, international coding was by region only as follows:

- Mexico
- Canada
- Central America/Caribbean
- Asia/Pacific
- Africa (not including Egypt)
- Europe
- United Nations (NYC)
- Middle East
- No appropriate foreign location

Some individual countries, such as ones in the Middle East, were coded separately and aggregated later into the larger regional category so that future studies could provide more specific geographic results than are available from Whitney et al. Very few instances were found, however, of news stories with a focus in another country. It is notable that the breakup of the Soviet Union had consequences for coding international stories. For purposes of the present study, stories from former Soviet republics were coded as European in origin. Science stories were broken down further for the 2002 – 2004 analysis than in previous years to include separate categories for medical and Internet stories.

Source coding followed the Whitney et al. study. Sources were coded according to affiliation/identification (whether they belonged to an organization or institution, or were speaking as private individuals), official representation (whether they were speaking on behalf of an organization or institution), and gender. For the 2002 – 2004 coding scheme, categories were added for foreign government officials and leaders. As was the case with the 1989 study, the *Vanderbilt Television News Index* provides information about sources only when they are shown on screen or can be heard via audio feed. Sources quoted by anchors and reporters are not represented. However, as Whitney et al. noted, rather than adversely affecting data collection, it is likely that “what we have is an analysis of a source record that documents only those sources contacted at the specific behest of the network news operations, not the total of sources available to the network through all sources, such as wire services” (1989, p. 164).

Intercoder reliability was measured by having the author recode all items from one randomly selected newscast for each other coder (N=7), computing reliability as coder agreement on decisions divided by total number of coding decisions for each category. Overall intercoder reliability across all categories and coders was 90.6%. Reliabilities for individual variables were: story type, 97.2%; story focus, 80.1%; content, 85.1%; source codes, 84.2%; source standing, 95.1%; source gender, 97.2%.

Results

The analysis of ABC, CBS and NBC weekday evening newscasts between 1992 and 1994 yielded interesting findings in its own right and interesting comparisons to the study by Whitney and colleagues of newscasts from 1982 and 1984.

The news items coded were distributed evenly across networks (ABC = 34.4%, CBS = 32.0%, NBC = 33.5%). The distribution was little changed from that reported by Whitney et al. The total number of news stories differed greatly, however. While the 1982 – 1984 analysis produced 5,190 news items, the 1992 – 1994 analysis resulted in 2,638 news items and the 2002 – 2004 analysis resulted in 2,921 items. Since the newscasts themselves did not change in length (remaining at 30 minutes per newscast, including commercials), there has clearly been an increase in length of newscast items since 1982 – 1984 (See Table 1.). Whereas the 1982 – 1984 news items averaged 90 seconds (mean = 90.1, s.d. = 89.6), the 1992 – 1994 average was just over two minutes (mean = 127.7, s.d. = 48.8), and the 2002 – 2004 average was also just over two minutes (mean = 128.4, s.d. = 103.7).

Table 1. Average length of newscast items, 1982 – 2004

	Average length of newscast item, in seconds	Standard deviation, newscast items, in seconds	Average items per newscast
1982 – 1984	90.1	89.6	15
1992 – 1994	127.7	48.8	12
2002 – 2004	128.4	103.7	11

It is interesting to note the vast differences in standard deviation more than the changes in mean time of news items. Even after removing the 10-second long nightly reports coded by Whitney and colleagues of Dow Jones averages in each network newscast (that in 1982 – 1984 themselves accounted for 360 news items) the 1982 – 1984 average news item length increases to 96 seconds, still considerably shorter than in 1992 – 1994 and 2002 – 2004. Another study of six months of network evening newscasts (from January through June 1998) found the average news item length to be 130 seconds, portending a potentially ongoing increase (Tyndall, 1998). A study of 27 years' worth of network television by Riffe and Holm (1999) found that "only CBS exhibited a significant trend to pieces of more than a minute in length (p. 12). It may be that Riffe and Holm's use of "four constructed weeks . . . per year" (p. 6) had consequences for findings reported per year. In the 1982 – 1984 Whitney et al. report and in our analysis of newscasts from 1992 – 1994 and 2002 – 2004, no significant differences were found between any of the networks in regard to newscast item length and number of items per newscast (by chi-square or t-test). Networks are thus not treated separately in the analysis.

Riffe and Holm (1999) also noted "a decreasing number of (news) items per year" (p. 8). The content analysis of network newscasts from 1992 – 1994 found that the average number of stories in a newscast dropped from 15 in 1982 – 1984 to 12 in 1992 – 1994. In the 2002 – 2004 analysis, the average number of items per newscast fell further, to 11. The news hole grew by 6% from 1982-1984 to 2002-2004, or roughly by an average of just over one minute per newscast. Presuming that network news decision makers' programming choices are at least in part determined by their interpretation of audience ratings, the 1992 – 1994 findings on story length confirm the ones in a report by Rosenstiel, Gottlieb and Brady (1999) that audiences look favorably upon longer news stories. Network executives, then, are either convinced that they must slightly increase the news hole to hold viewers, or they are having a difficult time attracting advertisers (or both).

Table 2. Type of story by general location/interest

	National news	International news with U.S. interest mentioned	International news with no mention of U.S. interest
1982 – 1984	66.4%	19.2%	14.4%
1992 – 1994	75.0	13.4	11.4
2002 – 2004	61.9	24.2	9.6

News stories accounted for 95.7% of all newscast items in 2002 – 2004, 98.5% of all newscast items in 1992 – 1994, and 98.2% in 1982 – 1984. National news accounted for 61.9% of all items in 2002 – 2004 and 75.0% of all items in 1992 – 1994, compared to 66.4% of all items in 1982 – 1984. International news in which a U.S. interest was mentioned accounted for 24.2% of all items in 2002 – 2004 and 13.4% of all items in 1992 – 1994, while in 1982 – 1984 it accounted for 19.2%. However, "pure" international news declined over the periods of analysis, accounting for 9.6% of all items in 2002 – 2004, 11.4% in 1992 – 1994, and 14.4% in 1982 – 1984 (See Table 2.). The trend toward increased news with U.S. interest mentioned and a decrease in "pure" international news may be a result of reporting on

the war in Iraq and a post-9/11 awareness of the U.S. in the world, rather than an increasing disregard for reporting from other countries when no clear U.S. interest is at stake. Our findings also confirm those of Riffe and Budianto, who, in a 30-year analysis of network news, found that “the proportion (of news time) devoted to international news has been decreasing significantly” (2001, p. 13). As in the Whitney et al. study, neither chi-square nor *t*-test (nor ANOVA in the case of story length) produced evidence of significant differences between any of the networks on the foregoing variables.

Content

Content was coded by topic (main and two subsidiary topics). Table 1 reports main and total content classifications for network news 2002 – 2004, 1992 – 1994, and 1982 – 1984 (as reported by Whitney and colleagues) and the percent change in each category.

Table 3. Main topic/content categorizations for network weekday newscasts May 2002 – 2004, May 1992 – April 1994, and May 1982 – April 1984 (as reported by Whitney et al., 1989). (In percents; total adds to more than 100% due to rounding.)

	Main (2002 – 2004)	Main (1992 – 1994)	Main (1982 – 1984)	Percent change of main topic, 1982 – 1984 to 1992 – 1994	Percent change of main topic, 1992 – 1994 to 2002 – 2004	Percent change of main topic, 1982 – 1984 to 2002 – 2004
International politics	11.3%	15.1%	9.4%	+60.6%	-25.2%	+20.2%
Domestic politics	9.3	25.2	15.0	+68.0	-63.1	-38.0
Military and defense	10.9	7.2	13.5	-46.7	+51.4	-19.3
Economic matters	8.3	9.0	20.0	-55.0	-8.4	-58.5
International aid	0.4	1.0	0.6	+66.7	-60.0	-33.3
Social services	0.2	1.0	3.5	-71.4	-80.0	-94.3
Crime, judicial, legal	23.8	14.8	13.6	+8.0	+60.8	+75.0%
Culture, arts	0.3	0.6	0.9	-33.3	-50.0	-66.7
Religion	0.6	0.8	0.8	0.0	-25.0	-25.0
Science, medical	8.4	8.3	4.7	+76.6	+1.2	+78.7
-Science and technology (not medical or Internet)	0.9					
-Medical	7.2					
-Internet	0.3					
Sports	1.3	3.6	2.8	+28.6	-63.9	-53.6
Entertainment	0.6	1.4	1.3	+7.7	-57.1	-53.8
Personalities	2.5	0.5	1.6	-68.8	+400.0	+56.3

Human interest	4.4	3.0	3.1	-3.2	+46.7	+41.9
Student affairs	0.6	1.7	0.3	+466.7	-64.7	+100.0
Ecology, pollution	1.0	1.3	1.3	0.0	-23.1	-23.1
Accidents, disasters	5.6	5.3	6.6	-19.7	+5.7	-15.2
Science and technology (not medical or Internet)	0.9	N.A.	N.A.			
Medical	7.2	N.A.	N.A.			
Internet	0.3	N.A.	N.A.			
Other	9.6	0.3	1.0	-70.0	+3100.0	860.0
Total	100.0%	100.1%	100.0%			

Table 4. Total topic/content for network weekday newscasts May 2002 – 2004, May 1992 – April 1994, and May 1982 – April 1984 (as reported by Whitney et al., 1989). (In percents; total adds to more than 100% due to rounding.)

	Total (2002 – 2004)	Total (1992 – 1994)	Total (1982 – 1984)	Percent change of total topic, 1982 – 1984 to 1992 – 1994	Percent change of total topic, 1992 – 1994 to 2002 – 2004	Percent change of total topic, 1982 – 1984 to 2002 – 2004
International politics	11.6%	19.6%	17.8%	+10.1%	-40.8%	-34.8%
Domestic politics	8.9	30.2	18.9	+59.8	-70.5	-52.9
Military and defense	12.8	17.6	18.4	-4.3	-27.3	-30.4
Economic matters	7.9	21.6	25.8	-16.3	-63.4	-69.4
International aid	0.5	2.8	1.5	+86.7	-82.1	-66.7
Social services	0.2	2.6	6.1	-57.4	-92.3	-96.7
Crime, judicial, legal	22.3	23.2	16.5	+40.6	-3.9	+35.2
Culture, arts	0.5	1.5	1.6	-6.3	-66.7	-68.8
Religion	1.4	2.0	2.4	-16.7	-30.0	-41.7
Science, medical	9.1	11.9	5.6	+112.5	-23.5	+62.5
Sports	1.6	3.3	4.4	-25.0	-51.5	-63.6
Entertainment	0.7	2.8	2.0	+40.0	-75.0	-65.0
Personalities	2.9	1.1	3.0	-63.3	+163.6	-3.3
Human interest	4.1	5.9	4.5	+31.1	-30.5	-8.9
Student affairs	0.9	3.3	0.6	+450.0	-72.7	+50.0
Ecology, pollution	1.2	2.2	1.9	+15.8	-45.5	-36.8
Accidents, disasters	4.5	6.5	7.0	+7.1	-30.8	-35.7
Other	8.9	0.4	0.9	-55.6	+2125.0	+888.8

Tables 3 and 4 show that newscasts during all three periods of analysis were dominated by several content categories. Whitney and colleagues found economic matters, domestic and international politics, military and defense, and crime categories dominant in the 1982 – 1984 period. In 1992 – 1994 and in 2002 – 2004, domestic and international politics, crime, economic matters, and science and medical categories were most dominant. Most interesting are the relative changes in categories during the 20-year period. International politics became increasingly dominant over domestic politics, perhaps in some sense balancing the decrease in “pure” international news. Military and defense stories became less dominant from 1982 – 1984 to 2002 – 2004, but showed a strong increase from 1992 – 1994 to 2002 – 2004. Crime stories increased only slightly during the first 10-year period, but grew strongly during the second 10-year period. Stories in the science and medical categories nearly doubled in frequency. A drop in stories related to economic matters may be due to a change in procedure. Whereas Whitney and colleagues coded stock exchange numbers presented on the TV screen as 10-second news stories, the present study did not. However, the drop between the 2002 – 2004 and 1992 – 1994 periods would indicate that economic stories are generally diminishing in newscasts. (Categories with little overall representation show exaggerated variation since small changes have proportionately greater impact on the calculation of percentages.)

Table 5. Top 10 main topic/content categorizations for network weekday newscasts May 2002 – 2004, May 1992 – April 1994, and May 1982 – April 1984 (as reported by Whitney et al., 1989)

Rank	2002 – 2004	1992 – 1994	1982 – 1984
1	Crime, judicial, legal	Domestic politics	Economic matters
2	International politics	International politics	Domestic politics
3	Military and defense	Crime, judicial, legal	Crime, judicial, legal
4	Other	Economic matters	Military and defense
5	Domestic politics	Science, medical	International politics
6	Science, medical	Military and defense	Accidents, disasters
7	Economic matters	Accidents, disasters	Science, medical
8	Medical	Sports	Social services
9	Accidents, disasters	Human interest	Human interest
10	Human interest	Student affairs	Sports

The finding by Whitney et al. that “five categories (of news topics) account for almost three-quarters of the main content categories for network news, and among the other categories, only accidents and disasters account for more than a twentieth of such news” (p. 165) is also the case in 1992 – 1994. The differences in rank are interesting (see Table 5). The science and medical category in 1992 – 1994 replaced the military and defense one in the 1982 – 1984 “top five,” while military and defense returned to the top five in 2002 – 2004 and economic matters dropped out of the top five. Science and medical content was also displaced, and the “other” category was the fourth largest content category in 2002 – 2004. Along with the relative drop in the total content that the top five categories represented, the dramatic rise in “other” stories may indicate a trend toward content diversification. The top three categories came to be even more dominant 10 years after Whitney et al., accounting for more than half of all main news content, but fell back to near the 1982 – 1984 level in 2002 – 2004 (at 46.0%).

Focus

Analysis of news item location revealed a similar trend to that which was found in the changes in news content. A more detailed analysis will be provided below. Whitney et al. found that two-thirds of network news was focused exclusively on the U.S. The present study found three-quarters with a U.S. focus. In both the Whitney et al. and present studies, news with an international focus was dominated by stories from the Middle East. In the 2002 – 2004 period, 5% of all stories had a focus in Iraq, accounting for 28% of all stories with a focus outside of the U.S., largely due to the war the U.S. began there in 2003. The next most prominent non-U.S. locations were Europe and Central and South America. Canada and Mexico received comparatively little attention. In 1982 – 1984, 14 stories with a Canadian location were coded compared to five in 1992 – 1994 and 13 in 2002 – 2004. Twelve stories with a Mexican location were coded in 1982 – 1984, compared to nine in 1992 – 1994 and seven in 2002 – 2004. It is particularly interesting to note the decrease in stories from those locations given the increased importance of trade agreements between Mexico, Canada, and the U.S., as well as the discussions about homeland security at U.S. borders. The decrease can be potentially explained by a focus on U.S. viewpoints and impacts that would cause a report to emanate from a U.S. location rather than from within those other countries. Another interesting change during the two 10-year periods between the analyses is an increase in stories with an African location. Whitney and colleagues coded 37 stories emanating from Africa, while the present study coded 84 in 1992 – 1994 but only 21 in 2002 – 2004. The increase in 1992 – 1994 may be due to civil unrest, American involvement in the affairs of African countries, and stories about the AIDS epidemic. However, as Whitney et al. note, “nations accounting for two-thirds of the world’s population garnered just over one percent of network evening newscast stories during the sampled dates” (p. 165). The present study showed no significant increase in reporting from those nations.

Sources

More detailed analysis of news sources will be provided below. It is important to note that 2,026 of the 2,638 stories (76.8%) in 1992 – 1994 had one or more sources, but in the 2002 – 2004 period only 1,780 of 2,921 stories (60.9%) had one or more source. These figures are both significantly higher than the findings of Whitney and colleagues (2,200 of 5,190 stories, 42.4%, had at least one source). The increase may be due to the aforementioned changes in newsgathering technology, but they may also be due to changes in news programming and perceptions of audience interest. When considered along with the finding that news story length has increased, one may surmise that lengthening has come at little “cost” (in terms of additional reporting that would garner more sources) to the networks, and that the increase is likely due to adding time for reporter comments and/or pictures.

The more interesting comparison is between the present study’s findings of the number of sources per story compared to the findings of the same by Whitney and colleagues, summarized in Table 6. Consistent with the finding that news stories had increased in length, one finds that the number of sources beyond the first has increased greatly in the 20-year time period and the number of stories with only one source, or with no sources, has decreased significantly. It is conversely possible that the finding of additional time per news story during the same period is either a result of, or perhaps caused by, an

increase in news sources used. Such increases may in turn have been caused by changes in newsgathering technology that resulted in a decrease in the cost associated with getting news sources for a story. The decrease in the number of news stories with only one or two sources is consistent with the increase in story length, as one should expect that longer stories would have more sources. However, as Whitney (2000) pointed out, "cutbacks in network news staffs have meant fewer, more drawn-out accounts with reporters taking more of the total time in news items talking (talk is cheap)."

Table 6. Comparison of number of news sources May 1992 – April 1994, and May 1982 – April 1984 as reported by Whitney et al. (1989) (In percents)

	2002 – 2004	1992 – 1994	1982 – 1984	Percent change, 1982 – 1984 to 1992 – 1994	Percent change, 1992 – 1994 to 2002 – 2004	Percent change, 1982 – 1984 to 2002 – 2004
One source	13.3%	14.3%	29.4%	-51.3%	-7.0%	-54.8%
Second source	24.4	24.4	31.4	-22.3	0.0	-22.3
Third source	27.0	25.8	18.9	+36.5	+4.7	+42.9%
Fourth source	18.0	35.3	11.3	+212.4	-49.0	+59.3
Fifth source	9.0	0.2	6.0	-96.7	+4400.0	+50.0
Sixth source	8.3	0.0	3.0	-100	+8300.0	+176.7
TOTAL	100%	100%	100%			

Findings on Geographic News Bias

The report of findings by Whitney and colleagues improved on Dominick's work in two ways. First, and most important, Whitney and colleagues computed an "attention ratio" in addition to Dominick's "attention index." The latter was determined by subtracting the percentage of population within each state or region of the U.S. from the percentage of news time coded for that state or region. The central premise for such a measure is the hypothesis that "news items are not distributed proportionate to the population" (Whitney et al., 1989, p. 160). But, as Whitney et al. noted, the attention index did not account for wide variations of population by state and region. Consequently they developed an attention ratio measure, computed as percentage of news time divided by percentage of population and "expressed as a percentage of over – or under – coverage" (Whitney et al., 1989, p. 166) that provides a "more standardized measure" of the amount of news time given to a state or region in relation to its population. The present study will therefore compute only the attention ratio and compare it to that found in the

Dominick and Whitney et al. results. Second, whereas Dominick used 1970 U.S. census data to calculate the relationship between 1973 – 1975 network news coverage in relation to population, Whitney and colleagues used 1982 population figures for their study of 1982 – 1984 network newscasts. The present study will use 1992 population figures for analysis of 1992 – 1994 network newscasts and 2002 population figures for analysis of 2002 – 2004 data.

As was the case with the Dominick study, Whitney and colleagues excluded all news items coded as commentary, non-U.S. news, and U.S. news from “no appropriate location,” and we did the same in our analysis. Whitney et al. found “substantial differences between Dominick’s finding” (1989, p. 166) and their own concerning domestic news. Dominick found that about 50% of news (not including foreign news and commentary) came from Washington, D.C., and 5% was from “no appropriate location” in the U.S., while Whitney and colleagues found that “18.1% of non-foreign-focused news stories emanate from Washington, while another 36.3% are domestic ‘no appropriate location’ stories” (1989, p. 166). The present study found that in the 1992 – 1994 period, 44.6% of news stories emanated from Washington, D.C., and 13.3% came from “no appropriate location” in the U.S., while in the 2002 – 2004 period, only 18.3% of stories emanated from Washington, D.C., and 5.5% from “no appropriate location” in the U.S. Whitney and colleagues noted that summing those figures to compare them with Dominick’s findings provided a more suitable comparison. According to Whitney and colleagues, Dominick found that “55% of U.S. news did not come from identifiable states and regions other than Washington, D.C.” while they found “that 54.4% did not” (1989, p. 166). The 1992 – 1994 figure of 57.9% compares well with Dominick’s and Whitney’s, et al. and further confirms Whitney and colleagues’ claim “*a la* Epstein (1974), that a substantial amount of network television news is ‘from nowhere’” (1989, p. 166). The 2002 – 2004 figure of 76.2% of news coming from identifiable states other than Washington, D.C., would seem to signal a shift in geographic focus. However, the shift is biased. More news stories were identified as coming from New York (stories from that state nearly doubled in number from 1992 – 1994 to 2002 – 2004) and it would appear that the shifts away from Washington, D.C., went toward New York in 2002 – 2004. Although the time period of the analysis began some months after the events of 9/11, it is likely that ongoing coverage of those events provided the boost in New York’s numbers.

Table 7 provides better measure and comparison by changing the unit of analysis from news stories to minutes. The results reported in that table exclude Washington, D.C. Whitney et al. found that stories from there accounted for 29.9% of domestic news time, but the District of Columbia had only 0.3% of the U.S. population, creating an “attention ratio” of 100, or 10,000%.

Table 7. Comparison of news time with regional population percentage and as attention ratio for 1973 – 1975, 1982 – 1984, 1992 – 1994 and 2002 - 2004 weekday evening network news

Region*	Percentage of 2002 – 2004 news time	Percentage of 1992 – 1994 news time	Percentage of 1982 – 1984 news time	Percentage of 2002 population	Percentage of 1992 population	Percentage of 1982 population	2002 – 2004 attention ratio	1992 – 1994 attention ratio	1982 – 1984 attention ratio ^a	1973 – 1975 attention ratio ^a
Midwest	8.4%	12.8%	18.7%	20.6%	21.7%	23.2%	0.41	0.59	0.81	0.74
Northeast	48.9	27.3	22.8	16.2	17.1	18.1	3.02	1.60	1.26	1.17
Pacific	14.9	26.3	19.5	16.1	16.0	14.3	0.93	1.64	1.36	1.65
South	7.9	10.9	12.4	14.8	14.1	13.4	0.53	0.77	0.93	1.02
Southwest	5.9	12.3	8.7	10.2	10.8	10.9	0.53	1.14	0.80	0.58
Middle Atlantic	5.6	13.8	2.3	7.4	7.3	7.2	0.75	0.52	0.32	0.69
New England	2.9	2.6	6.6	7.2	5.2	5.4	0.41	0.51	1.22	1.08
Mountain	4.7	3.7	7.1	6.7	5.7	5.2	0.71	0.65	1.39	0.78
Plains	0.8	0.4	1.7	2.0	2.2	2.3	2.0	.17	.74	1.60
Total	100.0%	100.1%	99.8%	101.2	100.1%	100.0%				
Total news minutes	2,786	2,657	2,595							

*Note: States in each region are listed in Table 4. Population, news time exclude Washington, D.C., "no appropriate location" news.

^aSource: Whitney et al., 1989

The present study found that in 1992 – 1994, stories from Washington, D.C., accounted for 32.8% of news time, but the District of Columbia had a little more than 0.2% of the U.S. population, resulting in an attention ratio of 164, or 16,400%. In 2002 – 2004, stories from there accounted for 38.0% of news time. The District of Columbia still had only 0.2% of the U.S. population in 2002, and the attention ratio actually increased to 189.9, or 18,900%. Thus, even though more news stories emanated from New York in 2002 – 2004 than in previous periods of analysis, Washington, D.C., had an increase in the amount of news time that it was given.

Table 7 also shows that there are considerable differences in news time apportioned to different regions of the U.S. The Northeast continued to be over-covered in relation to other regions and gained in coverage since 1982 – 1984. Due to the aforementioned increase in news stories from New York and news time from Washington, D.C., its gains were most impressive in the most recent period of analysis. The Southwest, too, gained in coverage (until 2002 – 2004), but as is shown in Table 8, its gain is due to increased coverage in Arkansas, due in turn to reporting on the 1992 Presidential campaign and Bill Clinton's candidacy. It is evident from Table 7 that these gains came at the expense of coverage of other regions, just as it is evident that changes in the attention ratio in the 2002 – 2004 period are, by and large, due to the increase in coverage from New York and Washington, D.C. Changes in attention ratio are themselves interesting. Two regions, Mountain and New England, that had been over-covered according to calculation of attention ratio in 1982 – 1984, were, in 1992 – 1994 and in 2002 – 2004, under-covered. The Plains states, barely covered in 1992 – 1994, increased in coverage significantly, but such changes are due to an increase from four stories and 16.4 minutes of coverage in 1992 – 1994 to 15 stories and 23.5 minutes of coverage during all of 2002 – 2004. Data analyzed by Whitney and colleagues showed that "deviations from the population norm, by region, are slightly less in 1982 – 1984 than they were in 1973 – 1975" (1989, p. 169). Such is not the case from 1982 – 1984 to 1992 – 1994, nor is it the case from 1992 – 1994 to 2002 – 2004. Whether the apparent increase in the rate of change of regional attention ratios is evidence of a greater degree of mobility among the three TV news networks is difficult to say, but it is likely not the case. For one thing, the changes in attention ratio in regions other than the Midwest, Northeast, and Pacific (and Washington, D.C.) seem to be due to changes in coverage in very few locations (typically urban areas that have long been "news centers") rather than to coverage of the regions overall. For another thing, in many regions, such as the aforementioned Plains, small changes in the number of stories or news time translate to big changes in the attention ratio.

The finer-grained analysis of state population, news time, and attention ratios in Table 8 provide further evidence of such concentration.³ As with the previous studies of geographic bias in network television news, New York, California, and Florida continue to be among the most over-covered states. The most under-covered states, however, have increased in number and in the amount of under-coverage. Whitney and colleagues found that, in 1982 – 1984, only Delaware had an attention ratio of zero. In 1992 – 1994, Alaska, Wyoming, and North Dakota had an attention ratio of zero, and in 2002 – 2004, Delaware and Wyoming had an attention ratio of zero.

³ Even though the study consists of a fairly large sample of news items, there is still a very large sampling error associated with any single state. Thus, at that level, there may very well be sizeable variations for single states, particularly small ones with little news coverage in one study.

Table 8. Comparison of news time by state population percentages and as attention ratio for 1982 – 1984, 1992 – 1994 and 2002 – 2004 weekday evening network news

	Percent news time, 1982 – 1984	Percent news time, 1992 – 1994	Percent news time, 2002 - 2004	Percent population, 1982 – 1984	Percent population, 1992 – 1994	Percent population, 2002 – 2004	Attention ratio, 1982 – 1984	Attention ratio, 1992 – 1994	Attention ratio, 2002 – 2004
Midwest									
Illinois	8.02%	3.54%	4.18%	4.96%	4.57%	4.37%	1.62	0.78	0.95
Iowa	1.11	0.99	0.13	1.26	1.10	1.02	.88	0.90	0.31
Missouri	1.85	2.58	0.34	2.14	2.04	1.97	.86	1.27	0.17
Michigan	2.67	3.02	1.58	3.94	3.72	3.49	.68	0.81	0.45
Ohio	2.72	1.32	0.75	4.67	4.33	3.96	.58	0.31	0.19
Minnesota	1.01	0.43	0.88	1.79	1.76	1.75	.56	0.25	0.52
Wisconsin	0.79	0.72	0.05	2.06	1.97	1.89	.38	0.37	0.03
Indiana	0.50	0.18	0.34	2.37	2.22	2.14	.21	0.08	0.16
Northeast									
New York	17.96	23.22	42.97	7.65	7.11	6.65	2.34	3.27	6.41
Pennsylvania	3.30	1.55	1.05	5.14	4.71	4.28	.64	0.33	0.24
Maryland	0.64	1.78	3.55	1.85	1.93	1.89	.35	0.92	1.87
New Jersey	0.88	0.65	1.29	3.22	3.08	2.98	.27	0.21	0.43
Delaware	0.00	0.14	0.00	0.26	0.27	0.28	.00	0.51	0.00
Pacific									
California	17.60	23.18	13.55	10.71	12.13	12.15	1.64	1.91	1.11
Alaska	0.21	0.00	0.10	0.19	0.23	0.22	1.11	0.00	0.48
Hawaii	0.33	0.19	0.14	0.43	0.45	0.43	.77	0.43	0.34
Washington	1.34	1.15	0.48	1.84	2.02	2.11	.43	0.57	0.23
Oregon	0.04	1.74	0.65	1.15	1.17	1.22	.03	1.49	0.54
South									
Florida	6.70	6.02	3.25	4.51	5.31	5.79	1.49	1.13	0.56
Tennessee	2.68	0.77	0.57	2.01	1.97	2.01	1.33	0.39	0.28
Alabama	1.02	0.79	1.02	1.71	1.63	1.56	.60	0.49	0.64
Georgia	1.32	2.26	1.02	2.44	2.66	2.97	.54	0.85	0.34
Kentucky	0.42	0.45	0.31	1.59	1.48	1.42	.26	0.30	0.22
Mississippi	0.27	0.58	0.63	1.10	1.03	1.00	.25	0.56	0.63
Southwest									
Texas	7.07	8.94	3.61	6.62	6.94	7.54	1.08	1.29	0.48
Louisiana	1.00	0.88	1.24	1.89	1.68	1.55	.52	0.52	0.78
Arkansas	0.41	2.13	0.17	0.99	0.94	0.94	.41	2.26	0.19
Oklahoma	0.25	0.35	0.85	1.38	1.26	1.21	.28	0.27	0.71

Middle Atlantic									
West Virginia	0.38	0.17	0.54	0.84	0.71	0.63	.45	0.24	0.91
Virginia	1.02	2.54	1.52	2.38	2.51	2.53	.43	1.01	0.61
South Carolina	0.35	0.49	0.57	1.39	1.42	1.43	.25	0.35	0.41
North Carolina	0.62	0.58	2.92	2.61	2.68	2.89	.24	0.22	1.00
New England									
Rhode Island	0.91	0.09	0.12	0.41	0.39	0.37	2.22	0.24	0.30
New Hampshire	0.84	0.23	0.19	0.41	0.44	0.44	2.05	0.52	0.48
Massachusetts	3.61	1.26	2.22	2.50	2.36	2.23	1.44	0.53	1.00
Maine	0.60	0.33	0.13	0.49	0.49	0.45	1.22	0.67	0.25
Vermont	0.12	0.14	0.00	0.22	0.22	2.53	.55	0.62	0.00
Connecticut	0.55	0.61	0.28	1.37	1.29	1.20	.40	0.47	0.23
Mountain									
Utah	2.71	0.42	0.27	0.67	0.72	0.81	4.04	0.59	0.34
Arizona	1.74	0.44	0.39	1.24	1.52	1.89	1.40	0.29	0.20
Nevada	0.53	0.39	0.51	0.38	0.52	0.75	1.39	0.74	0.64
New Mexico	0.58	0.26	0.69	0.59	0.62	0.64	.98	0.41	1.16
Montana	0.32	0.19	0.35	0.35	0.32	0.32	.91	0.58	1.18
Wyoming	0.19	0.00	0.00	0.22	0.18	0.17	.86	0.00	0.00
Colorado	0.94	1.74	2.44	1.32	1.36	1.56	.71	1.28	1.53
Idaho	0.12	0.22	0.08	0.42	0.42	0.47	.29	0.52	0.16
Plains									
North Dakota	0.60	0.00	0.10	0.29	0.25	0.22	2.07	0.00	0.48
South Dakota	0.48	0.08	0.35	0.30	0.28	0.26	1.60	0.29	1.18
Nebraska	0.39	0.12	0.28	0.69	0.63	0.60	.57	0.19	0.46
Kansas	0.28	0.17	0.12	1.04	0.99	0.94	.27	0.17	0.13

Note: Population, news time exclude Washington, D.C., "no appropriate location" new

The finding by Whitney et al. that “there is substantial over- and under-coverage” (1989, p. 169) is confirmed, and the degree of over- and under-coverage has increased. Two examples illustrate this confirmation. The first example is shown in Table 9. It shows the top five states by attention ratio for the three periods from 1982 to 2002 and includes the attention ratio for Washington, D. C.

Table 9. Top five states by attention ratio for 1982 – 1984, 1992 – 1994 and 2002 – 2004

1982-1984	1992-1994	2002-2004
Washington, D.C., 100	Washington, D.C., 164	Washington, D.C., 190
Utah, 4.04	New York, 3.27	New York, 6.41
New York, 2.34	Arkansas, 2.26	Maryland, 1.87
Rhode Island, 2.22	California, 1.91	Colorado, 1.53
North Dakota, 2.07	Oregon, 1.49	Montana, 1.18
New Hampshire, 2.05	Texas, 1.29	South Dakota, 1.18

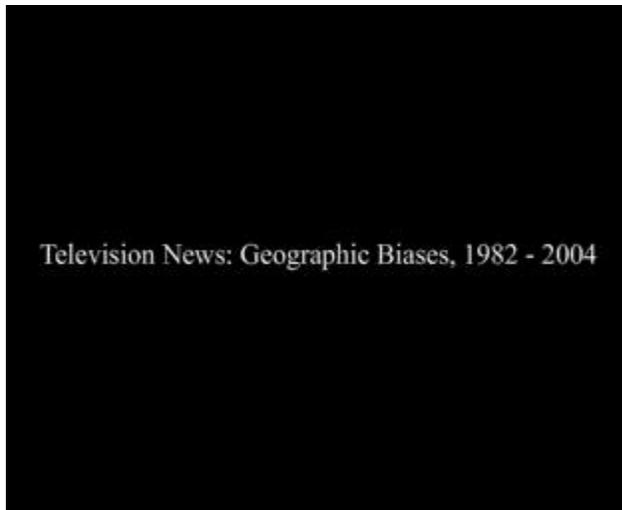
Both New York and Washington, D.C., have made enormous gains in attention, while none of the other states can be found in the top five a second time. The second example is shown in Table 10, a statistical analysis of attention ratios for all states, including Washington, D.C., for all three periods of analysis.

**Table 10. Statistical analysis of attention ratios for all states (including Washington, D.C.)
1982 – 1984, 1992 – 1994 and 2002 – 2004**

	Attention ratio, 1982 – 1984	Attention ratio, 1992 – 1994	Attention ratio, 2002 – 2004
Mean	2.8324	3.8510	4.3512
Median	.6400	.5200	.4600
Std. Deviation	13.89804	22.88159	26.53180
Variance	193.15553	523.56703	703.93620

It is clear from this analysis that there is significant increase in mean, standard deviation, and variance, as well as a significant decrease in median, from 1982 to 2002. In short, those who get a lot of attention are getting a greater share of it, and those who get little attention are getting even less of it over the 29-year time span.

The most striking display of the changes in geographic bias over time can be found in the Animation below (see supplementary file). To create the animation, data from Table 8 was entered into Mapresso web-based software, allowing for creation of area "cartograms," maps with the U.S. states distorted according to their percentage of news bias. The cartograms were exported as graphics files from Mapresso. These files were imported into Adobe Illustrator for graphic refinement and formatting. The resulting files were exported to Adobe Flash, where the transitions from one map to another were created and exported as Flash animations.



QuickTime

Click [here](#) to view video clip in QuickTime (mov) format.

The animation most clearly shows the march toward over-representation of New York and California in concert with the decline in coverage in all other states during the 20-year period for which data is available.

Indeed, the deviations found by the present study are considerably greater than those found by Whitney and colleagues and those found by Dominick. What could account for the difference? Whitney and colleagues noted two possibilities for individual states' dominance. First, "news occurs (in some states) because they are home to large cities . . . that are centers of political, economic and cultural power . . . Second . . . one or two running stories (may) account for the bulk of the coverage" (1989, p. 169). The likelihood of the first possibility is made clear by the continued over-coverage of Washington, D.C., New York, Florida, Texas and California. But the drop from over-coverage to under-coverage of Illinois is difficult to explain in this case, given Chicago's presence. However, it is possible that Illinois is under-covered as a consequence of what Dominick termed an "eclipse" effect, "whereby one or two states in a region are over-covered and the rest are under-covered" (Whitney et al., 1989, p. 170). The argument made by Whitney and colleagues is that it "is not states 'eclipsing' other states, but cities, by and large, which eclipse states" (p. 170). While the "eclipse effect" continues to be in evidence, it may well be that it is a particular news event, the "running story," that eclipses both cities and states, hence Illinois' decline in coverage from ten years ago may have been partially due to Missouri's increase in coverage, itself a result of stories related to Mississippi River flooding (and the Midwest as a whole showed a decrease in coverage). Indeed, the second interpretation, that running stories skew coverage, is validated by noting the increased coverage in Arkansas (the Clinton campaign), California (Los Angeles riots), Missouri (Mississippi flooding), and Oregon (Robert Packwood and sexual harassment charges) in 1992 – 1994, and by noting the change in coverage of North Carolina (John Edwards' vice-presidential campaign) and Massachusetts (John Kerry's presidential campaign) in 2002 – 2004. Also, as already mentioned, the events of 9/11 undoubtedly had a strong influence, particularly on the early dates in the 2002 – 2004 analysis.

However, another possibility is that the consequence of advances in newsgathering technologies has not been to "diffuse" where the news comes from, but to concentrate more news gathering from locations already covered. The cameras, news trucks, and reporters may be deployed in number to the site of a single news story, and their reports may then be collated and "packaged" with more images and sounds than in the previous decades' newscasts. Such practice would explain well the drop in the average number of stories per newscast (from 15 in 1982 – 1984, to 12 in 1992 – 1994, to 11 in 2002 – 2004) and the increase in average news story length (from 90 seconds in 1982 – 1984 to two minutes, seven seconds in 1992 – 1994, to two minutes, eight seconds in 2002 – 2004). Stories are, on average, longer because there is more that can be shown from the scene. Our findings confirm the claims by Barnhurst (1997) that despite the conventional wisdom that the news has become increasingly shorter and delivered in rapid-fire bursts, it has in fact become longer.

Further, a perception on the part of news directors and others that "reality-based TV" has changed audience expectations of television news may have created an emphasis on "live" coverage from

the scene of news stories. At the same time cutbacks in local bureaus and local news stations' news staffs might amplify geographic bias. These findings may also indicate that a "pack mentality," whether enhanced by technology or not, exists in network television news. As Ehrlich (1995) observed at a local television news operation, journalists "in the newsroom consistently measured their work against that of the three other television news operations in the market" (p. 201), and the emphasis on getting a story "live" before the competition was ever-present.

Sources in Network Evening Weekday Newscasts, 1992 -1994

Only those sources for which there was a visual image or audio recording in the newscast were coded, because these are the only ones for which the Vanderbilt *Television News Index* provides enough information to make identification possible. In the 2,921 news stories from 2002 – 2004, 5,521 sources were coded and in the 2,638 news stories from 1992 – 1994, 5,741 sources were coded, compared to 5,483 sources in 5,190 news stories coded by Whitney and colleagues. Thus, despite a decrease in the number of news stories, the number of sources increased in both of our periods of analysis. This finding is consistent with the one of increased average news story length, as it is likely that the lengthier a news story, the more sources will be presented. It may also help bolster the argument that stories are "packed" with sources to show "live" coverage as opposed to reporting from the studio. Further confirmation can be found in analyses of "sound bites" that have shown a decrease in their length (Hallin, 1992; Lowry & Shidler, 1995).

The present study's findings were similar to the ones by Whitney et al. (1989), with one significant difference. Whitney and colleagues found 540 identifiable non-domestic news sources, while the present study found only 136 such sources in 1992 – 1994 and 219 such sources in 2002 - 2004. This discrepancy is difficult to account for. It is not due to a change in methods used to compile the Vanderbilt *Television News Index*, and may, if anything, be a reflection in the decrease in international news.

Table 11. Domestic news sources for weekday network evening news 2002 – 2004, 1992 – 1994, 1982 – 1984

Government Sources	2002 – 2004	1992 – 1994	1982 – 1984 ¹
Federal officials	25.7%	26.0%	28.2%
State/local government	5.5	6.5	7.1
Other government	2.4	1.8	0.7
Political sources	1.9	3.1	4.6
Group/Institutional Sources			
Business	5.7	8.4	9.2
Political and social interest groups, labor	5.7	6.6	5.2
Other (academic, professional, religious,	22.0	19.9	19.3

sports)			
Private individuals	27.4	27.9	25.7
Total identifiable news sources	5503	5605	4886

¹Source: Whitney et al., 1989.

Official and institutional sources greatly dominated newscasts (see Table 11). The variation from one coding period to another is not great, with the possible exception of political sources (who may have been supplanted as sources by other government officials). The number of unaffiliated sources found in the present study are also similar to those Whitney et al. reported in 1989, though source gender showed a slight change from the 1982 – 1984 results. After removing sources whose gender was not identifiable, Whitney et al. found 86.4% of sources were male and 13.6% were female. The present study found 81.2% to be male and 18.8% to be female in 1992 – 1994; and 80.2% to be male and 19.2% to be female in 2002 - 2004 (see Table 12). One's hopes that the change from 1982 – 1984 to 1992 – 1994 was the start of a trend (or even significant) toward an increase in female sources are dimmed, if not dashed, by the diminished rate of change from 1992 – 1994 to 2002 – 2004. Mirroring these results, an analysis of network evening newscasts during the first six months of 1998 published by the Freedom Forum found that 87% of "expert" sound bites were from males (Tyndall, 1998).

Table 12. Domestic news source gender for weekday network evening news 2002 – 2004, 1992 – 1994, 1982 – 1984 (unidentifiable sources removed)

	2002 – 2004	1992 – 1994	1982 – 1984 ¹
Male	80.2%	81.2%	86.4%
Female	19.2%	18.8	13.6
Total	100	100	100

¹Source: Whitney et al., 1989.

As was the case with the study of news sources in 1982 – 1984, the 1992 – 1994 and 2002 - 2004 samples included the U.S. general elections (1982, 1992, 2002) and the early primary season two years later. Coverage of those elections may account for the predominance (apparently slightly diminishing over time) of government and political sources (35.5% in 2002 – 2004, 37.4% in 1992 – 1994 and 40.6% in 1982 – 1984). Federal government sources are four times more prevalent than state and local ones in both the present study and in Whitney's and colleagues' (Table 11), and the President continues to be the most frequently appearing individual news source, accounting for 6.4% in 1992 – 1994 and 4.8% in 2002 - 2004 of all news sources compared to "about 5%" reported by Whitney et al. (1989) and 8.5% reported by Gans (1979, as recomputed by Whitney et al., 1989) for 1967 television news.

As Table 11 also shows, business spokespersons' predominance in the analysis by Whitney and colleagues continued, as they accounted for nearly 29.7% of all institutional sources in 1992 – 1994, but dropped to about a fifth (20.6%) of all institutional sources in 2002 – 2004. It is difficult to account for the

change in 2002 – 2004, given the numerous accounting scandals in the news at the time, though it may be that in light of those scandals fewer business spokespersons' were deemed to be good sources. Sources in the political and social interest group category (civic and social leaders, civil and human rights groups, labor, etc.) were little represented in all three periods of analysis.

The category of sources labeled "private individuals" provides some interesting comparative data. To properly replicate the study by Whitney and colleagues, the present study followed the same procedures and rationale for source coding categories. According to Whitney et al.:

Guided by Gans (1979), we had constructed our coding categories with the following rationale in mind: The presentation of private individuals in news, as news sources, largely involves showing individuals either as "epitomizing cases," as when an out-of-work laborer is quoted to show the hardships of unemployment, or as a criminal victim or defendant or as another form of victim, or finally, as a participant in some bizarre activity. . . . We had, additionally, a residual category to allow for cases that did not fit the pattern suggested above; it contains all other private individual cases. (1989, p. 171)

Whitney and colleagues' data supported these assertions, but the present study's data are considerably more ambiguous. The majority of private individuals represented in evening network television newscasts from 1992 – 1994 and 2002 – 2004 were not classifiable, showing a two-fold jump in percentage of private individuals as news sources from 1982 – 1984. Of even greater interest is the decline in other categories of private individuals, particularly in epitomizing cases (farmers, protesters, consumers, voters, sports fans, etc.). However, the overall number of private individuals represented increased from 25.7% in 1982 – 1984 (1,256) to 27.9% (1,561) in 1992 – 1994, to 27.4% (1,509) in 2002 – 2004. What could account for the change?

**Table 13. Private individuals as domestic news sources for weekday network evening news
2002 – 2004, 1992 – 1994, 1982 – 1984**

	2002 – 2004	1992 – 1994	1982 – 1984 ¹
Epitomizing cases	7.6%	10.1%	21.5%
Crime-related	9.3	9.1	10.9
Victims	9.7	6.2	25.9
Odd & unusual	0.2	1.2	6.9
Aggregates	5.2	16.8	8.0
All other	68.0	56.7	28.1
Total	100.0	100.1	101.3

Source: Whitney et al., 1989

It is again useful to consider the overall changes in the number of news stories and of their length between the periods of analysis. Given that the number of news stories declined and the length of

the average story increased, it is likely that 1992 – 1994 and 2002 – 2004 stories employed private individuals as “wallpaper” in broadcast news terms. As mentioned earlier in this article, technology for newsgathering may have made it easier to capture interviews with sources on location. In turn, such sources are there in the news because they provide a “localizing” or “humanizing” element to a story, and are not themselves the focus of the story. Such a claim is bolstered by the observation that, unlike other source categories, the number of “aggregates” and “any other private individuals” coded increased slightly from those used as the first source in a story to those used as a second source, and only slightly decreased as subsequent sources (stories were coded for up to six sources). Table 13 also shows a sharp increase in the use of private individuals as “epitomizing cases,” “victims” and people engaged in “odd and unusual” activities. Private individuals are likely being used as “humanizing” elements in news stories, thereby making stories more “feature”-like, thus also increasing the length of stories as they shift from hard news to features. This supposition is further strengthened by cross-tab analysis of private individuals by news topic, revealing private individuals clustered in the “crime,” “medicine,” and “politics” categories, where they were likely providing opinion or relating experience.

Indeed, the increased characterization of private individuals as “MAN” or “WOMAN” (typically providing a comment on a story) is visible simply from scanning the Vanderbilt *Television News Index* during the two periods under study. It is important to note that while Whitney and colleagues found that “‘ordinary people’ not otherwise characterized still account for only about 7% of all network evening news sources” (1989, p. 171); in 1992 – 1994, they accounted for a little more than double that figure, 15.8%; and in 2002 – 2004, they accounted for 18.7% of all network evening news sources. That they are not the focus of a news story should not distract attention from their increased appearance in evening network television news. Subsequent studies may want to examine with more precision the role they play as sources.

Conclusion

Data from an analysis of network evening news program from 1992 – 1994 and 2002 – 2004 show a geographic and source bias similar to, and in some cases stronger than, that found in a study of news programs from 1982 – 1984 (Whitney et al., 1989). Despite some differences in geographic and source bias, what is most striking about the comparison of data between the 10-year spans is the ongoing, and in some cases increasing, geographic bias, first toward stories from the U.S. and also toward stories from Washington, D.C. and New York. Also striking is the ongoing source bias toward male, official and institutional news sources.

As Walter Lippmann (1965) observed, “news and truth are not the same thing” (p. 226). Geographic news bias in comparison to population does not presume to make population a norm for news coverage. It is clear that newsworthiness is measured in myriad ways. However, it can be presumed that there is some correlation, however slight, between newsworthiness and population, insofar as one can posit that a greater frequency of newsworthy occurrences will be found where there are greater numbers of people. What makes these findings, and those of Whitney and colleagues, startling is not that they deviate from any ratios of news to people that can be created by manipulating population figures. Rather,

it is startling that the deviations from population are so large. Despite a variety of relatively inexpensive means to both gather and transmit high-quality audio and video from any location, and despite the proliferation of digital video cameras and camcorders, some areas of the U.S. are entirely without news coverage for the given periods and sample. "The news" as defined for the network television news audience by what is broadcast is greatly confined to a small handful of geographic locations.

These findings are cause for further attention to geographic and source bias in news. In particular, it will be important to account for the Cable News Network (CNN). Although CNN had quickly risen in prominence during the 1992 – 1994 period, it did not have a specific "evening newscast" that could be coded. Moreover, neither it nor the MacNeil/Lehrer Newshour are available via the Vanderbilt *Television News Index* (although CNN's *Newsnight* is available for broadcasts since 2001, its format is unlike that of other the network news programs, and it does not have a large audience). Future research should examine geographic and source bias in those news programs and compare it to that of the networks. It should particularly examine international news coverage, for, as Seib noted, "As of late 1998, CNN had 23 foreign bureaus with correspondents, while ABC had five, CBS four, and NBC (with its sibling, MSNBC) seven" (1998, p. 45). Interestingly, in October 2007, ABC announced that it would open "mini-bureaus" in eight countries, staffed by one person whose work might not only be broadcast on the evening news but may also be shown online as well as on "Good Morning America." Neither CBS nor NBC had responded with similar moves by early December 2007.

It would be worthwhile to conduct interviews with news directors, reporters and others at the networks to determine, among other things, the degree to which they rely on these partnerships and on "packaged" news (from satellite feeds and the like), whether they believe ENG technology to be reliable and cost-effective, and their own senses of geography and source as elements of news values.

Further, it would be interesting to see whether local markets mirror geographic and source bias found in network newscasts of the same period. For example, a 1993 content analysis of local broadcast news in the Detroit market (Atkin & Fife, 1993) found that 78.9% of news sources were male and 21.1% female, closely matching the findings of the network news content analysis presented in this article. Local and regional differences in news bias would be interesting to assess.

It will also be important to replicate these studies of geographic and source news bias for the 2012 – 2014 period and beyond. To do so will not only provide additional data with which to discern patterns and trends, but will also provide greater opportunity to find evidence of the effects of developments in the technology of news gathering on bias. It is likely that, although new technologies were introduced during the 20-year period between the present study and that of Whitney and colleagues, such changes were not as great as those that occurred since 1994. Developments in digital video, miniaturization, cellular and microwave communication, and the Internet have all probably had great impact on the news media. As Gunter commented, "technological developments have speeded up the processes of news gathering and onward dissemination A key question for the future is how will the newer journalism of immediacy and the older journalism of professional mediation relate to each other?" (1997, p. 160). Similarly, changes in other television programming, particularly the popularity of "reality-based" TV shows in the mid- to late-1990s, may have had significant impact on news audiences, and/or

the perceptions of the audience for news held by news directors and others involved in decision making at network news operations. And, the present content analysis may cover a period too early to provide evidence of the consequences of developments related to the Internet and journalism production and consumption. Future studies may at least want to take into account as a coding category the presence of web and e-mail links provided along with news stories. Interestingly, however, a report by the Pew Internet and American Life Project noted that during the September 11, 2001, terror attacks in the U.S., the vast majority (over 80%) of respondents in a survey reported using television as their major source of news about the attacks (Rainie, 2001), so it is too soon to foretell the demise of television news.

Equally important is further study of how citizen journalism will impact network news. Many local news operations solicit photos and videos from viewers, and some national ones, such as CNN, do so as well. Future studies should take into consideration, if possible, whether images are generated by news staff or private individuals (or, perhaps, by surveillance cameras). But more important for theoretical purposes is the consideration of what media use such measures should encourage. Consumers of news have ever greater choices of media from which to get news, and we know little about how they make choices among the variety on offer. Newsgathering routines and newsroom decisions are very likely closely connected to perceptions of consumers' news habits. Our theories of media use should be bolstered by empirical research on these habits, and they should further be connected to theories of news production by engaging news professionals' perceptions of consumers' reading, viewing and surfing behaviors. The result could be a holistic theoretical foundation for explaining shifts in the form of news over the long haul. This is a particularly important endeavor given the growth of online news sources and their engagement of youth. It is unlikely that network television news will ever claim the place it once had as the most widely watched and most influential news source in the U.S.

The ongoing bias in sources represented in network television evening newscasts merits further attention, too. As Whitney et al. noted, the "data do show some diversity in network-quoted sources, albeit a limited diversity" (1989, p. 172). But diversity in this case means only that a group categorized in the study was represented in at least one story from the two-year sample. The bias toward "experts," sources legitimated through connection with groups and institutions, is itself a reflection of the network news' values and routines (Hansen, 1991; Steele, 1995). Ehrlich (1995) noted that "Competitive norms and practices strongly appear to help homogenize the news rather than diversify it" (p. 206), and this study provides evidence to bolster the claim.

One way that such routines have consequences for public perceptions of news bias was made clear in a study of public beliefs about media bias. Rouner, Slater and Buddenbaum (1999) found that "the general public fail(s) to discriminate news source bias in the same way (as) journalism professionals" do (p. 48). Thus, as Whitney and colleagues stated, while there is little likelihood of deliberate discrimination, either against particular types of sources or against women, there is nevertheless likelihood that "the success of the story balance convention may be less certain and news consumer interpretation of stories in some cases more distorted than journalists assume" (Rouner, Slater & Buddenbaum, 1999, p. 49). Indeed, the biases found in the Whitney et al. study and the present one indicate the degree to which men are in positions of "legitimated" power and considered "trustworthy" (or at least "newsworthy") sources as those attributes are defined by journalists. As Tyndall noted, "Individuals of either sex, any age, and all

voices could be heard from as long as they were not wielding power or offering expertise" (1998, p. 1). But, importantly, a content analysis such as this and the one performed by Whitney and colleagues does not provide evidence of the treatment of these sources. How they are portrayed is not an issue in either study, and Voakes and colleagues (1996) caution that source diversity may not lead to content diversity. Source treatment is thus an important subject for future research to examine.

Of course, one cannot easily make the claim that news should be "representative" in the sense that it will equally, or indeed by statistical measure, match demographic data. As Rosengren (1977, p. 167) has argued, use of "extra-media data . . . (can) establish a universe of events, and this universe of events, rather than the universe of news reported during a given time period," can give additional insight into explaining news coverage. Whitney and colleagues put it well when they wrote that "news . . . if it serves any 'representative' function, serves to represent significance, impact and the doings of power" (1989, p. 173). Analyses such as theirs and the present study are thus important, if for no other reason than providing an ongoing determination of what network television news makes so.

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