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The link between changing news use and trust: longitudinal analysis of 46 countries

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Abstract

Changing levels of public trust in the news are of deep concern to both researchers and practitioners. We use data from 2015 to 2023 in 46 countries to explore how trust in news has changed, while also exploring the links with sociodemographic variables, differences by media system, and changing patterns of news use. We find that (a) there has been a small overall decline in trust in news since 2015, but also that (b) there are different trends in different countries. More specifically, trust has declined more in media environments that have become less structured by television news use, and increasingly structured by social media news use. Our findings underscore how changing structures of media use may be central to explaining trust dynamics in recent years, which suggests new avenues for restoring trust where it has eroded.

Keywords: trust in news, journalism, television news, social media news, comparative research, media systems

Across the world, platforms that offer personalized content have become increasingly important for how people access news, as the importance of broadcast television, radio, and printed newspapers that offer everyone the same bundle of content has stagnated or declined. At the same time, trust in news has fallen in many parts of the world (Newman et al., 2023).

Are these two developments linked? Has the move from media environments in which publishers controlled both news content and the channels through which people access it, to a world in which publishers still provide much of the news content people see, but where it is increasingly accessed via platforms such as social media, contributed to declining levels of trust? Is the shift away from a news media environment structured around one-way communication to one offering more opportunities for interaction and participation—including commenting on, criticizing, and ridiculing news coverage—linked to reduced trust in news?

Many journalists, editors, and publishers certainly think so (Ross Arguedas et al., 2022). Here, we analyze annual online survey data collected from 2015 to 2023 across 46 countries (N = 667,001) to investigate whether they are right. We find that they are—even if they may be wrong about how significant this shift is relative to other factors, what specific form it takes, or what drives it.

By using random effects within-between (REWB) models designed to analyze repeated cross-sectional data and the effect of both individual-level and societal-level variables,

we find, first, that there has been a small overall decline in trust in news since 2015 in the countries covered. These declines are not evident in every country, and there is obvious, non-linear fluctuation within countries over time. But overall, the trend toward lower trust in news is evident.

Second, across the 333 separate nationally representative surveys that make up the dataset, we find that on average, there are cross-sectional individual-level associations between age, gender, education, interest in news, media use, and trust in news—with older people, women, those without a university degree, those more interested in news, and television news users all having higher levels of trust. Those who access news on social media have lower levels of trust in news. While the significant positive effect of interest in news and television news use is evident in around 90% of country–years, the effects of the other variables are less consistent, helping us make sense of mixed results from single country studies.

Third, we find that the fluctuations in trust in news over time are aligned with changes to the structure of the news media environment—more specifically, the extent to which that environment is characterized by particular types of news media use. People in national news media environments that became less based on television news use—and more based on social media news use—have lower trust in news. Fourth, there are some consistent patterns by media system, with trust in polarized pluralist and hybrid media systems falling in the last ten years, while trust in news in democratic

corporatist countries has remained stable. However, as we also show, changes to trust in news are better explained by yearly changes to media use than by differences in media system.

One recent literature review on trust in news noted that although "communication researchers have comprehensively studied the correlates of trust in news media at the individual level, relatively little attention has been paid to the societal level" (Fawzi et al., 2021, p. 163). Our main contribution, therefore, is to go beyond most existing research and analyze the influence of structural- or societal-level variables on trust. In doing so, we provide evidence that people's trust in news is closely aligned with recent changes to the news media environment, in addition to the effect of the individual-level patterns we describe earlier. We ground this finding in comparative media systems research and structuration theories drawn from audience research, thus pursuing a series of hypotheses and research questions anchored in existing research with a very large and internationally diverse dataset. In particular, we argue that structural change in media use, specifically the decline of television and the growth of social media as a way of accessing news, has contributed to recent declines in trust in news, above and beyond the role played by many other factors including interpersonal trust, trust in institutions, and political factors such as polarization and elite cues identified in previous work (Hanitzsch et al., 2018; Ladd, 2012; Strömbäck et al., 2020; Watts et al., 1999).

In the first part of the article, we develop our research questions and hypotheses based on the growing body of research focused on trust in news. In the second part, we describe the data. In the third part, we explain our analytical approach, before turning, fourth, to the results. We conclude by offering a theoretically grounded interpretation of our findings to help inform future work on how structural change in media use may be among the factors that influence trust (and by extension, potentially other media attitudes and perceptions). Drawing on earlier scholarship, we suggest that television news may be associated with higher trust in news because audiovisual information is seen as inherently more credible, coverage is often more immediate, television newsreaders tend to be viewed more favorably than other journalists, and—at least in countries with relatively free media—many broadcasters have a commitment to impartiality. News on social media, on the other hand—even though it can come from television brands—is characterized by higher levels of exposure to lower quality news and information, more partisan, cross-cutting exposure, more disagreement, and criticism of independent media.

We hope that future work will build on the work done here, test what we have found, and unfold the causal mechanisms at play. We suggest that more sustained attention to such structural differences and changes over time will help supplement established accounts focusing on the role of, for example, political trust.

Defining trust in news

Trust is an important factor for understanding how people navigate contemporary news media environments, and changes to levels of public trust in news are of deep concern to both researchers and practitioners. There is no single agreed-upon definition of trust in the literature, but there tends to be consensus around several core features. First, trust constitutes a relationship between audiences (trustors) and news organizations (trustees) (Blöbaum, 2016; Schiffrin, 2019; Tsfati & Cappella, 2003). Second, trust refers to audiences' positive expectation that news organizations will perform their journalistic function in a manner that is favorable or beneficial for audiences (Engelke et al., 2019; Fawzi et al., 2021; Kohring & Matthes, 2007). Third, trust requires that audiences accept a degree of uncertainty or risk, as they typically cannot verify information firsthand (Kohring & Matthes, 2007; Tsfati & Cappella, 2003); hence, they must, in some sense, be "vulnerable" to news content (Hanitzsch et al., 2018, p. 5)—willing to accept the risk associated with not being able to verify the information for oneself.

Importantly, trust is not necessarily aligned with underlying trustworthiness, however defined or assessed, but a subjective judgment each of us must make when we rely on others. Most newsworthy events occur outside of one's personal experience, so people's willingness to believe the news media's descriptions of them must partly depend on whether they are trusted. Some degree of trust is thus, in a sense, a precondition for people to be informed by the news media.

What influences trust in news?

This is why trust in the news attracts considerable scholarly attention—particularly in recent years, following the decline of trust in some countries (Newman et al., 2022). Most research has examined trust at the individual level, focusing on the direct or indirect role of trust for people's news consumption and their acquisition of knowledge, beliefs, and attitudes, or on the individual characteristics of those that do or do not trust the news (Fawzi et al., 2021; Strömbäck et al., 2020; Toff et al., 2020). However, studies that examine the influence of sociodemographic variables like age, gender, and education are inconsistent, often arriving at contradictory conclusions. Similarly, while some find that the use of traditional or mainstream news sources such as television and newspapers is positively associated with trust, others do not, and when it comes to social media news use, researchers have also found a variety of different patterns (Fawzi et al., 2021). This happens, in part, because studies are drawn from separate countries where the dynamics of trust may be completely different, and/or because of the inconsistent use of measures of trust and media use. This creates confusion over what factors are consistently important, and to what extent. Furthermore, despite very pronounced cross-country variation, research has rarely explored the influence of structural factors on trust in news alongside individual-level associations (Fawzi et al., 2021).

Research that has considered the influence of structural factors on trust has tended to focus on its relationship to other attitudes about political or elite institutions. These studies usually treat attitudes to news media as an extension of other attitudes about the political systems they are embedded within. For example, one landmark study comparing across countries used World Values Survey data to establish a strong link between confidence in politics and confidence in the press—referred to as the "trust nexus" (Hanitzsch et al., 2018), which has strengthened in more polarized societies. The present study seeks to complement this work by looking instead at how changing patterns of media use, and the media environments structured by these patterns, relate to changes in trust in news over time.

Trust in different news sources

Although results are mixed, a handful of multi-country studies have shown that low trust in news is associated with using non-mainstream news sources like social media and digital-born outlets, whereas high levels of trust are associated with using television and newspapers (Fletcher & Park, 2017; Tsfati & Cappella, 2003). This can be explained by the fact that people have different levels of trust in different news sources (Aharoni et al., 2024; Mangold et al., 2022) and may have different sources of news in mind when asked about trust in general (Daniller et al., 2017). If we look at aggregate brand-level trust scores, we see considerable variation between outlets (Newman et al., 2023), but also a consistent pattern showing that television brands—particularly public service media (where it exists)—are more trusted (Schulz et al., 2020). Conversely, in most countries, people have lower levels of trust in news on social media compared to news in general (Newman et al., 2021), and experiments suggest that people tend to trust the same stories less when accessed through Facebook (Karlsen & Aalberg, 2023). It therefore follows that people are likely to trust news less if they come into contact with sources that are generally seen as untrustworthy.

Television

But why do people find television sources more trustworthy? A rich body of research offers several answers. First, people tend to see television as inherently more credible than other legacy media—in part due to its technological features (see Metzger et al., 2003 for a review). Television is a highly visual medium, providing viewers with a sense that they are seeing events with their own eyes, enhancing its believability compared to print and radio—"seeing is believing", as the expression goes (e.g., Carter & Greenberg, 1965; Wilson & Howard, 1978). Scholars have labeled this the "realism heuristic," predicting that people are more likely "to trust audiovisual modality because its content has a higher resemblance to the real world" (Sundar, 2008, p. 80).

Second, research suggests that the temporality of live television reports confers a sense of importance and authority through vicarious experience, as audiences witness breaking news in real time (e.g., Chang & Lemert, 1968).

Third, the prominent role of news anchors in delivering television news can make it more believable when these professionals are perceived favorably, compared to the "invisible newsman" behind print (Chang & Lemert, 1968; Newhagen & Nass, 1989). Television news is particularly amenable to the formation of parasocial relationships (Levy, 1979), as viewers, over time, can develop emotional bonds with news anchors, which in turn fosters a sense of trust (Pellizzaro & Liseblad, 2021). This is one reason why public opinion polls regularly find that television news readers are more trusted than journalists in general (e.g., Ipsos, 2022).

Fourth, television news has often—for a variety of professional, commercial, and sometimes regulatory reasons (at least in countries with a history of press freedom)—sought to occupy a relatively impartial position. Long-established television channels with such a legacy frequently remain relatively highly and broadly trusted, able to reach politically diverse audiences (Schulz et al., 2019). In more competitive multi-channel environments, some cable channels—most notoriously, perhaps, Fox News in the United States—are highly polarizing and mostly trusted by partisans, even as other television brands (e.g., ABC, CBS, etc) have higher, broader trust, and more diverse audiences. In many markets, however, mainstream television brands remain among the most widely used and trusted news media.

Most importantly, these four features of television do not operate in isolation; instead, they combine to have a cumulative effect on trust. In other words, trust in television as a medium is best understood as resulting from a combination of symbolic and material features that together are more than the sum of its parts. As such, we predict that television use for news will be associated with higher trust.

Social media

Social media, on the other hand, has been linked to much lower levels of trust in news (Ceron, 2015; Park et al., 2020; Park & Lee, 2023). There are several reasons such perceptions may have taken hold. First, for many audiences, social media platforms are viewed as places saturated with low-quality news and information. While news sources deemed trustworthy by independent raters account for the majority of social media engagement with news in many countries, news sources rated untrustworthy engage more people on social media than they do on the open web (Altay et al., 2022). There are also particular concerns about the amount of misinformation that is spread via social media, and research has found that greater perceived exposure to misinformation on social media decreases media trust over time (Stubenvoll et al., 2021). Negative discourse about misinformation on social media, including from news coverage itself, may also magnify perceptions of these sites as places where misinformation is rampant and hence less trustworthy (e.g., Thorson, 2024).

Second, alongside low-quality information, social media tends to expose people to cross-cutting news and information that goes against people's attitudes or beliefs (Lu & Lee, 2019; Masip et al., 2018, 2020). Although there may be some benefits to cross-cutting exposure (Matthes et al., 2019), it may also decrease trust in news through an increased awareness of what the 'other side' is saying, and some experimental work has found cross-cutting exposure increases hostile media perceptions (Arceneaux et al., 2012). Although people may also encounter cross-cutting information on television, the nature of this exposure is different, being arguably more intentional than incidental, and shaped by professional norms of journalism. In many countries, television networks seek to present all sides of an issue concurrently for the purposes of balance. However, on social media, people are more likely to get news from more partisan sources (Fletcher et al., 2023), meaning that any balance is constructed differently and is far from guaranteed.

A third feature of social media that could lower trust in news is the abundance of sources that compete for users' attention. While this plurality has the advantage of increasing media choice (e.g., Hargittai et al., 2012), it can also lead to confusion or uncertainty over what to believe. As Webster (2011) and others (e.g., Thorson et al., 2021) point out, information presented on platforms is shaped by algorithms that sort users by how interested they are in news, potentially contributing to widening disparities between those most attentive to (and trusting toward) news and others. Studies have also shown that when audiences access news on social media they tend to have more difficulty recalling the

provenance of that information compared to information they consume directly from news organizations (Kalogeropoulos et al., 2019). These tendencies may undermine audience connections to the news media as an institution.

Fourth, in contrast to the overwhelmingly one-way communication from a very small number of outlets to much larger audiences associated with mass media, and often relatively clear distinctions between professionally produced news and other kinds of content, the way social media are structured also constitutes a far more complex environment, where people may come across not only content from many different kinds (and qualities) of sources, but also where they and others can comment on, criticize, and ridicule news that purports to be authoritative. Indeed, studies show that negative commentary on social media impacts the perceived credibility of news stories (Boot et al., 2021), and platform users tend to report higher exposure to media criticism than non-users (Mont'Alverne et al., 2022). This criticism can come from the general public, but in some countries can also come from elites, including those who use partisan cues to attack and criticize the news media for their own ends (Ladd, 2012).

Fifth, as some have argued (Ross Arguedas et al., 2022; Van Dijck et al., 2018), the platformization of news on social media may also have a corrosive influence on the nature of the information that circulates in these digital spaces, as the prevalence of audience metrics may incentivize news organizations to distribute content that is more attention-grabbing (such as clickbait) but less likely to engender trust. Again, these five features of social media operate in conjunction, compounding the negative effects of any single one.

While the (non-exhaustive) list of features described above, for both television and social media, can have effects at the individual level (e.g., the sense that a person can trust television news they can see with their own eyes), they also matter at the societal level, reshaping the broader media environment. For example, given the tendency for television news to adhere more closely to professional norms of impartiality, the media environment in countries structured more heavily around television news use is more likely characterized by less partisan, more balanced reporting, which may lead to a sense that journalism is more unified or consistent across the board. On the flipside, more criticism of journalism and the greater plurality of viewpoints on social media create a context in which everything can be challenged, alternative explanations abound, and where there is little consistency around particular norms, which may lower trust in news in countries where social media is more prominent.

It is also worth acknowledging that some of the individual features we suggest promote trust in television news can also be found in some social media content, for instance, video-heavy platforms, where visuals and real-time streaming are common. Past studies have shown how activists live-streaming on-the-ground events make claims to truth based on the purported rawness and unfiltered nature of their videos (e.g., Kavada and Treré, 2020). While grassroots reporting may benefit from realism heuristics, it is still the case that such information circulates in the context of social media platforms where users must navigate competing claims or evaluate a variety of different sources they may know little to nothing about (rather than news anchors they recognize)—sources which are unconstrained by professional norms of journalism. Trusting individual sources or pieces of information with these features does not imply people trust news on social media more generally, and the evidence reviewed above confirms the opposite. Again, the aforementioned features—both those we suggest may favor trust in television news and discourage trust in social media news—likely have a cumulative effect rather than working individually.

Structuration and trust

The research reviewed above helps explain why, at the individual level, people who use different types of news sources might have different levels of trust in news. But to understand why the media environment as a whole might affect trust, we draw on structuration approaches to audience research. Simply put, structuration theory calls for empirical research on how the structure of the media environment shapes (and is shaped by) media users' collective attitudes and behaviors. It avoids separating analysis of structure from analysis of agency by underlining that the media environment plays an important role in influencing media use, and perceptions about that environment, even as these media are also influenced by how audiences engage with them (Webster, 2011, 2014).

For example, linear television offers a set number of channels, based in part on what media organizations believe there is effective demand for. But people's experience of using these channels also influences how they think of television, and these perceptions will be among the factors influencing what they watch, and this viewership will in turn influence which channels are available and what they offer. Structure thus influences individual-level agency, even as agency, over time, shapes structure. Patterns in media use are among the factors that define national media systems (in early comparative work, for example, differences in the prominence of the written press versus television, see, e.g., Hallin & Mancini, 2004). Changes in these patterns are increasingly playing out through differences in how much people rely on digital platforms that operate quite differently from traditional news media (Napoli, 2014; Nelson, 2021). In the present study, we investigate whether these changing media structures are a significant factor contributing to declining audience trust in addition to the political factors identified in other studies.

This approach shares an interest in the potential influence of different media on communication with the work sometimes labeled as "medium theory" (see, e.g., Meyrowitz, 1985), but eschews the stronger, more deterministic, claims—along the lines of "the medium is the message"—that some scholars of the latter are associated with. We extend structuration theory here by building on previous work to investigate whether the media environment influences, not just media *use*, but also media *perception*—in this case trust in news. Just as theoretical and empirical research focused on how political factors influence trust in news does not imply deterministic or mono-causal accounts, this also, of course, does not mean we are arguing that changing structures of media use are the *only* factor that influence trust—simply that it is a factor, and that it is therefore important to investigate whether the use of different media for news, with their different affordances, content styles, and associated journalistic practices, influences trust.

This structurational approach to analyzing trust in news does not necessitate ignoring political factors or cross-

country institutional variation in political and media systems—though we do intentionally focus on under-explored media-related factors more than political factors which have been explored in prior literature (e.g., Hanitzsch et al., 2018). To capture comparative differences, we draw on a third literature on comparative media research (Hallin & Mancini, 2004), which seeks to characterize national news media systems, but which has rarely examined trust as a key dimension. In other words, differences in trust between polarized pluralist systems—such as in Spain and Italy, where political parallelism is high, newspapers are weak, and journalistic professionalism is lower—and democratic corporatist systems—such as in the Nordic countries, where the opposite is true—have yet to be explored.

Research questions and hypotheses

To better understand the overall landscape, we first ask how trust in news has changed over time. This is particularly important with multi-country analyses because previous work has consistently warned against assuming changes in trust in a small number of (often unusual) countries represent broader phenomena (Norris, 2011). We also focus on a period after that covered by existing work (e.g., Hanitzsch et al. [2018] uses data up to and including 2014) whose findings should not be assumed to hold for continuously changing media and political environments.

RQ1. How has trust in news changed over time?

Before looking at what might explain this change over time, we use the dataset to explore what demographic variables are associated with trust at the individual level, given that prior studies have found inconsistent results associated with demographic variables like age, gender, and education (Fawzi et al., 2021). This is partly due to inconsistent measurement, but also because results from single-country studies, conducted at a single point in time, have been used to draw broader conclusions. We believe using our much larger dataset, including 333 separate surveys with identical measures, provides a more robust basis for exploring the extent to which these associations hold up over a much more extensive set of countries and longer period of time.

RQ2a. What is the association between age and trust in news?
RQ2b. What is the association between gender and trust in news?
RQ2c. What is the association between education and trust in news?
RQ2d. What is the association between interest in news and trust in news?

We then explore the association with individual news media use. As with demographic variables, evidence from existing studies on the relationship between the use of different news sources and trust is mixed (Fawzi et al., 2021). However, drawing on the research described above, we hypothesize that television will be associated with higher trust in news, and social media with lower trust in news.

H1a. People who use television news have higher trust in news.

H1b. People who use social media for news have lower trust in news.

We then turn our attention to societal-level factors. Because trust in news varies across countries, and because media systems differ in ways that might influence this, we explore how trust has changed in different media systems. However, because media systems theory does not specifically explain how trust in news might have changed over time in different media systems, we ask a research question instead of forming specific hypotheses.

RQ3. How has trust in the news changed in different media systems over time?

We then focus on the structure of the news media environment people inhabit—more specifically, the extent to which that environment is characterized by different types of news use. For the reasons outlined earlier, we hypothesize that for people in a national news media environment that is less based on television news use—and/or more based on social media news use—trust in the news will be lower.

H2a. People in countries where the media environment is structured around television news use have higher trust in news.
H2b. People in countries where the media environment is structured around social media news use have lower trust in news.

Because we effectively have panel data at the country level through repeated cross-sectional surveys, we can also explore the effect of *changes* to the structure of the media environment—which, as with panel data at the individual level, provides a more meaningful and robust test of the effect of that variable.

H3a. People in countries where the structure of the media environment is becoming less characterised by television news use will have lower trust in news.
H3b. People in countries where the structure of the media environment is becoming more characterised by social media news use will have lower trust in news.

Methods
Data

Our data come from the 2015–2023 Digital News Reports.[1] The Digital News Report project at the Reuters Institute for the Study of Journalism is based on nationally representative online surveys fielded by YouGov simultaneously across multiple countries. The main advantage of the dataset is that the relevant questions were asked in the same way each year and in each country, meaning that the data are highly comparable. An important limitation is that respondents were drawn from opt-in online panels rather than selected at random. This means that samples may over-represent certain groups, likely those who use more news, those who get news online instead of offline, and those who have higher trust. A second limitation is that the data on news use are based on recall and may not accurately describe people's actual behavior. Results from passive tracking data, available in a small number of

countries, often show different results to survey data. For example, research from the United States has found that younger people tend to over-report television news use (Prior, 2009). However, the Pew Research Center (2020) has found that it is not clear whether people over-report or under-report because of large variation in different tracking measures. Furthermore, researchers are starting to discover new limitations with web tracking which preclude it from being used as a ground truth (e.g., Bosch et al., 2023). As such, it is difficult to know how any limitations and biases associated with survey data will affect the analysis here. It is also worth remembering that tracking cannot be used to measure the use of sources such as print newspapers, meaning that survey data are the only option for cross-country, single source, single currency data capturing both different types of media use and different media attitudes. The relevant parts of the dataset are available upon request.

Countries

The dataset covers 46 countries in total.[2] Due to the practical limitations of online surveying, most are from the Global North, score relatively highly on the United Nations' Human Development Index (based on life expectancy, education, and income),[3] and generally have relatively high levels of press freedom according to Reporters Without Borders.[4] These facts are reflected in our hypotheses, which—because they are informed by previous research that has mainly focused on countries with relatively free media—refer to the nature and use of television and social media in a particular context. We will explore the potential for different relationships and media use to emerge in low press freedom contexts later in the analysis.

The dataset contains 333 country–years. However, data were not collected from all 46 countries every year (see Supplementary Table S5). This is because the Digital News Report project focused on Europe and the United States in 2015, but expanded to Asia-Pacific and Latin America by 2017, adding a small number of African countries from 2019 onward. This means, in total, there are more data from Europe, which, even within the context of this sample, means countries with higher levels of human development and press freedom are over-represented—which is important to keep in mind when interpreting the results.

Measures

Our dependent variable is trust in the news. Many different researchers have attempted to measure some aspect of trust in news using surveys. As Strömbäck et al. (2020) highlight, studies have measured trust in a variety of ways. Here we focus on measuring people's overall trust in all news media content. This was measured in the same way in every survey, using the following question: "Please indicate your level of agreement with the following statement: I think you can trust most news most of the time." Respondents could select from a five-point Likert scale ranging from (1) "Strongly disagree" through (3) "Neither agree nor disagree" to (5) "Strongly agree".

Our independent variables at the individual level are age, gender, education, interest in news, and binary measures of different types of media use (television, radio, print, online print, online broadcast, online other, and social media). At the societal level, our measures of the structure of the media environment are derived from the media use measures. As the various measures of individual-level media use are binary, they can be represented as percentages at the country level (i.e., the percentage of the sample that used television news in a given country–year). Our media system variable was created using the classifications from Humprecht and colleagues (2023). Their categories are democratic corporatist, hybrid, and polarized pluralist. Unfortunately, because this scheme only covers Europe and the United States, many of the countries in the data we use here are unclassified, reflecting the lack of comparative media system research that compares across continents. However, this largely does not affect comparisons between the other categories. In the main analysis, we control for political polarization and media bias at the country level using measures from the V-Dem (Varieties of Democracy) project, and press freedom from Reporters Without Borders. All measures are described in full in the Supplementary material.

In the main analysis, we restrict control variables to those that are present in every Digital News Report survey, or are available from external sources for every year from 2015 to 2023, to avoid dropping cases. Despite this, we are able to test for the effect of several potential confounding variables (frequency of news use, political leaning, generational shift, interpersonal trust, and confidence in government) as part of robustness checks, which are detailed in the Supplementary material. None of these tests produced findings that depart from those described below.

Analysis

Most of the analyses rely on a modeling approach suggested by Fairbrother (2014). This approach, which is based on the random effects within-between (REWB) framework (Bell et al., 2019), was specifically designed for the analysis of comparative survey datasets, where cross-sectional surveys are repeatedly fielded in the same country over time.[5] Thus, data at the individual level are cross-sectional, but repeated cross-sectional surveys over time form panel data at the country level.

As with modeling panel data using fixed effects, the main strength of this approach is that it allows us to estimate the effect of changes in the independent variable on changes in the dependent variable within the same country over time. This focus on within-country variation means that estimates are far less influenced by national differences in how people define and conceptualize "trust" and "news," and has the related advantage of controlling for the effect of all stable (time-invariant) country-level variables, regardless of whether they were measured or not. In addition, REWB models can account for the nested structure of the data by specifying random effects for country and country–year, given that individuals at level one are nested within country–years at level two, which are in turn nested in countries at level three (Schmidt-Catran & Fairbrother, 2016). This allows for the additional estimation of individual-level effects (e.g., age) across countries and between-country effects (e.g., media system). The ability to simultaneously estimate individual-level effects also reduces the risk of committing the ecological fallacy. One version of this is when patterns observed at the group (country) level are assumed to be caused by similar patterns at the individual level—which does not have to be the case. But, if we can observe the same patterns at the country level and the individual level, then the risk of committing the ecological fallacy is lower. Including individual effects alongside societal-

level effects also means that any estimates of the effect of the structure of the media environment exist in addition to the effects of media use at the individual level, ensuring that the two are not conflated. Nonetheless, the ability to control for all stable country-level variables does not address the possibility of reverse causation, which here would mean news habits changing in response to declining trust levels rather than trust levels changing because of news use. This is a key limitation of our analysis.

Results

Our first research question explores what has happened to average levels of trust in news since 2015. The results from Model 1 (Table 1) show that, on average, there has been a small but statistically significant decrease in trust over time (B = −.01, $p < .001$). In other words, there has been an average yearly decrease in trust of .01 on the five-point scale. This amounts to an average decline of around .08 between 2015 and 2023 (Figure 1a). If we re-run the model with year as a factor to estimate differences from 2015, we can plot the non-linear year-on-year trend (Figure 1b). This shows that there has not been a consistent decline in trust in every year, with trust rising between January/February 2020 and January/February 2021 during the first year of the coronavirus pandemic.

However, pooling countries in this way risks oversimplification. To explore variation in the trust trend by country, we run separate OLS models for each country with fixed effects for year. When we plot the coefficients in Figure 1c, we can identify the countries where trust has significantly decreased over time, where it has increased, and where there has been no statistically significant change. In line with the average, in 24 of the 46 countries (52%)—including Germany and the UK—there is evidence of a significant linear decline in trust in news since 2015. In 13 countries (28%)—including Sweden and the Philippines—there was evidence of a significant increase, while there was no statistically significant effect of year in Australia, Ireland, and seven other countries (20%). The coefficients for the effect of year vary from −0.06 in Chile to 0.11 in Kenya—equivalent to a predicted −0.54 decrease and a 0.99 increase on the five-point scale since 2015, respectively. However, the change in trust since 2015 for many countries was much smaller.

We now address RQ2a–d and H1a–b by adding individual-level demographic and media use terms to the model (Model 2). The results across all country–years show that, on average, older people (B = .001, $p < .001$), women (B = .09, $p < .001$), those without a university degree (B = −.04, $p < .001$), and those with higher levels of interest in news (B = .14, $p < .001$) all have higher trust in the news. If we instead run a separate OLS regression models for each country–year, and then plot all 333 standardized effect sizes (Figure 2), we see a statistically significant positive association between age and trust in news in 45% of cases, compared to just 9% of cases where younger people were significantly more likely to trust the news (there was no significant association between age and trust in the remaining 46% of country years). This is aligned with the results from the multilevel model, as the number of positive associations outweighs the number of negative associations, even though there is not a positive association most of the time. Women were significantly more likely to trust the news in 46% of

cases, whereas men were more likely to have higher trust in just 1%. Those without a university degree were more likely to trust the news in 29% of cases, compared to just 4% with a degree. For these variables, there are a large number of country–years where there was no significant association, but this is not the case with interest in news, which was positively associated with trust in news in 91% of cases. There was a negative association less than 1% of the time. Figure 2 also shows that the standardized effect sizes for interest were typically larger than for the other demographic variables.

Turning to H1a–b, on average across all country–years there is a positive individual-level association between television news use and trust in news (B = .21, $p < .001$), and a smaller but statistically significant negative association between social media news use and trust (B = −.03, $p < .001$). If we look instead at the results of separate OLS models for each country–year, we see very consistent results for the association between television news use and trust. There were a positive association in 89% of cases and no evidence of a negative association in any of the country–years analyzed. The effect size for television news use is comparable to that of interest in news, but also varies considerably. For social media news use, we did find evidence of a positive association in 7% of cases, but this is outweighed by the negative association in 21%.

Moving now to the societal level, RQ3 asks whether patterns of trust in news are evident if countries are grouped by media system. As explained earlier, the dataset is longitudinal at the societal level, so we are concerned with both differences between countries, and within countries over time. If we add a term for media system to the existing model (Model 3), setting democratic corporatist as the reference category, we see that average levels of trust in polarized pluralist media systems are −.32 lower than in democratic corporatist countries (B = −.32, $p < .001$), −.21 lower in hybrid countries (B = −.21 $p < .05$), but not significantly lower across all other countries analyzed (B = −.14 $p > .05$). To understand different trends, we must look at the interaction between media system and year. Here, we see a significant negative coefficient for polarized pluralist countries (B = −.02, $p < .001$) and hybrid countries (B = −.01, $p < .05$), meaning that declines in trust have been significantly steeper here compared to democratic corporatist countries—where trust levels have remained stable (Figure 3).

Now we add the between-country and within-country variables for the structure of the news media environment, and country-level controls for media bias, political polarization, and press freedom (for which we have yearly data, allowing for the inclusion of within-country terms).[6] When we do this (Model 4), media system is mostly no longer a statistically significant variable. This is partly due to the inclusion of the variables for the structure of the news media environment. For H2a, we hypothesized that people in countries where the media environment is structured around television news use will have higher trust in the news. However, we do not find evidence that countries with higher average levels of television news use also have higher trust in news (B = .10, $p > .05$). It is important to recognize that there are a limited number of data points at the between-country level, so even quite large effects will not be statistically significant, and we should avoid over-interpreting these results. As with television, we do not find any evidence that countries with a news media environment structured around social media news use have

Table 1. REWB models where the dependent variable is trust in news.

Predictors	Model 1 B	SE	p	Model 2 B	SE	p	Model 3 B	SE	p	Model 4 B	SE	p
(Intercept)	3.14	0.03	**<0.001**	2.83	0.03	**<0.001**	3.18	0.06	**<0.001**	0.02	4.81	0.996
Year	−0.01	0.00	**<0.001**	−0.00	0.00	0.345	0.00	0.00	0.801	0.03	0.01	**<0.001**
Demographic variables												
Age (individual)				0.00	0.00	**<0.001**	0.00	0.00	**<0.001**	0.00	0.00	**<0.001**
Gender (individual)				0.09	0.00	**<0.001**	0.08	0.00	**<0.001**	0.09	0.00	**<0.001**
News interest (individual)				0.14	0.00	**<0.001**	0.18	0.00	**<0.001**	0.14	0.00	**<0.001**
Education (individual)				−0.04	0.00	**<0.001**	−0.03	0.00	**<0.001**	−0.04	0.00	**<0.001**
News use variables												
TV (individual)				0.21	0.00	**<0.001**				0.21	0.00	**<0.001**
Radio (individual)				0.06	0.00	**<0.001**				0.06	0.00	**<0.001**
Print (individual)				0.09	0.00	**<0.001**				0.09	0.00	**<0.001**
Online print (individual)				0.02	0.00	**<0.001**				0.02	0.00	**<0.001**
Online broadcast (individual)				0.07	0.00	**<0.001**				0.07	0.00	**<0.001**
Online other (individual)				−0.05	0.00	**<0.001**				−0.05	0.00	**<0.001**
Social media (individual)				−0.03	0.00	**<0.001**				−0.03	0.00	**<0.001**
Media system (ref=Democratic corporatist)												
Hybrid							−0.21	0.09	**0.016**	−0.11	0.12	0.359
Unclassified							−0.14	0.07	0.057	0.08	0.17	0.658
Polarized pluralist							−0.32	0.09	**<0.001**	−0.21	0.16	0.179
Hybrid: Year							−0.02	0.01	**0.009**	−0.00	0.01	0.496
Unclassified: Year							−0.01	0.01	0.135	0.01	0.01	**0.032**
Polarized Pluralist: Year							−0.03	0.01	**<0.001**	−0.00	0.01	0.592
Societal variables												
Age (between)										0.00	0.02	0.780
Age (within)										0.01	0.01	0.418
Gender (between)										0.86	2.83	0.761
Gender (within)										0.32	0.36	0.372
News interest (between)										0.29	0.20	0.160
News interest (within)										0.15	0.07	**0.022**
Education (between)										0.36	0.40	0.366
Education (within)										0.24	0.08	**0.002**
Structure of the media environment												
TV (between)										0.10	0.53	0.854
TV (within)										0.77	0.23	**0.001**
Radio (between)										0.63	0.60	0.293
Radio (within)										0.09	0.18	0.603
Print (between)										−0.36	0.48	0.454
Print (within)										0.32	0.17	0.050
Online print (between)										0.38	0.46	0.402
Online print (within)										−0.08	0.17	0.636
Online broadcast (between)										−0.33	0.56	0.554
Online broadcast (within)										0.17	0.21	0.421
Online other (between)										0.09	0.31	0.757
Online other (within)										−0.09	0.11	0.388
Social media (between)										−0.10	0.46	0.835
Social media (within)										−0.57	0.15	**<0.001**
Societal-level controls												
Polarization (between)										−0.05	0.04	0.292
Polarization (within)										−0.06	0.02	**0.004**
Media bias (between)										−0.08	0.10	0.418
Media bias (within)										0.01	0.02	0.583
Press freedom (between)										0.00	0.01	0.429
Press freedom (within)										−0.00	0.00	0.758
Random effects												
σ^2	1.04			0.99			1.01			0.99		
τ_{00}	0.01 Country:year 0.04 Country			0.01 Country:year 0.04 Country			0.01 Country:year 0.03 Country			0.01 Country:year 0.03 Country		
ICC	0.04			0.04			0.04			0.03		
N	46 Country 9 year			46 Country 9 year			46 Country 9 year			46 Country 9 year		
Observations	667,001			661,687			661,687			661,687		
Marginal R^2/Conditional R^2	0.001/0.043			0.045/0.085			0.041/0.077			0.065/0.097		

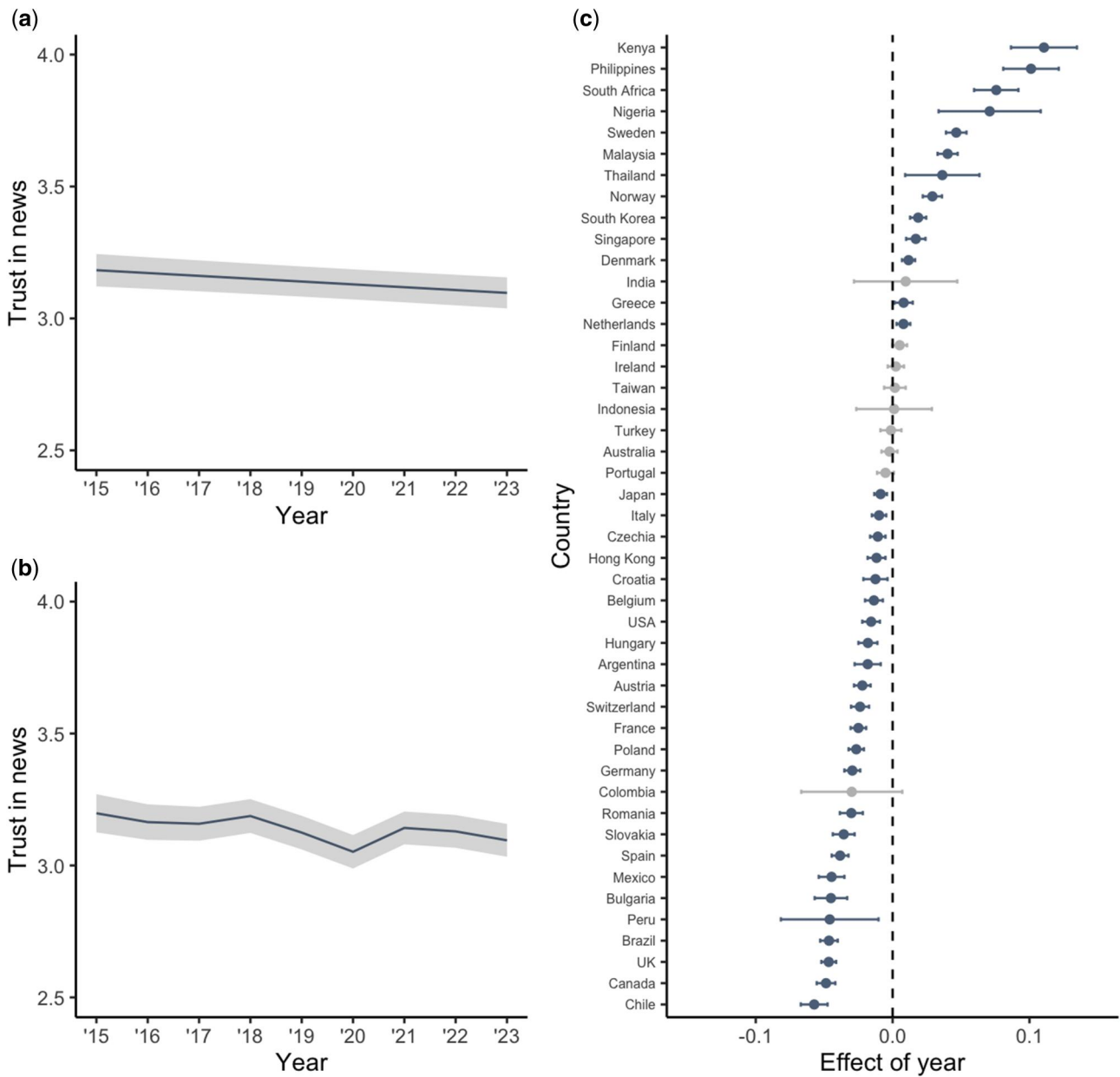Note: Bold text within *p* column indicates *p* < .05.

Figure 1. The (a) predicted linear effect of year on trust in news across all 46 countries, (b) predicted non-linear effecr of year on trust in news across all 46 countries, and (c) linear effecr of year on trust in news by country.

Note. Shaded area/error bars represent 95% confidence intervals. Gray bars in plot c indicate that the effect was not statistically significant at the .05 level.

lower overall levels of trust in news (B = −.10, $p > .05$). Therefore, H2b is not supported. However, it is important to keep in mind that the within-country estimates for the structure of the media environment that we turn to next provide a more robust and more meaningful indication of the effect of media use on trust than the between-country estimates.

In H3a, we hypothesized that people will have higher trust in news in countries where the structure of the news media environment is increasingly characterized by television news use. The results from the model, specifically the within-country term for television news use, support this hypothesis (B = .77, $p < .001$). H3b, which hypothesized that people will have lower trust in news in countries where the structure of the news media environment is increasingly characterized

by social media news use, is also supported (B = −.57, $p < .001$).

Putting these results in the context of the overall decline in trust in news, they mean that a yearly decrease of around 3 percentage points (pp) in television news use is associated with a decrease of around −.025 in trust in news on the five-point scale (Figure 4). A yearly increase of around 3 pp in social media news use is associated with a decrease of around −.016. These are small annual changes, but it should be kept in mind that, since 2015, many countries have seen simultaneous declines in television news use and rises in social media news use. Furthermore, the data span nine years, so annual changes have compounded year-on-year in countries that have seen, for example, consistent declines in television news use. In the
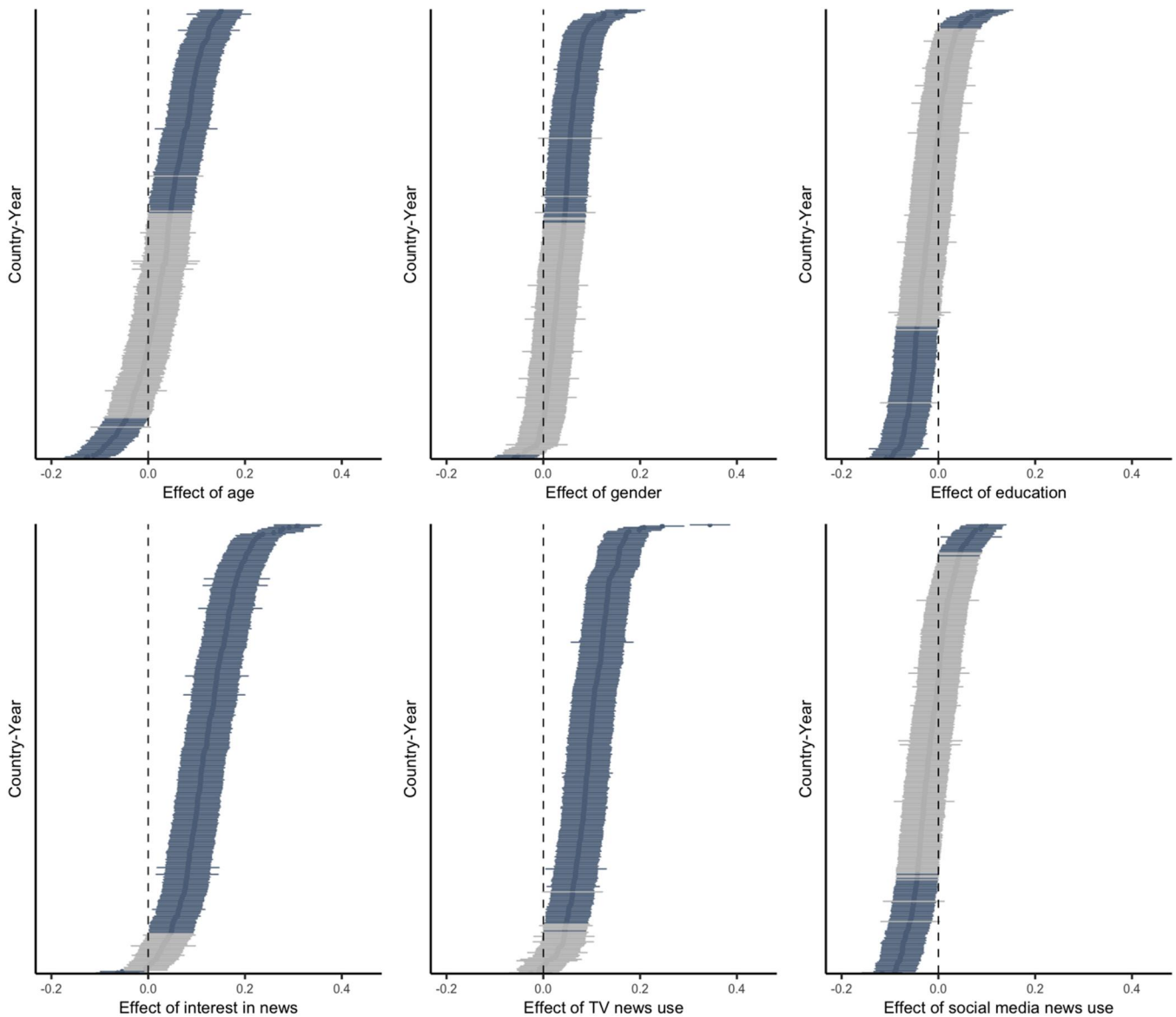
Figure 2. Standardized effects of different variables on trust in news across 333 separate country years.
Note. Predicted effects ordered by size in each plot. Error bars represent 95% confidence intervals. Gray bars in plot indicate that the effect was not statistically significant at the .05 level.

Unites States, weekly television news use has fallen from 64% in 2015 to 48% in 2023, while weekly social media news use has grown from 40% to 48% (Newman et al., 2023). These findings are a particularly important illustration of the value of structuration theory that considers the interplay between societal and individual-level factors, and of how our large dataset enables us to examine change over time.

We describe our results here in the context of overall declines in trust in news. However, it also follows from the results that in years when television news was higher than normal—such as in 2021, when television news increased during the coronavirus pandemic (Newman et al., 2023)—trust in news also increased. This is particularly important to remember, given that trust is not declining in every country, and there is considerable year-on-year fluctuation.

We should also keep in mind that the countries we analyze mostly have relatively high levels of press freedom—which could bias the overall results in a particular direction. In the

Supplementary material, we show that the effects of both television and social media news use on trust start to move in the opposite direction in countries with lower levels of press freedom, as some of the affordances that underpin our hypotheses no longer apply (e.g., commitment to impartiality on television). Although we do not have sufficient countries with very low levels of press freedom in our sample, future research could explore the possibility that the effects we find here could be inverted in media systems characterized by government control over mainstream media, and the use of social media for free expression.

We also note that, although there are significant individual-level associations between the use of all types of news media (e.g., radio, print, etc) and trust, none of the other within-country coefficients are statistically significant, meaning that we have no evidence, for example, that as media environments become less structured around newspaper use, trust in news decreases. Although included as control

variables, we do see a significant negative effect of political polarization at the within-country level, meaning when political polarization is higher than usual, trust in the news is typically lower (b = −.06, $p < .01$).

Although the within-between models allow us to associate levels of media use with levels of trust in news while controlling for all unobserved stable country-level variables, they do not reveal anything about the direction of causation. In other

words, while it may be the case that levels of trust in news fall because television are less widely used, it could also be that television becomes less widely used in response to declining trust.

Discussion

In this study, we analyzed survey data from more than half a million people across 46 countries between 2015 and 2023 to explore the effect of different types of media use on trust in news. Our analysis, based on REWB modeling, enabled us to explore changes in trust in news over time, as well as the effect of individual-level and societal-level factors simultaneously.

We find that there has been a small average decline in trust in news between 2015 and 2023, covering a period that goes beyond previous work in this area (Hanitzsch et al., 2018). The overall trend is clear, but, aligned with data from the World Values Survey and other studies (Livio & Cohen, 2018; Poletti & Brants, 2010), it is not universal, varies significantly by country, and is not necessarily linear within countries. In some countries there are clear declines, while in others we see stability—and, in a smaller number of cases, increases in trust in news over time, contrary to the popular Western narrative.

What might help explain these differences? Our results at the individual level show a positive association between age and women and trust in news, and a negative association with education. However, these associations are inconsistent across countries, present in less than half of all 333 individual country–years analyzed. Interest in news, on the other hand, is consistently and positively associated with trust in news. The same is true of television news use. In none of the country–years analyzed is television news use negatively associated with trust at the individual level. Overall, we found a
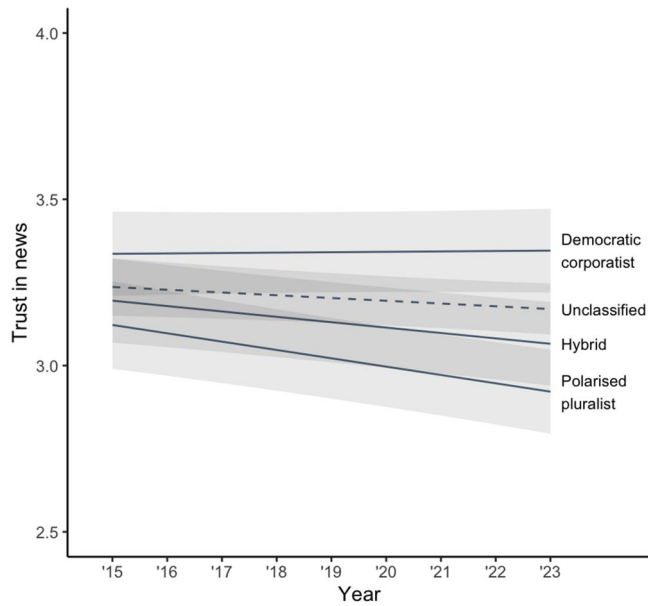
Figure 3. Predicted effect of media system on trust in news over time.

Note. Shaded areas represent 95% confidence intervals. Countries classified using Humprecht et al. (2022).
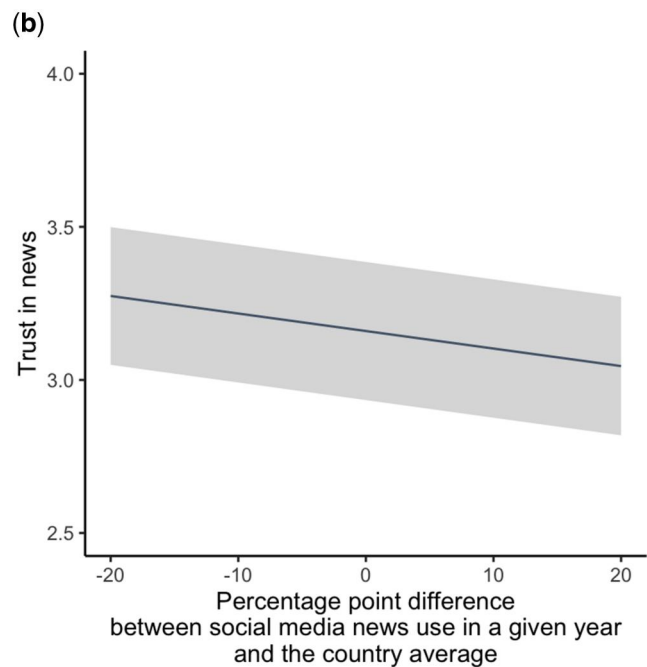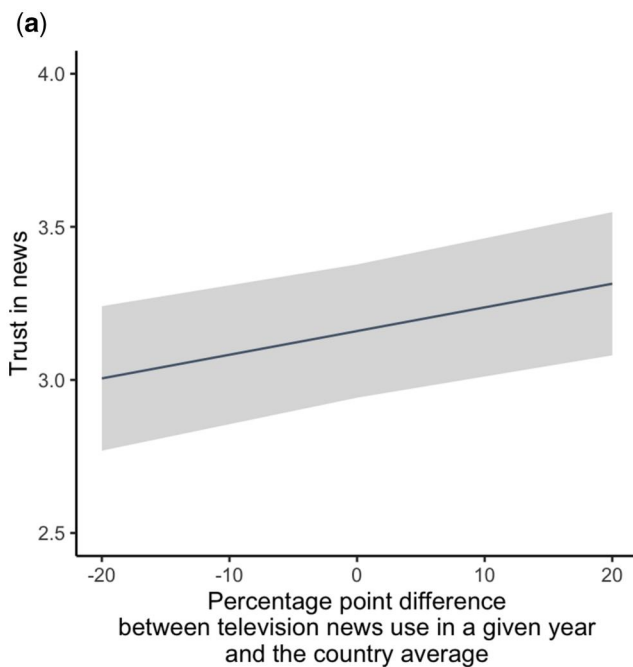
Figure 4. Predicted effect of change in the structure of the media environment in terms of (a) television news use and (b) social media news use across all 46 countries.

Note. Shaded areas represent 95% confidence intervals.

negative individual-level association between trust in news and social media use, but in most country–years there is no significant effect. These findings bring some clarity to the current literature on trust, which is primarily characterized by mixed results from single country studies.

At the societal level, media system partially explains the patterns we see, since democratic corporatist countries have seen almost no change in trust, whereas polarized pluralist and hybrid countries have lower and declining levels of trust overall. But our key finding is that changes to the structure of the news media environment better explain trust in news. Specifically, as media environments became less characterized by television news use, and increasingly characterized by social media news use, this was associated with a decline in trust. This is an important contribution that goes beyond the role played by political and social factors identified in previous work.

However, it is important to acknowledge that the analysis we present here cannot identify the direction of causation. It may be that changing levels of trust in news are primarily influencing both news use and the structure of the media environment or that this is happening alongside the mechanisms we describe. Although there are methods for addressing reverse causation, they are difficult to apply to the data we have here, with annual data collection likely unsuitable for pinpointing whether changes in media use precede trust, or vice versa (Leszczensky & Wolbring, 2022).

Our analysis demonstrates both the utility of pursuing a structuration approach, examining the interplay between structure (the media environment) and agency (media use), and extends structuration theory to media attitudes (trust). It also points to the importance of integrating a structuration theory approach into studies of trust in news to help focus attention on the role of macro-level factors and affordances of different kinds of media use.

Our argument is not that the structure of news use solely determines trust in news, but that—just like interpersonal trust, confidence in politics, or political polarization—it is among the factors that may well explain changes in trust in news, and we have shown here that it is a consistent factor globally where prior theories have faced limitations. Although the available data do not allow us to test the effect of media structures alongside some of these variables, on balance we do not think this significantly undermines our findings because, on the whole, they are not theoretically plausible confounders.

The positive link between television news use and trust could be explained with reference to findings from other studies discussed. We formulated hypotheses H1–3a on the basis of literature which shows how trust in news can be established, such as through audiovisual material, real-time coverage and—in countries where press freedom is relatively high—trusted personnel and a commitment to impartiality, leading to distinct trust relationships when compared to other sources (e.g., Metzger et al., 2003; Pellizzaro & Liseblad, 2021; Schulz et al., 2019). This can be contrasted with social media, where—again, at least in countries with high press freedom, according to the studies in which we grounded hypotheses H1–3b—people often encounter low-quality information, more partisan, cross-cutting news, all in the context of often contentious conversations or news criticism, and in a volume that hinders people's evaluations of what is or is not trustworthy, potentially adding complexity and confusion

(e.g., Fletcher et al., 2023; Masip et al., 2020; Stubenvoll et al., 2021). Prior research has also highlighted the degree to which social media structures, with their reliance on algorithms and metrics, may be contributing to qualitatively different perceptions about the quality of the media environment—associations which may in turn be fueling erosion in the public's trust (Fletcher & Nielsen, 2019).

Although the strength and direction of the effects may differ depending on press freedom, the basic point remains that changing structures of media use are one of several factors that can help explain trends in trust in news in recent years. The decline of television and the growth of social media are near universal trends, but not at the same rates in all places, and as trust goes up in some countries and down in others, we can partly understand this through the different affordances they have in different political contexts.

But even focussing on North America and Western Europe, some of the very features of television news critics have long decried (e.g., dominated by long-established "mainstream media", little space for nuance, one-way transmission with no space for counter-speech, etc) may have helped engender trust in news, and some of the very features of social media often held up as positive contributions (e.g., incidental exposure leading people to more and more diverse sources of news, greater opportunities for participation) may at the same time erode trust. The American CBS evening news presenter Walter Cronkite's legendary sign-off "and that's the way it is" captures some of the authority television news has often assumed, in striking contrast to the diversity and disagreement often experienced on social media (Carlson, 2017). (Whether, when, and under what condition that assumed authority was deserved, and whether the trust engendered aligned with trustworthiness, are separate questions from the ones we are focused on here.)

These differences between modes of media point toward potential new avenues for scholars and practitioners who seek to devise effective strategies to respond to declines in trust, which go beyond a strict focus on journalistic reporting practices, and we hope this study can help spur innovation in this vein. This study holds other scholarly implications as well, making significant theoretical and empirical advances in understanding what may be driving declines in trust in news across political information environments around the globe. It demonstrates how a combination of political forces but also changing media structures, in line with structurational accounts of audience attention, are contributing to a fraying of the relationship between the public and institutions of journalism in many places. As audiences are increasingly accessing news via social media platforms rather than television, they may be less likely to develop distinct relationships with a small number of unique journalistic sources, which are instead encountered in a more incidental manner and evaluated alongside a wider array of content. Webster's (2011, 2014) work on structuration and audience formation has long underlined the importance of paying close attention to the often-reciprocal relationship between structure and agency—an especially important point given the rapid pace of change in many forms of media use at the current juncture—and we extend this line of thinking here to help us understand changes in trust in news. It is possible that similar relationships exist between various kinds of media use and other attitudes toward and perceptions of the media, and we

hope our approach offers a way of investigating that across countries over time.

We also believe that the approach we have taken here demonstrates how larger-scale comparative studies looking both across countries and over time can complement in-depth qualitative work, single country case studies, and cross-sectional comparative research. This helps communications scholars arrive at a firmer understanding of which trends and mechanisms are more general, and which ones more particular, strengthening our ability to generalize, and protecting us against the risk of drawing unwarranted broad conclusions from studies of a single unusual country like, say, the United States. This is important for understanding trust in news, but also many other questions central to the theoretical and empirical concerns of communications research.

While we believe that this study is unprecedented in empirical scale and scope, demonstrating relationships between media use and trust in news across countries and over time, we want to underline that the theoretically grounded interpretations we offer here, aligned with the research we ground our hypotheses in, do not represent the only possible explanations for the empirical findings, and we hope future work will focus on testing the relative role of different possible causal factors, including counterarguments and alternative explanations. Furthermore, while we have identified a variety of features that prior research suggests may distinguish television and social media when it comes to trust, we cannot adjudicate which of these features—or constellations of features—are most important, something future work should examine. This study also has some other limitations. We have evidence that media use matters for trust—even as the mechanisms we describe play out differently in different political contexts—but our focus on countries with relatively high press freedom means we cannot be sure that this is true everywhere. We should note that we do see a significant individual-level association between some types of media use and trust—for example, a positive association with print use. This is a reminder that a major part of our analysis refers to societal-level changes. Future research could explore the effect of media use on changes in trust at the individual level. It could also expand our understanding by separating out the inherent, universal aspects of television and social media use that are relevant for trust, from those where the effect is contingent on the political context.

Supplementary material

Supplementary material is available at *Journal of Communication* online.

Funding

Acknowledgements

Notes

1. We also include data from the 2015 Reuters Institute Supplementary Digital News Report and the 2019 Reuters Institute India Digital News Report.
2. These could be more accurately described as markets, given that Taiwan and Hong Kong are not universally recognized as countries.
3. http://hdr.undp.org/en/content/human-development-index-hdi
4. https://rsf.org/en/ranking
5. Although we are not aware of the use of this specific approach elsewhere in communication research, the broader REWB framework has been used by Schemer et al. (2021) and Stier et al. (2022).
6. Within and between terms were included in the analysis because interest in news varies over time, and although education levels are generally stable, additional education quotas were incorporated into the Digital News Report data collection from 2019, meaning university educated respondents were over-represented in earlier years, and thus introducing variation.

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