Hard News: The Softening of Network Television News*

Gaurav Sood† Daniel Weitzel‡

October 1, 2020

Abstract

Network television news is among the most frequently consumed news in the country. But there is little data on what is covered on network news. Or how the quality of network news has fared over the years. We exploit the Vanderbilt Television News Archive, the largest publicly available database of TV news, to learn about two important aspects of the production of news: geographic focus and political content. Using data from a random sample of over 5,000 broadcast segments spanning 1968–2019, we find that the percentage of network television news devoted to topics unrelated to politics steadily increased from less than 5% in 1968 to over 10% in the last 15 years. The pattern of change in geographic focus is more complex, but there is a clear rise in the percentage of local news over the last two decades. The percentage of local news increased from about 5% in 2000 to over 25% in 2019.

*Replication scripts and data are posted at: https://github.com/notnews/notwork_news.

†Gaurav can be reached at

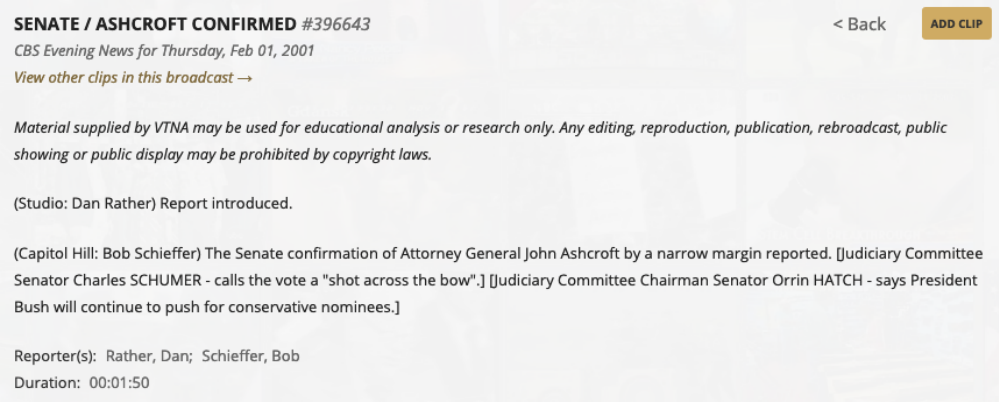
‡Daniel can be reached at daniel.weitzel@utexas.edu

Network television news is among the most frequently consumed news in the country (Pew Research Center 2019; 2020). But there is little data on what is covered on the network news or how the coverage has changed over the years. We exploit data from Vanderbilt Television News Archive (VTNA), the largest publicly available database of TV news, to shed light on two important aspects of the quality of news: geographic focus (local, national, and international) and political relevance (whether or not the news is about a politically relevant topic) (Curran et al. 2009). Coding a random sample of over 5,000 broadcast segments spanning 1968–2019, we find that the percentage of network television news devoted to topics unrelated to politics steadily increased from less than 5% in 1968 to over 10% in the last 15 years. The pattern of change in geographic focus is more complex, but there is a clear rise in the percentage of local news over the last two decades. The percentage of local news increased from about 5% in 2000 to over 25% in 2019.

Data and Measurement

VTNA contains a continuous collection of the daily news broadcasts from *ABC*, *CBS* and *NBC* since 1968. A few news shows from *CNN* and *Fox News* are available starting 1995 and 2004, respectively. In total, the archive has over 1M broadcast abstracts from US network channels between 1968 and 2019 (Lynch 1996; Sood and Laohaprapanon 2020). For each segment of a news broadcast, the data includes information on the channel, broadcast date, duration, program title, and an abstract of the content of the segment (see Figure 1).

Figure 1: Example of VTNA broadcast segment abstract. CBS Evening News segment from Feb 01, 2001



We limit our focus to the three main networks: ABC, NBC, and CBS. Figure 2 shows the total number of news broadcasts with abstracts available for the three network channels between 1968 and 2019. The number of news segments from CBS and NBC falls sharply, starting in 2015.

From this data, we randomly sampled 100 stories from each year between 1968 and 2019. We weighted the sample by broadcast duration so that we have a random sample of content broadcasted in time. The sampled abstracts for 1968 to 1977 accidentally included news specials. We removed those posthoc. In all, we sampled 5,200 stories. The three network news channels make up 3,928 broadcast abstracts in the sample (ABC–1,374, CBS–1,228, and NBC–1,326). (The remaining abstracts were from news shows on other channels, such as CNN and Fox News.)

Figure 2: News Broadcasts by Channel in VTNA



We coded the abstracts of the news segments for geographic scope (local, national, international) and news type (soft vs. hard news). (See SI 1.1 for coding scheme and SI 1.2 for screenshots of the coding scheme, examples, instructions, and a sample question with the instrument.) By soft news, we mean "information that is either personally useful or merely entertaining" (Zaller 2003).[1]

We crowdsourced the coding of these abstracts using *Figure Eight* (now *Appen*). We crowdsourced the coding of these abstracts using *Figure Eight* (now *Appen*). Three different coders coded each broadcast abstract. The number of news abstracts coded by a coder ranges between 12 and 347. The mean is 56.6, and the standard deviation is 49.

To guarantee high-quality coding, we coded 230 randomly chosen questions ourselves and

[1]By soft news, we mean the precise content of the news as opposed to "soft news media"—shows that primarily carry soft news but sometimes carry hard news (e.g., Baum and Jamison (2006)).

included those as gold standard questions in the survey.[2] The fewest gold standard questions that a coder had to field was 9. Any answer from a coder who answered less than 80% on the gold standard questions was replaced by an answer from a coder who got 80% or more of the gold standard questions correct. The average score on gold standard questions for the type of news and geographic focus was 88.1% and 88.6%, respectively.

The inter-coder agreement among coders who met the standard for geographic scope was 50.1%, and news classification was 80.3%. Krippendorf's α for the tasks for 0.4 and 0.3, respectively.

For our main results, we subset our analysis to stories where two or more of the high accuracy coders agreed on the label. For the type of news, this means sacrificing ten rows, and for the geographic focus, it means sacrificing 195 rows or less than 5% of the data. And we assign the story the label given by the majority.

Results

Network news is steadily becoming softer (see Figure 3). From less than 5% in the late 1960s and early 1970s, the percentage of soft news is more than 10% in the last 15 or so years. There is little difference across channels, in means as well as slope. As Table 1 shows, the potential maximum mean difference between ABC, CBS, and NBC is about 2%. We do not have enough data to estimate slope over time within channels, but whatever data we have suggests the differences are non-existent (see Figure SI 2.1). Limiting inference to years where we have consistent data (1970–2014) doesn't affect the results (see Table SI 2.2).

[2]The list of gold standard questions and their answers is available here (CSV).

Table 1: Explaining The Provision of Different Types of News by Channel and Year

	Soft	International	National	Local
(Intercept)	0.08^{***}	0.31^{***}	0.59^{***}	0.10^{***}
	(0.01)	(0.01)	(0.01)	(0.01)
Channel: CBS	-0.01	-0.02	0.03	-0.01
	(0.01)	(0.02)	(0.02)	(0.01)
Channel: NBC	-0.01	0.02	-0.02	-0.00
	(0.01)	(0.02)	(0.02)	(0.01)
Year	0.04^{***}	-0.00	-0.05^{***}	0.05^{***}
	(0.00)	(0.01)	(0.01)	(0.00)
R^2	0.02	0.00	0.01	0.03
Num. obs.	3923	3733	3733	3733

$^{***}p < 0.001, ^{**}p < 0.01, ^{*}p < 0.05$

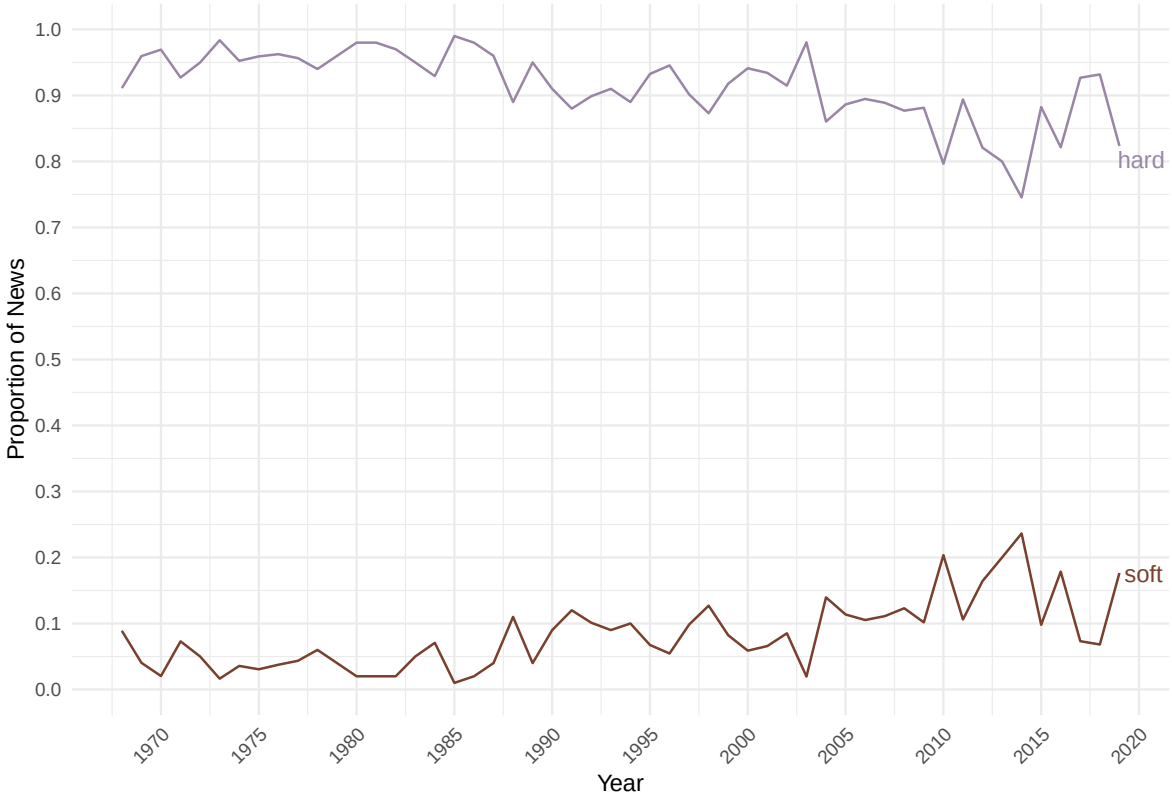


Figure 3: Proportion of Hard and Soft News Over the Years

Moving to the geographic focus of news, the pattern in local news is the clearest. Since

the 2000s, the provision of local news has increased substantially. It has moved from roughly 5% to 20% (see Figure 4). Between 1985 and 2000, there was another concave curve peaking in the early 1990s at about 20%. Between 1970 and 1985, the provision remains flat.

Percentages of national and international news seem to follow a pattern with national news generally peaking around presidential elections (see Figure 6) and international news peaks during wars (see Figure 5).

Figure 4: Proportion of Local, National, and International News Over the Years

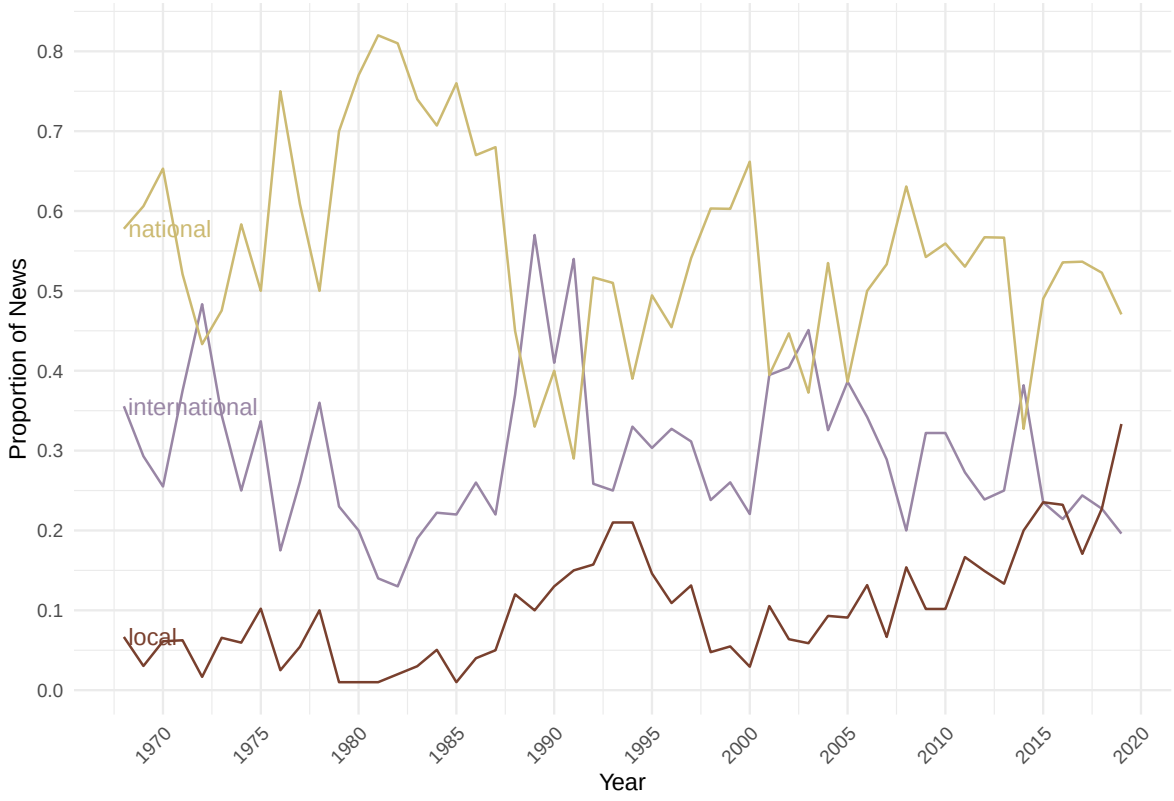


Figure 5: International News and Key International Events

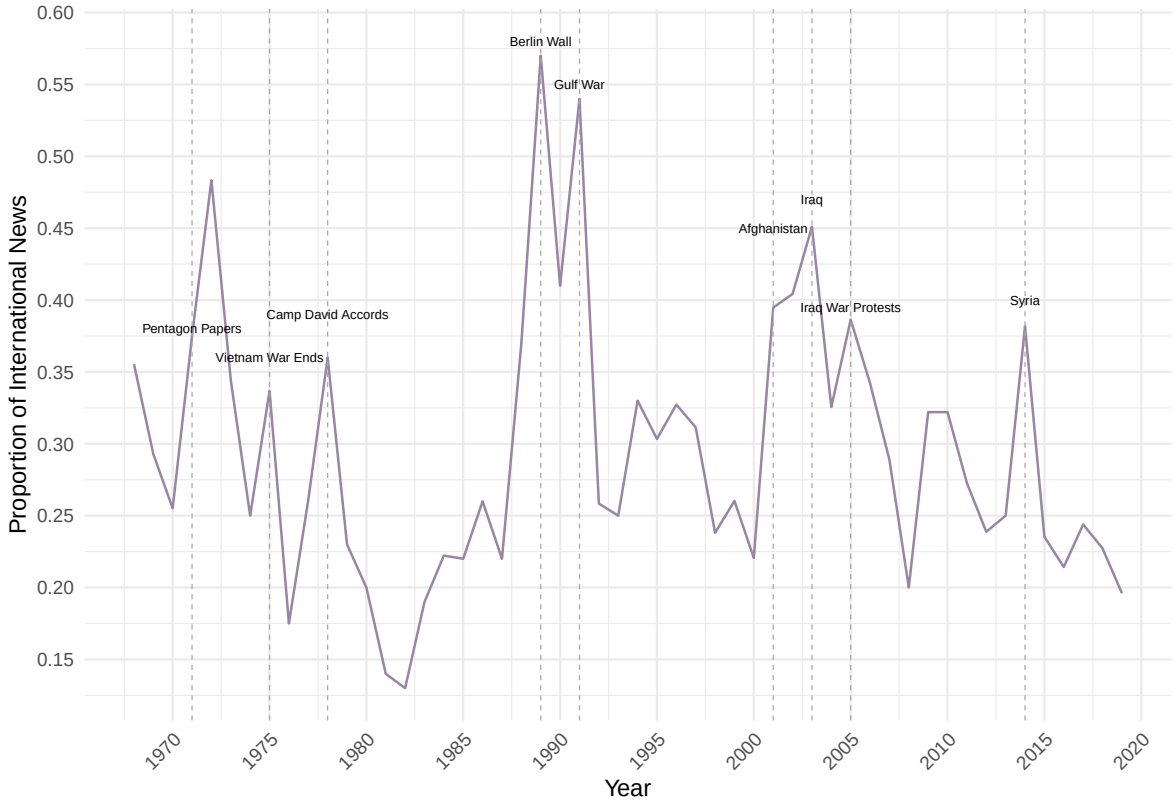
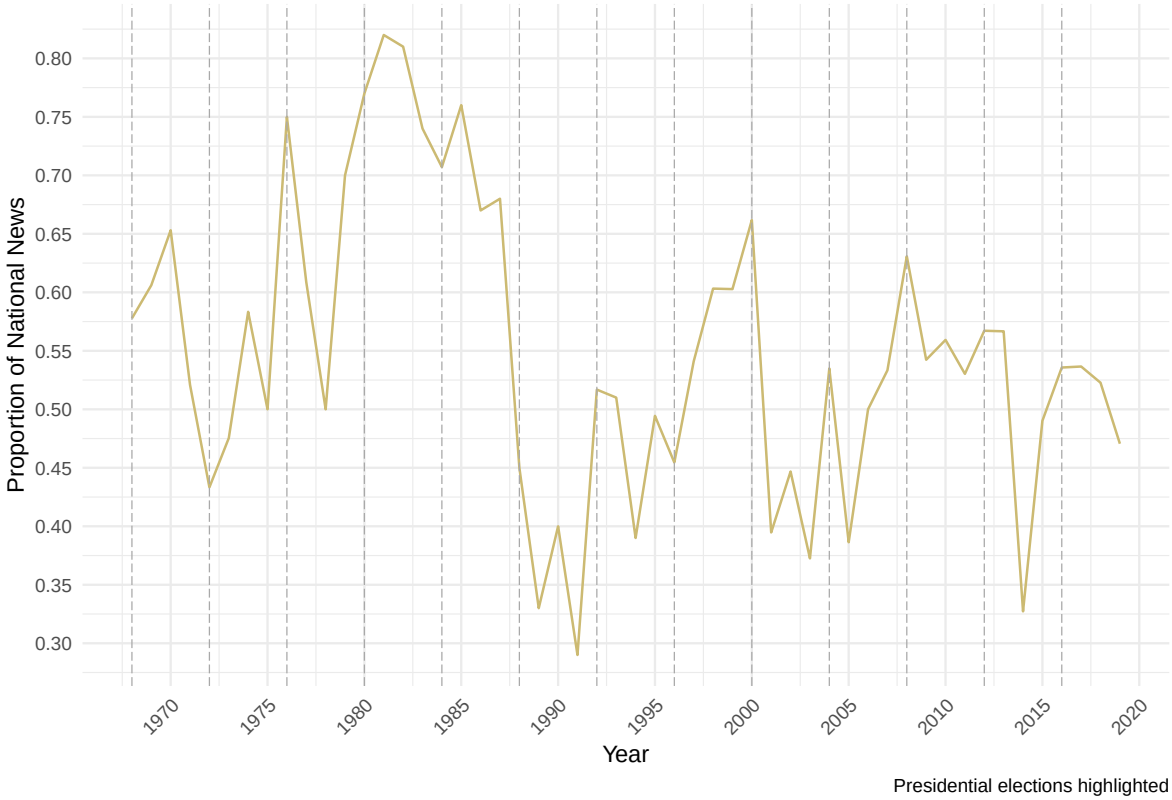


Figure 6: National News and Presidential Elections



Our numbers are sharply different from those obtained by Curran et al. (2009). In the media analysis by Curran et al., in 2007, about 27% of the television news was soft. Our numbers are closer to 10%. For geographic focus, our numbers are closer to 30% while the Curran et al. estimate is 20%.

Discussion

Network television news was widely regarded for its quality in the 1960s and 1970s (Hallin 1990). Was the esteem it was held in deserved? And how has the quality fared since? These questions have added urgency given network television news continues to be among the most common sources of news for Americans. Capitalizing on a vast dataset of news transcripts, we have an

answer. The quality of news has declined somewhat, with soft news constituting twice as large a share today than 70 years ago.

References

Baum, Matthew A and Angela S Jamison. 2006. "The Oprah effect: How soft news helps inattentive citizens vote consistently." *The Journal of Politics* 68(4):946–959.

Curran, James, Shanto Iyengar, Anker Brink Lund and Inka Salovaara-Moring. 2009. "Media System, Public Knowledge and Democracy A Comparative Study." *European Journal of Communication* 24(1):5–26.

Hallin, Daniel. 1990. "Whatever happened to the news." *Media and Values* 50:2–4.

Lynch, John. 1996. "Vanderbilt Television News Archive." *Historical Journal of Film, Radio and Television* 16(1):81–83.

Pew Research Center. 2019. Network News Fact Sheet. Technical report.

Pew Research Center. 2020. Election News Pathways project. Technical report.

Sood, Gaurav and Suriyan Laohaprapanon. 2020. "Vanderbilt TV News Abstracts.".
URL: *https://doi.org/10.7910/DVN/BP2JXU*

Zaller, John. 2003. "A new standard of news quality: Burglar alarms for the monitorial citizen." *Political Communication* 20(2):109–130.

SI 1 Supporting Information

SI 1.1 Coding Scheme

You will see snippets of stories from American television news. We would like to classify these snippets on the following two dimensions:

- Soft or Hard News:
  - Soft News: News about topics like:
    * Sports
    * Weather (but not climate, e.g., global warming is excluded)
    * Entertainment celebrities
    * Travel
    * Style/Fashion
    * Cooking
    * Arts or Literature
    * Personal Tech.: New Apple products, etc.
    * Personal health: How to sleep better, etc.
  - Hard News: News that is politically consequential. News that tells us the state of the world, e.g., unemployment, crime, poll results, etc. or news that talks about policies being debated, e.g., healthcare bill, abortion bill, Medicare, Medicaid, etc. Among others, it includes the following areas:
    * Politicians, Parties, Elections, and Polling: Poll results, candidate profiles, election results, etc.
    * Economy: Taxes, Inflation, Unemployment, Trade, GDP, etc.

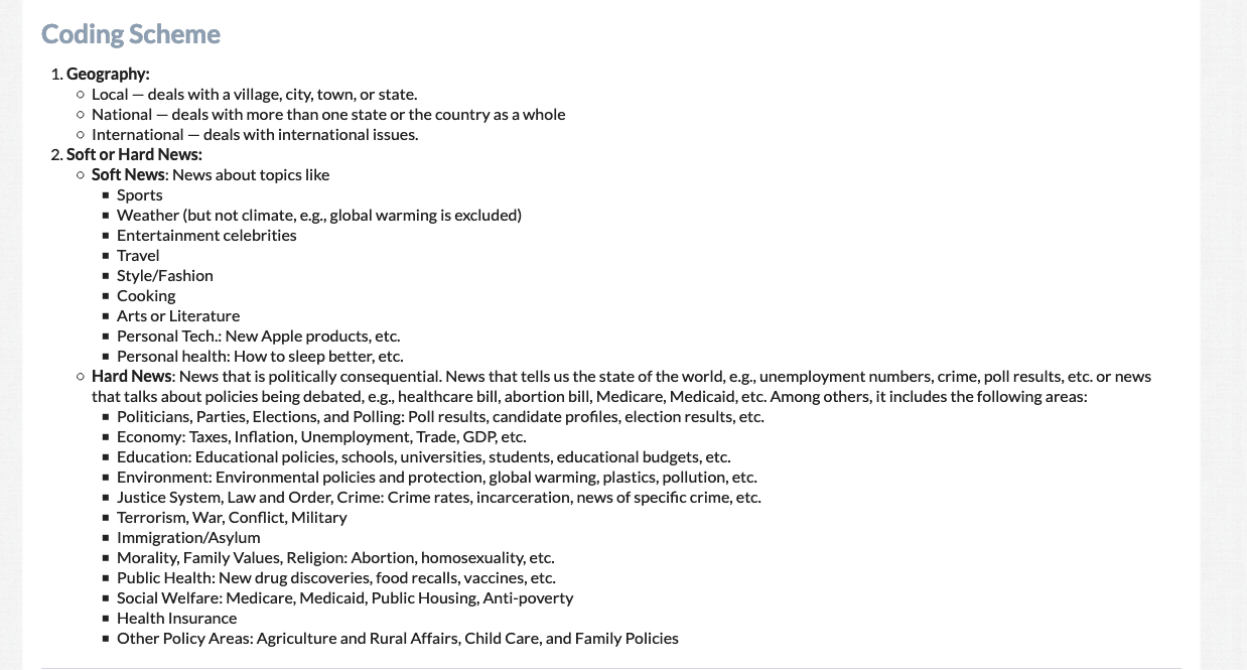
    * Education: Educational policies, schools, universities, students, educational budgets, etc.
    * Environment: Environmental policies and protection, global warming, plastics, pollution, etc.
    * Justice System, Law and Order, Crime: Crime rates, incarceration, news of specific crime, etc.
    * Terrorism, War, Conflict, Military
    * Immigration/Asylum
    * Morality, Family Values, Religion: Abortion, homosexuality, etc.
    * Public Health: New drug discoveries, food recalls, vaccines, etc.
    * Social Welfare: Medicare, Medicaid, Public Housing, Anti-poverty
    * Health Insurance
    * Other Policy Areas: Agriculture and Rural Affairs, Child Care, and Family Policies
- Clarifying Differences Between **Hard** and **Soft News**:
    * **Hard News**: News that is politically consequential, e.g., news about the state of the world, e.g., unemployment numbers, crime, terrorist attack, poll results, etc., news about policies being debated, e.g., healthcare, abortion, immigration, civil rights, Medicare, etc.
    * **Soft News**: News about personal technology, e.g., new iPhone, etc., cooking, sports, style, fashion, music, arts, literature, etc.
    * Technology
        · News about personal tech. like latest Apple products are **Soft News**
        · News about new technologies like advancement in semiconductors, energy, space exploration is **Hard News**.

    * Weather
        · News about how the weather will be, etc., is **Soft News**
        · News about climate change, global warming, flooding, etc. is **Hard News**
    * Health:
        · News about personal well being like tips for sleeping and eating better is **Soft News**
        · News about new nutrition guidelines, drug discoveries, food recalls, etc. is **Hard News**

- Geography:
    - Local — deals with a village, city, town, or state.
    - National — deals with more than one state or the country as a whole
    - International — deals with international issues.

SI 1.2 Screenshots of the Coding Scheme, Examples, Instructions, and Sample Question With Instrument

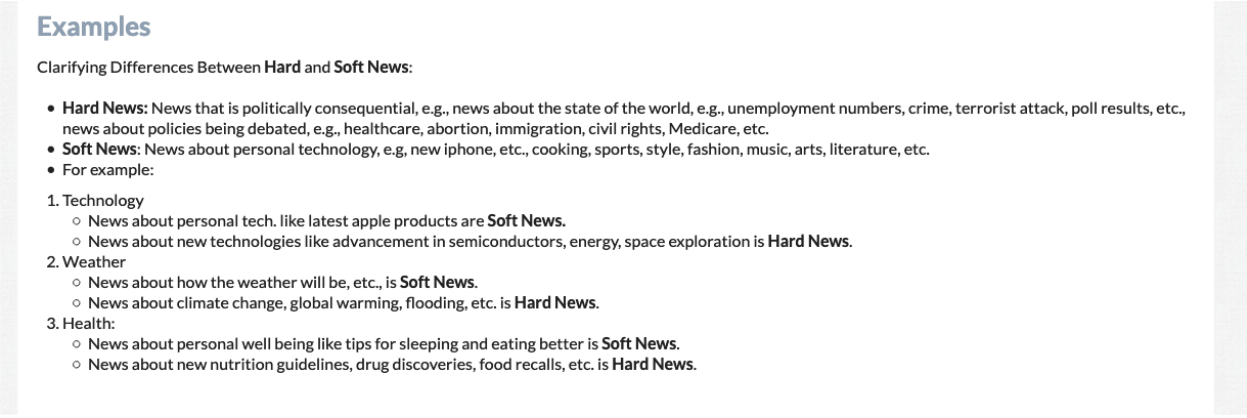
Figure SI 1.1: Coding Scheme



Coding Scheme

1. **Geography:**
   - Local — deals with a village, city, town, or state.
   - National — deals with more than one state or the country as a whole
   - International — deals with international issues.
2. **Soft or Hard News:**
   - **Soft News**: News about topics like
     - Sports
     - Weather (but not climate, e.g., global warming is excluded)
     - Entertainment celebrities
     - Travel
     - Style/Fashion
     - Cooking
     - Arts or Literature
     - Personal Tech.: New Apple products, etc.
     - Personal health: How to sleep better, etc.
   - **Hard News**: News that is politically consequential. News that tells us the state of the world, e.g., unemployment numbers, crime, poll results, etc. or news that talks about policies being debated, e.g., healthcare bill, abortion bill, Medicare, Medicaid, etc. Among others, it includes the following areas:
     - Politicians, Parties, Elections, and Polling: Poll results, candidate profiles, election results, etc.
     - Economy: Taxes, Inflation, Unemployment, Trade, GDP, etc.
     - Education: Educational policies, schools, universities, students, educational budgets, etc.
     - Environment: Environmental policies and protection, global warming, plastics, pollution, etc.
     - Justice System, Law and Order, Crime: Crime rates, incarceration, news of specific crime, etc.
     - Terrorism, War, Conflict, Military
     - Immigration/Asylum
     - Morality, Family Values, Religion: Abortion, homosexuality, etc.
     - Public Health: New drug discoveries, food recalls, vaccines, etc.
     - Social Welfare: Medicare, Medicaid, Public Housing, Anti-poverty
     - Health Insurance
     - Other Policy Areas: Agriculture and Rural Affairs, Child Care, and Family Policies

Figure SI 1.2: Clarifying Differences Between Hard and Soft News



Examples

Clarifying Differences Between **Hard** and **Soft News**:

- **Hard News:** News that is politically consequential, e.g., news about the state of the world, e.g., unemployment numbers, crime, terrorist attack, poll results, etc., news about policies being debated, e.g., healthcare, abortion, immigration, civil rights, Medicare, etc.
- **Soft News**: News about personal technology, e.g, new iphone, etc., cooking, sports, style, fashion, music, arts, literature, etc.
- For example:

1. Technology
   - News about personal tech. like latest apple products are **Soft News.**
   - News about new technologies like advancement in semiconductors, energy, space exploration is **Hard News**.
2. Weather
   - News about how the weather will be, etc., is **Soft News**.
   - News about climate change, global warming, flooding, etc. is **Hard News**.
3. Health:
   - News about personal well being like tips for sleeping and eating better is **Soft News**.
   - News about new nutrition guidelines, drug discoveries, food recalls, etc. is **Hard News**.

Figure SI 1.3: Examples

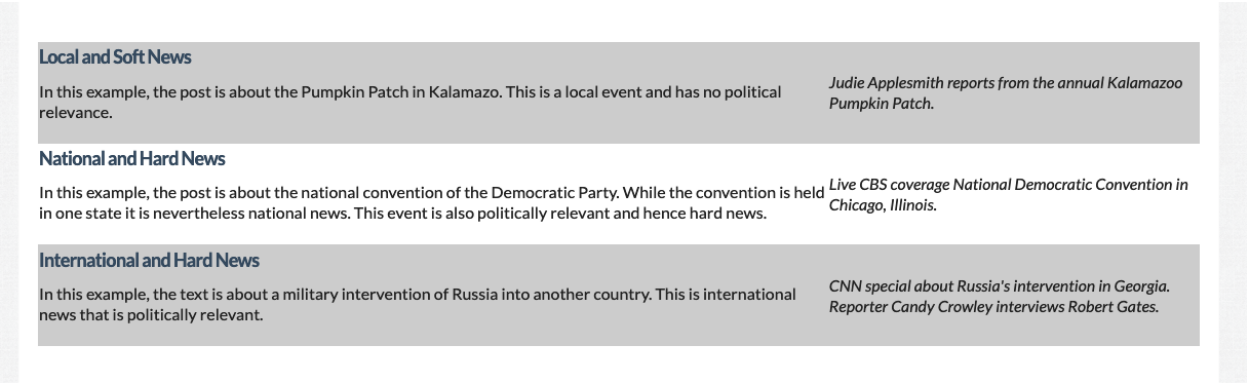


Figure SI 1.4: Instructions

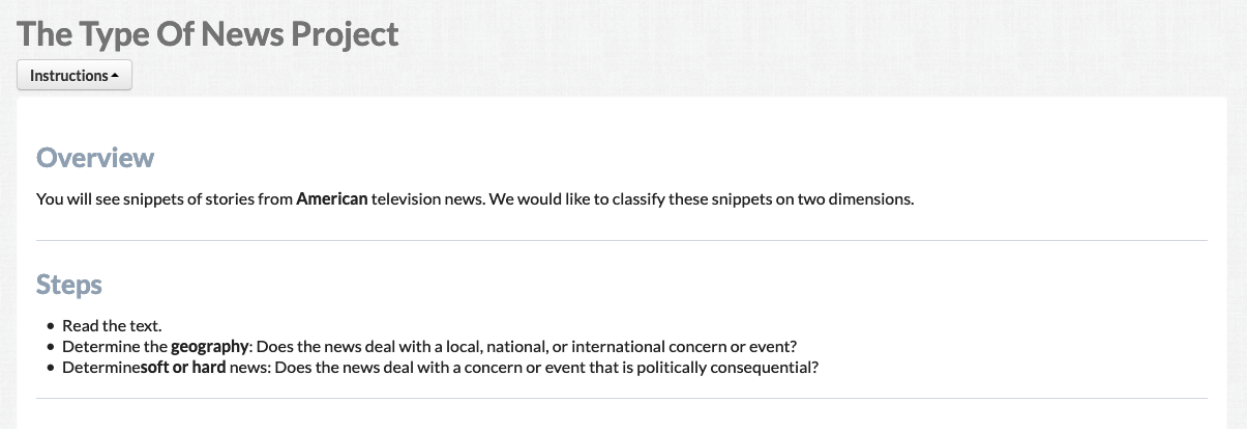
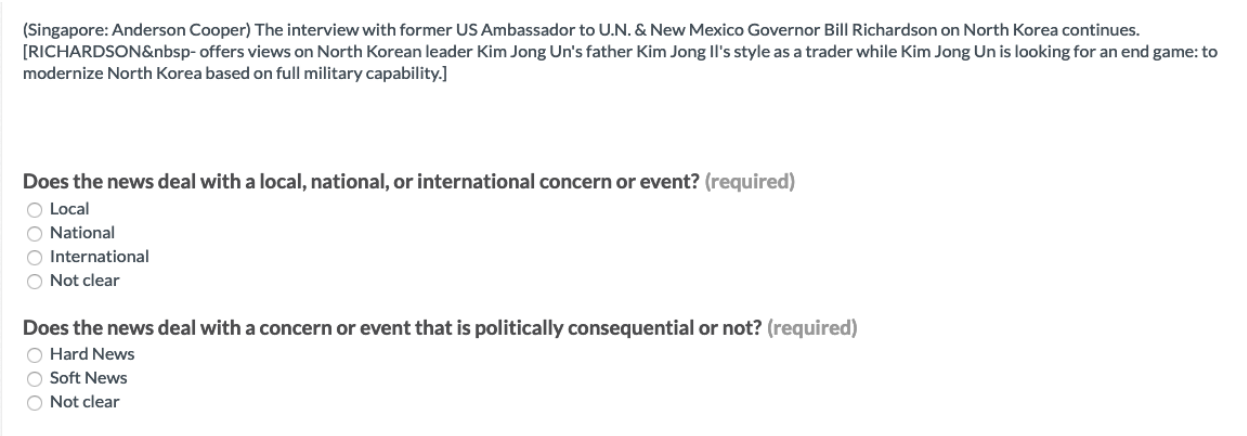


Figure SI 1.5: Sample Question



SI 2 Supplementary Results

Figure SI 2.1: Proportion of Soft News by Channel

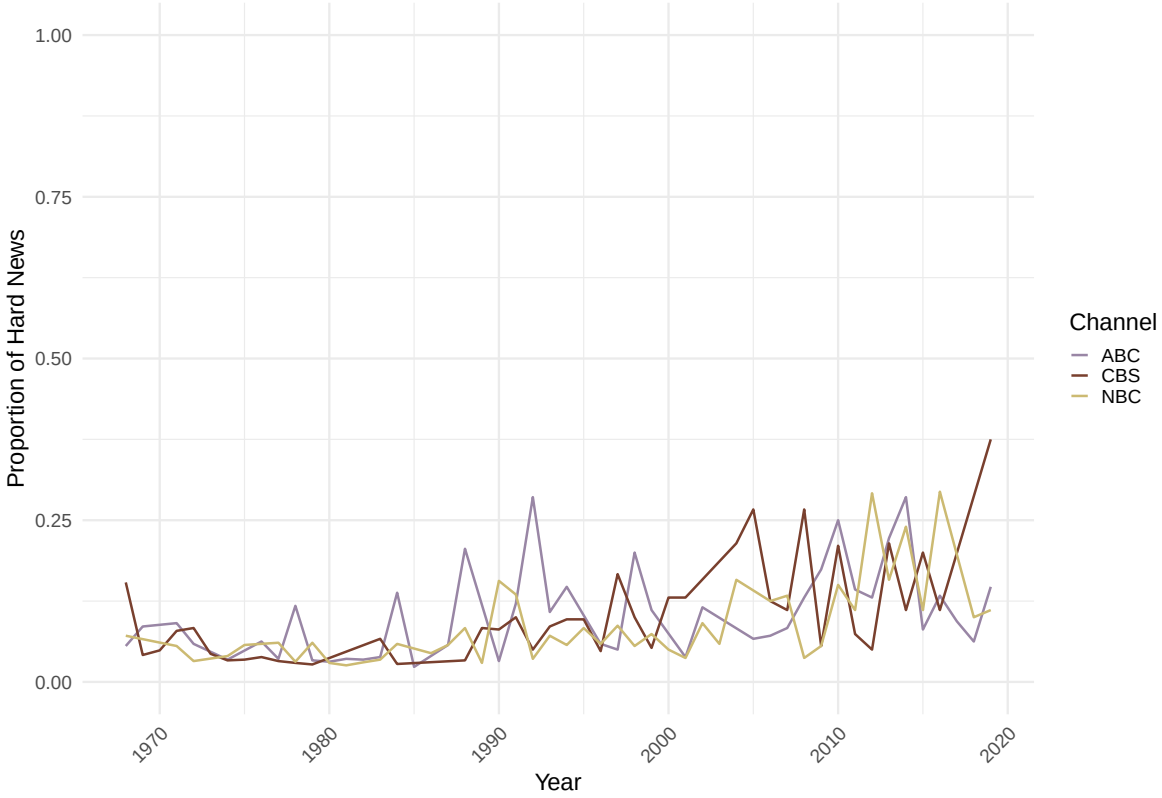


Table SI 2.2: Explaining The Provision of Different Types of News by Channel and Year (1970-2014)

	Soft	International	National	Local
(Intercept)	0.08^{***}	0.31^{***}	0.59^{***}	0.10^{***}
	(0.01)	(0.01)	(0.01)	(0.01)
Channel: CBS	-0.01	-0.02	0.03	-0.01
	(0.01)	(0.02)	(0.02)	(0.01)
Channel: NBC	-0.01	0.02	-0.02	-0.00
	(0.01)	(0.02)	(0.02)	(0.01)
Year	0.04^{***}	-0.00	-0.05^{***}	0.05^{***}
	(0.00)	(0.01)	(0.01)	(0.00)
R^2	0.02	0.00	0.01	0.03
Num. obs.	3923	3733	3733	3733

$^{***}p < 0.001, ^{**}p < 0.01, ^{*}p < 0.05$