

Quote of the Day

“News and truth are not the same thing.”

**-- Walter Lippmann, American writer and intellectual,
1922**

Second paper

Third paper, due Tuesday, December 15 at 4:00 PM

Readings for next time

**Today's class: wrapping up our segments
on (1) science, and (2) the media**

Strong advocates of science (like me) have a responsibility to acknowledge the limitations of scientific knowledge.

How science can get corrupted: five pathways

First pathway. The actual conduct of science is fine. The problem lies instead in the communication of science by politicians, activists, or interest groups, especially industry (e.g., smoking, flame retardants, acid rain, pharmaceuticals, nutrition, and climate change).

Book/documentary, *Merchants of Doubt*

Second pathway. Industry groups, through their funding, shape the actual practice of science. The published, peer-reviewed literature then becomes tilted toward the findings they want. Pharmaceuticals and nutrition as examples.

Third pathway. Even without industry funding, the pressures for publish-or-perish lead to flawed studies getting published.

Beyond outright fraud, we have publication bias / file drawer problem. Studies with positive findings (those that find a relationship) are more likely to get published than those with negative or null findings (no relationship). The published literature will therefore be biased toward positive findings.

My own example

Solutions:

- **Techniques for determining whether a research area is affected by publication bias**
- **Journals need to publish well-designed studies with null findings. Note the qualifier, “well-designed.” Sometimes a study fails to find a relationship because it was poorly designed.**

Fourth pathway (related to the third): p-hacking, the name for research practices that commit the Texas sharpshooter fallacy. Happens when scientists rummage through their data to find something interesting, then claim they hypothesized it all along.

Basic information on Brian Wansink:

https://en.wikipedia.org/wiki/Brian_Wansink

Brian Wansink's blog post setting his downfall in motion:

<https://web.archive.org/web/20170312041524/http://www.brianwansink.com/phd-advice/the-grad-student-who-never-said-no>

Ed Yong, A Waste of 1000 Research Papers. A combination of the 3rd and 4th pathways:

<https://www.theatlantic.com/science/archive/2019/05/waste-1000-studies/589684/>

Solutions:

- **Post-publication scrutiny.** Scientists have to read each other's work and publicize critiques.
- **Sharing data, which has become the norm.** Necessary for post-publication scrutiny.
- **Replication.** Others follow identical procedures to see if they get the same results. A failure to replicate could indicate that the original finding is wrong, or that it emerges only under certain conditions.
- **Pre-registration.** Researchers commit themselves in advance to a plan for data collection and analysis. Cuts down on possibilities for p-hacking.

Fifth pathway. Groupthink and hidden biases in the research community. Certain findings will be accepted, others won't. Shapes what gets studied, how it is studied, and what gets published.

Solution: need diversity of all kinds in the research community, including race, gender, and other identities and viewpoint diversity.

My class next quarter: Pol S 285, “Political Science as a Social Science” (better title: “Understanding Politics through Research and Data”)

Transitioning now from science to the media. To motivate the rest of today's class:

Write down good deeds you personally know about from the past month (volunteering, caring for a family member, helping a stranger, etc.)



How many of those good deeds made the news?

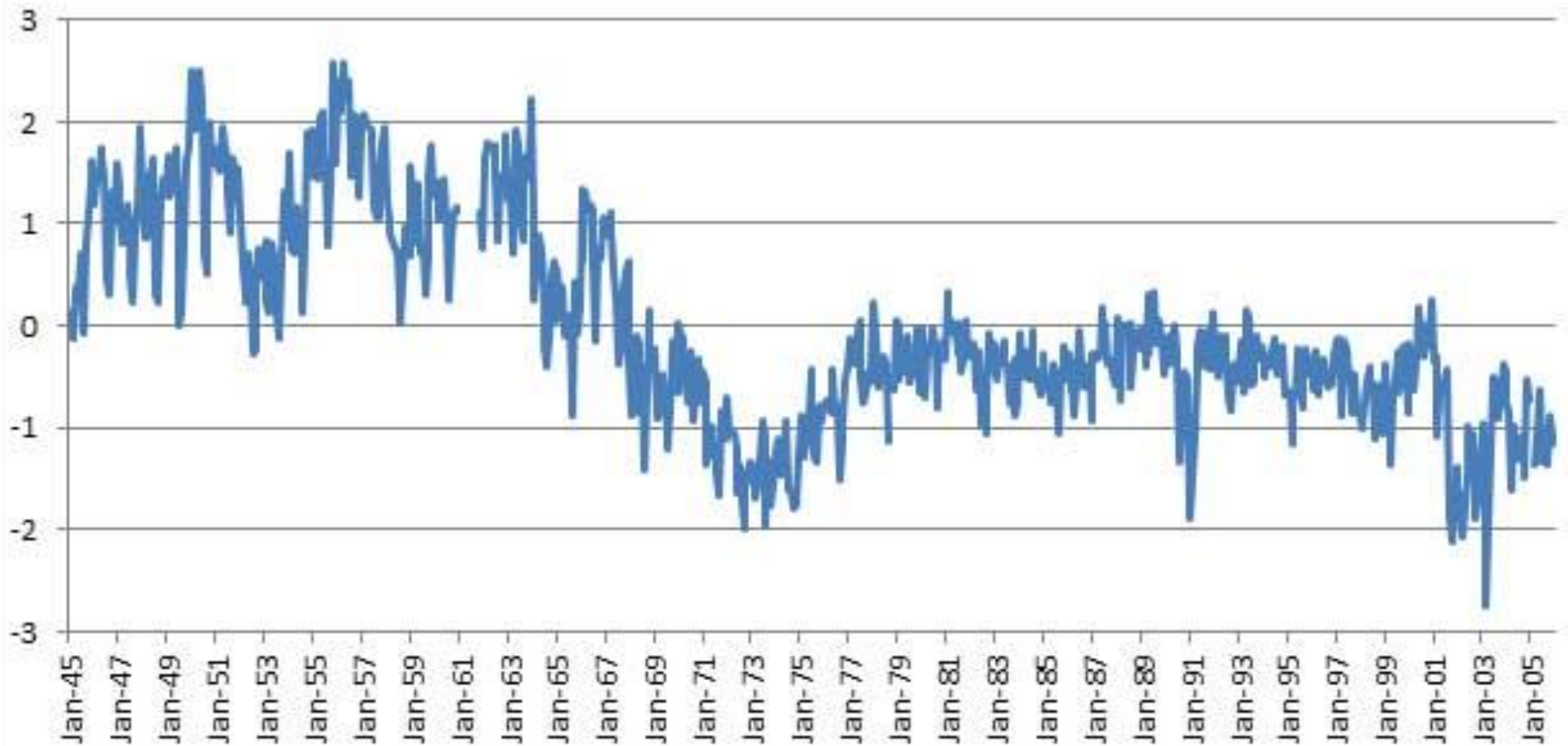
They might have gotten posted/tweeted on social media. However, items that go viral are disproportionately negative (invoking emotions such as outrage).

<https://www.revelist.com/viral>

negativity bias: negative events, interactions, and emotions have a stronger effect than positive ones. The negativity bias could have an evolutionary origin.

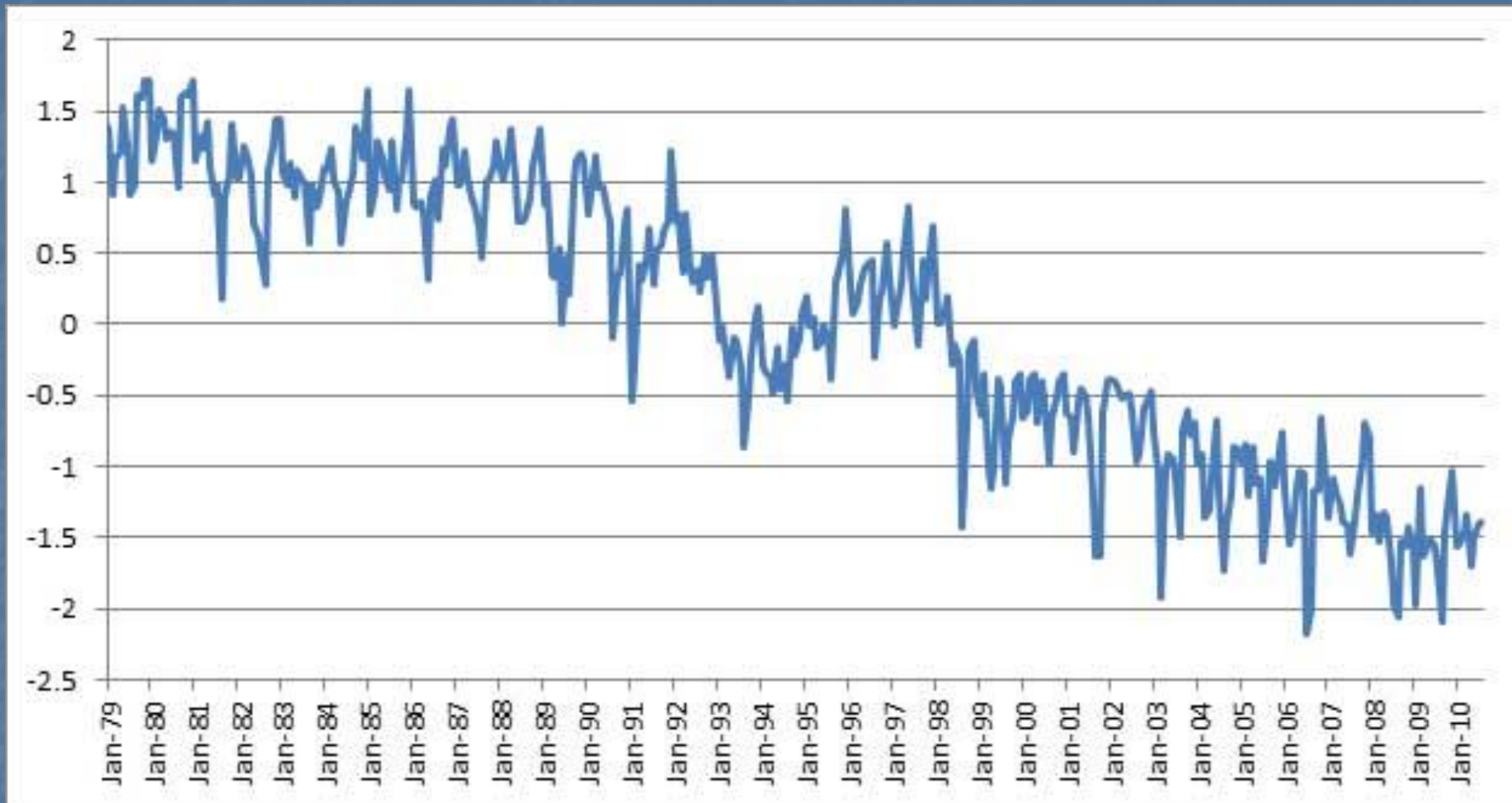
News organizations have figured out that negative news gets more engagement than positive news.

Tone of *New York Times* content, 1945-2005



Source: Kalev Leetaru, *Culturnomics 2.0* (2011)

Tone of world broadcast news, 1979-2010



Source: Kalev Leetaru, Culturnomics 2.0 (2011)

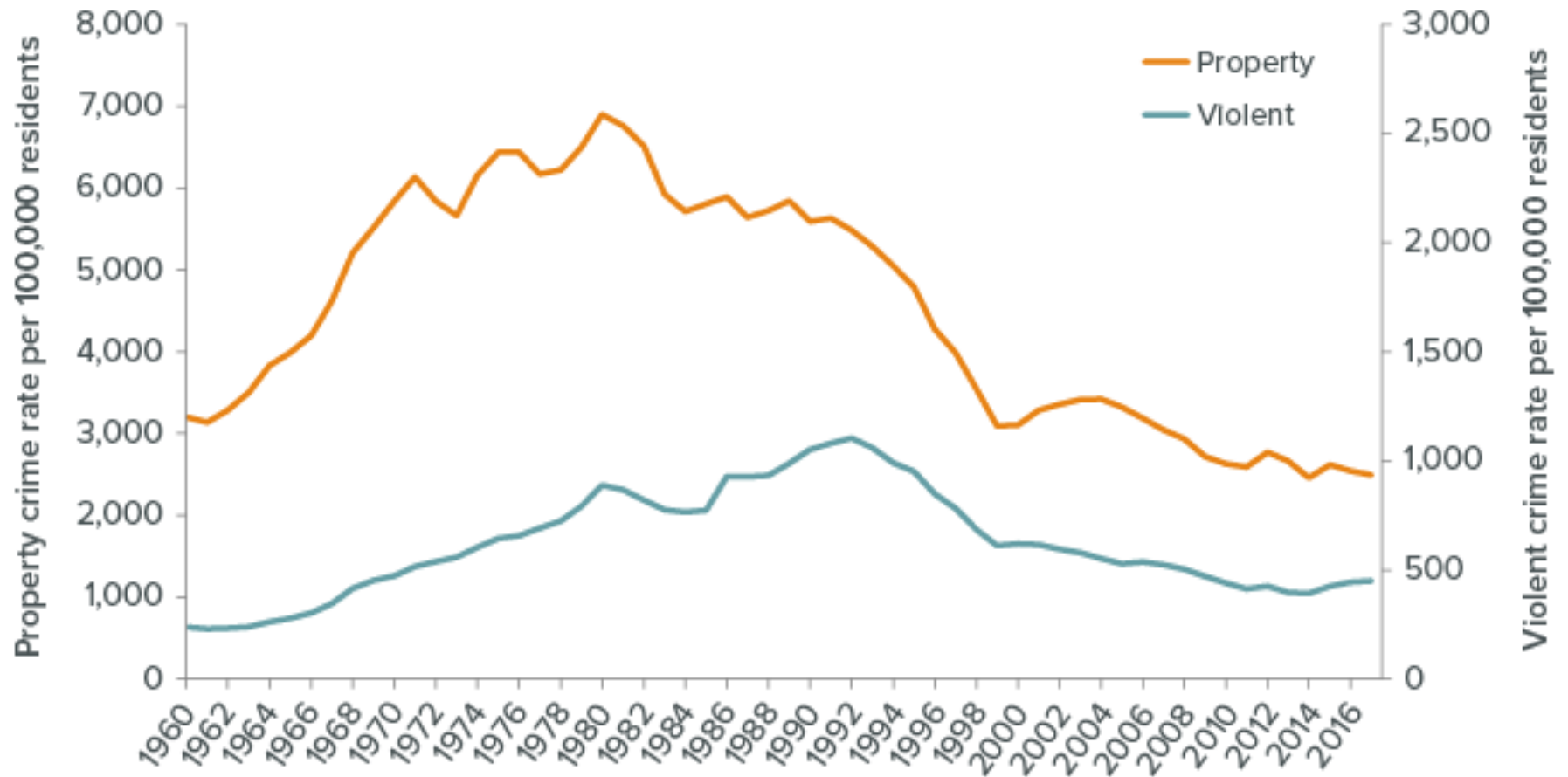
The Onion, “CNN Holds Morning Meeting to Decide What Viewers Should Panic about for Rest of Day”



<https://www.theonion.com/cnn-holds-morning-meeting-to-decide-what-viewers-should-1819577164>

Even if every negative reported event did actually happen, media coverage can lead people to overestimate the incidence of negative events (availability bias).

crime rates in the U.S.



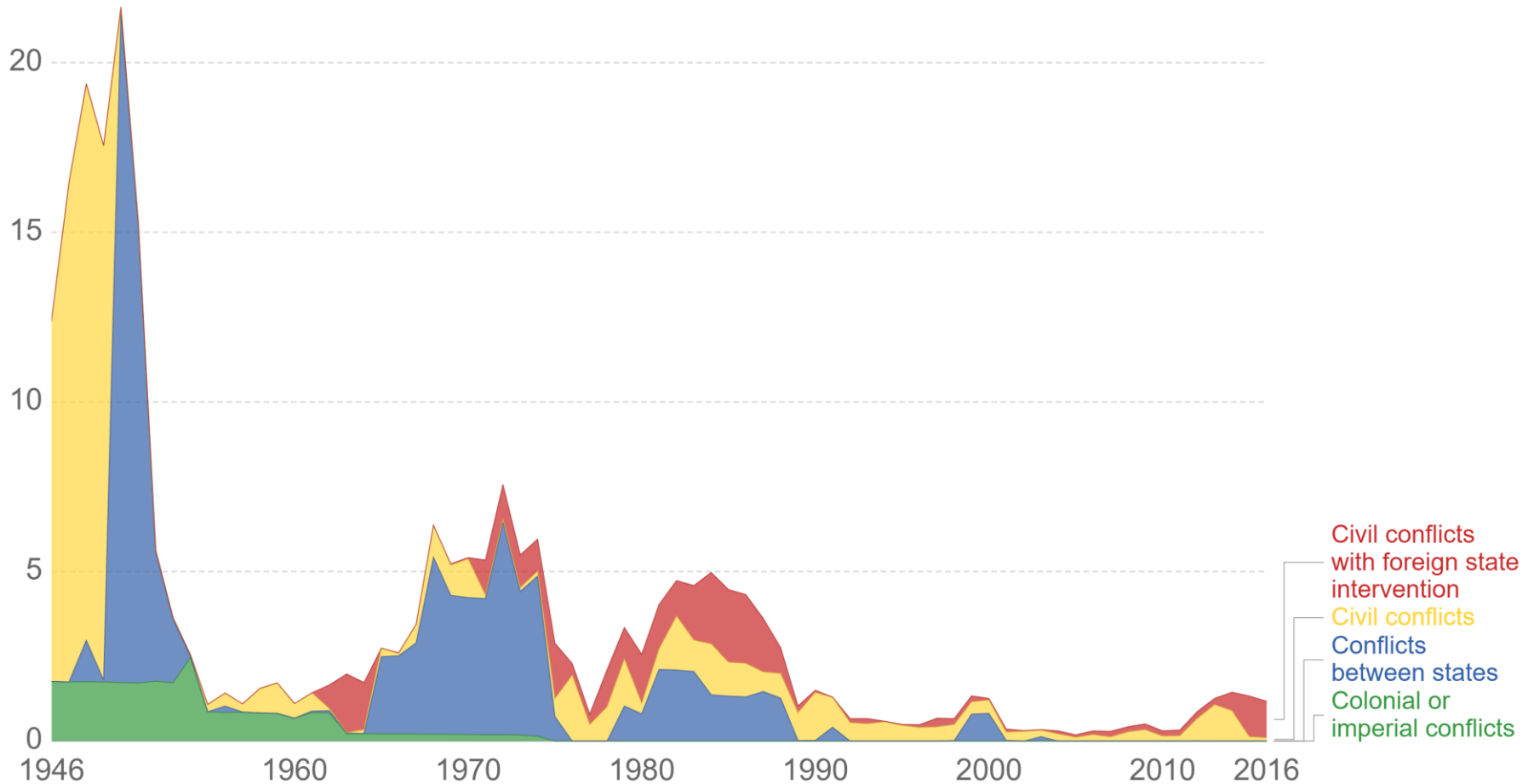
“Is there more crime in the U.S. than there was a year ago, or less?” (Gallup)

	more	less	same (volunteered)
1989	84	5	5
1993	87	4	5
1997	64	25	6
2001	41	43	10
2005	67	21	9
2009	74	15	6
2013	64	19	9
2017	68	19	9

State-based battle-related deaths per 100,000 since 1946

Our World
in Data

Only conflicts in which at least one party was the government of a state and which generated more than 25 battle-related deaths are included. The data refer to direct violent deaths per 100,000 of world population. Deaths due to disease or famine caused by conflict are excluded. Extra-judicial killings in custody are also excluded.



Source: UCDP/PRIO

CC BY

Note: The war categories paraphrase UCDP/PRIO's technical definitions of 'Extrasystemic', 'Internal', 'Internationalised internal' and 'Interstate' respectively. In a small number of cases where wars were ascribed more than one type, deaths have been apportioned evenly to each type.

Once we understand what gets communicated through the news media and social media, which is mostly bad news, we're better positioned to understand what is happening at the local, national, and global levels, and react accordingly (Carolyn Hax article).

By the 1970s, there were widespread allegations of media bias. Can the media discover and disseminate truth if they are biased?

Left-wing critique. Edward Herman and Noam Chomsky, *Manufacturing Consent: The Political Economy of the Mass Media* (1988). The media has a pro-capitalist, status quo, system-reinforcing bias.

Hermann and Chomsky's case:

- media conglomerates are large corporations
- advertisers are also large corporations
- can't alienate sources (need access)



Hermann and Chomsky would have been thrilled to see the decline of the mainstream media, expecting it would open space for left-wing challenges to capitalism.

More recent left-wing critiques: the media are not representative in terms of race, ethnicity, gender, and other identities.

Right-wing critique: the media has a strong liberal bias

In their personal values, most journalists are liberal, secular, and cosmopolitan. But do liberal journalists necessarily write and produce liberal stories?

Fox News (founded 1996), early slogans: “fair and balanced,” “we report, you decide.” Fox News has always been critical of other, mainstream media.



The left-wing and right-wing critiques are not necessarily contradictory. Liberal, secular, and cosmopolitan people want to reform the system, not replace it.

Data on public trust in the media, perceptions of bias, and use of different kinds of media

<https://news.gallup.com/poll/1663/media-use-evaluation.aspx>

These same questions of bias and objectivity arise for professions besides journalists, including professors, researchers, judges and justices, police officers, doctors, etc.

Attempts to estimate media bias. Some caveats:

- **If a source has a certain political orientation, that doesn't necessarily mean the source is "biased."**
- **Don't assume that a "moderate" or "middle of the road" source is unbiased (or impartial, or objective, or closer to the truth).**
- **Does it make any sense to label an entire media source as biased? Why not focus on individual stories?**

ad fontes media, media bias chart (perhaps better named the “political orientation chart”)

<https://www.adfontesmedia.com/>