Journalistic Roles and News Framing: A Comparative Framing Analysis of COVID-19 Pandemic Across China, South Korea, and the United States

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Drawing on the latest Worlds of Journalism report, this study identifies the perceived roles of Chinese, Korean, and American journalists and examines the relationship between these role perceptions and the news frames used during COVID-19. Among the various frames, we looked at which frame was used more in each country (frame prevalence) and how those frames were used (framing valence). Based on a content analysis of the news articles (N = 749), we found that Chinese journalists were more likely to use a frame that reassures people but less likely to emphasize uncertainty or conflict. Although South Korean and American journalists share similar role perceptions, Korean journalists used significantly fewer conflict and uncertainty frames than American journalists. When using consequence and action frames, Chinese media was more likely than Korean and American media to present stories positively. The implications of the findings are discussed.

Keywords: news framing, comparative framing analysis, COVID-19 pandemic, journalistic roles, frame prevalence, frame valence

As the COVID-19 pandemic has become the biggest challenge for the world since World War II (BBC News, 2020), it has been followed by massive and intensive media coverage (Krawczyk et al., 2021). News media coverage of COVID-19 played a significant role in transmitting and communicating public health information and policies (Mach et al., 2021). Noticeably, there has been some evidence that news media in different countries covered the COVID-19 pandemic differently (e.g., Colarossi, 2020; Mellado et al., 2021). Colarossi (2020) showed that while U.S. media have been focusing on the economic consequences caused by the pandemic and the controversies around lockdown and social distancing policies, news media in China put greater efforts in telling stories about how the government's actions helped control the spread of the virus. In reporting personal preventive actions, unlike controversial and conflicting conversations in U.S. news, South Korean media were highly consistent in promoting the importance of wearing masks (Colarossi, 2020).

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To decipher the complex global pandemic discourse, it becomes more important to explore how and why media in different countries portrayed the pandemic differently. This study aims to identify frames used by news media across different countries (i.e., framing prevalence) and explain how each used frames differently (i.e., framing valence). As cross-national comparative analysis on describing and predicting news framing has become more prevalent during the past decade (Dimitrova, 2018), comparative framing studies, which examine how the same event or issue is portrayed differently across countries, help us better understand which characteristics of different systems matter and how they work (Gurevitch & Blumler, 2004). In explaining differences in news framing, previous studies mostly focus on comparisons between "media systems" (e.g., Strömbäck & Dimitrova, 2006). However, this dominant media-system framework has been accused of being Western-centric, which is less applicable or useful when non-Western, nondemocratic countries are involved.

In this study, we used the results of the latest Worlds of Journalism Study (WJS) survey, which inclusively measured a set of criteria related to journalistic culture in 67 countries around the world to explore how different journalistic roles may shape different news frames on COVID-19 pandemic coverage in different countries. Journalistic roles are important because they reflect communicators' normative ideas about the function of journalism in a society and influence their practices of developing news stories (Shoemaker & Reese, 1996). We conducted a descriptive content analysis of news articles from three different countries. This study chose China, South Korea, and the United States as subjects for comparison and one news outlet from each—*Xinhua, Yonhap*, and the Associated Press—for collecting news stories. The selected news stories were published in either (digital) newspapers or broadcast media. China is the country where the first COVID-19 case was reported, while South Korea is considered to have among the best pandemic control responses during its initial peak, and the United States is among the worst (Martin & Yoon, 2020). Based on Shih, Wijaya, and Brossard's (2008) six epidemic news frames, we examined differences in news framing across the three countries. By comparing the different roles of journalists in different political/media systems and the news frame, this study will provide empirical evidence on how journalistic roles can be consequential in their practices.

Literature Review

Journalistic Roles and News Framing

Journalistic roles can be conceptualized as the "functions of journalism in society" (Hanitzsch et al., 2011, p. 275). Scholars have used different approaches to describe the roles or functions that journalists take. One of the earliest attempts at conceptualization was done by Cohen (1963), who distinguished "neutral reporter" from "participant" based on journalists' relations with foreign policy officials in the United States. Weaver and Wilhoit (1996) suggested four journalistic functions—"interpretive," "disseminator," "adversarial," and "populist mobilizer" (p. 137). Donsbach and Patterson (2004) took a cross-national perspective and compared journalistic roles in five western countries by variations on two dimensions—passive-active and neutral-advocate. Hanitzsch and colleagues (2011) expanded Donsbach and Patterson's (2004) work and considered three dimensions, interventionism, power distance, and market orientation, to depict different journalistic roles across 18 countries. These dimensions reflect journalists' identities and perceived political and market influences. Later, Hanitzsch, Hanusch, Ramaprasad, and De Beer (2019)

distinguished four types of journalistic roles: monitorial, collaborative, interventionist, and accommodative. In the current study, we adopted these four journalistic roles; more details and reasons for this choice will be provided in the following sections.

Journalistic roles reflecting differences between journalism's cultures can directly influence journalistic practices and media content (Hanitzsch et al., 2011). As Shoemaker and Reese (1996) argued, professional roles (that journalists take or are expected to take) determine communicators' judgments over news values and how they develop news stories. While there may be a gap between journalists' normative role perceptions and their actual role performances (e.g., Mellado & Van Dalan, 2014), there is strong evidence of the influence of journalists' role orientations on their journalistic practices. Studies have found that depending on the different roles that journalists embrace (i.e., professional attitudes), they prefer different types/styles of news stories (Culbertson, 1983). Culbertson (1983) showed that journalists who underscore interpretive roles tend to highlight national news and human-interest news, while journalists categorized as activists tend to emphasize international news. Such role perceptions can also affect how journalists implement the norms of objectivity and neutrality (Patterson & Donsbach, 1996; Skovsgaard, Albæk, Bro, & De Vreese, 2012) and their reporting style of political news (Van Dalen, De Vreese, & Albæk, 2012). Skovsgaard and colleagues (2012) showed that journalists who highlight the role of journalists in informing citizens had a different understanding and implementation of the objectivity norm than journalists who take a more active role.

In this light, this study seeks to explain news frames that journalists in each country—which each has its own differing perceptions of journalistic roles––chose when covering the COVID-19 pandemic. Framing is about social actors choosing, emphasizing, and promoting specific elements of reality with a particular interpretation (Entman, Matthes, & Pellicano, 2009). When journalists cover news events, they cannot write an article without framing it because they must select, highlight, or omit certain attributes of an issue (Entman, 1993; Lee & Basnyat, 2013; Strömbäck & Dimitrova, 2006). Journalists' choices of words or organization of text reflect their attitudes or backgrounds as well as the social and political context in which news is produced, such as cultural norms, newsroom cultures, and political power structures (De Vreese, Peter, & Semetko, 2001; Hallin & Mancini, 2004; Shoemaker & Reese, 1996). Thus, this study explains how media in different countries framed the COVID-19 crisis and focuses on how the macro social systems level, notably different journalistic roles, are reflected in news frames. During pandemics, when people go through uncertainties and a lack of information, news frames highlight which attributes of an issue get more attention, reflecting the dynamics of news reporting (Lee & Basnyat, 2013). Comparing news reports from different countries will reveal each country's news coverage dynamics.

This study focuses on differences in journalistic roles at a *national* level for two reasons. First, journalists' role perceptions are mainly shaped by nation-specific political or cultural factors (Weaver & Wilhoit, 1996). Journalistic culture in one country is considered unique and different from other countries because news producers in each country prioritize domestic agendas, feature national actors, and speak to national audiences (Hantrais, 1999). Accordingly, each country's news content will also be different. By exploring how journalists in different countries react to the same issue (i.e., COVID-19), we try to understand how journalists' role perception shapes news framing practices. Second, empirical studies have provided robust evidence that the roles of journalists are much more dissimilar when compared with

journalists in other countries than journalists within the same nation (Zhu, Weaver, Lo, Chen, & Wu, 1997). Although journalists in the same country do not always share the same role perception, differences in journalistic role perceptions are more pronounced and obvious when comparing journalists from different countries than ones in the same country (Van Dalen et al., 2012). By considering various sociopolitical contexts, we aim to provide a more detailed explanation of why there are differences and similarities between news produced in countries where the role perception of journalists is different.

Journalistic Roles in China, Korea, and the United States

This study characterizes unique journalistic roles in different countries by relying on empirical results of the latest WJS survey (Hanitzsch et al., 2019). WJS is a large-scale cross-national survey focusing on comparing journalistic cultures around the world. It measured journalistic roles as an aspect of journalistic culture by asking journalists how much they agree with statements related to four types of journalistic roles—monitorial, collaborative, interventionist, and accommodative.

The *monitorial* role encourages journalists to scrutinize political speeches and public policies by voicing criticism toward authorities and holding officials in power to account (Christians, Glasser, McQuail, Nordenstreng, & White, 2010). However, *collaborative* journalists work more often as partners of the government. Amid crisis, instead of expressing criticism toward authorities, collaborative journalists tend to support governments to maintain the social order "against threats of crime, war, terrorism, and insurgency, as well as natural emergencies and disasters" (Christians et al., 2010, p. 31). The *interventionist* role reflects journalists' strong involvement in and commitment to social affairs: They consider themselves as "participants," not as objective bystanders; journalists embracing the *accommodative* role are more likely to see the audience as consumers and thus strive to provide content that appeals the most to the public (Hanitzsch et al., 2019).

Based on such characterizations, this study examined different journalistic roles across China, South Korea, and the United States. We chose these three countries because they show interesting differences in relation to the different journalistic roles defined in WJS. We associate Chinese journalists with a collaborative role while we match Korean and American journalists with a monitorial role. Although Korean and American journalists share some similar role perceptions, there are some interesting differences in their perceptions of interventionist and accommodative roles. Thus, the findings would yield some interesting comparisons between countries with clearly different media cultures and political systems (China and the United States) and countries with similar political systems and media cultures in a broad sense (Korea and the United States). At the same time, these three countries showed very different governmental and public responses to COVID-19 (e.g., Cha & Kim, 2020; Liu & Saltman, 2020; Wallach & Myers, 2020). Given that the way news covers health-related issues is influential in government/public attitudes and behaviors (Coleman, Thorson, & Wilkins, 2011; Gollust, Fowler, & Niederdeppe, 2019), this study will provide some hints as to why such differences might have occurred by comparing how journalists in three countries covered COVID-19.

According to the WJS (see Table 1), the biggest difference in journalistic roles across the three countries lies in the relationship—between journalists and authorities. Though the journalist-government

relationship is mostly *collaborative* in China, South Korean and American journalists were more likely to believe themselves to be *monitorial* toward their governments (Table 1). With collaborative roles, the gap between China and the other two countries is large. The press reform in 1978 and the commercialization of the press created some chances for Chinese media to be independent of the government (Wang, 2012). Nevertheless, many Chinese journalists, especially those who work in news outlets that obtained a license from the government, are classified as state employees, and it is uneasy for them to fully exert their professional autonomy (Rohrhofer, 2015; Wang & Sparks, 2019). Recent studies still show that Chinese news coverage tends to rely heavily on administrative sources and does not mention much about political violence or stories that might suggest the authorities' incompetence (Shahin, Zheng, Sturm, & Fadnis, 2016). Chinese journalists play a collaborative role, cooperating with the government to maintain social harmony, preserve national unity, and advance socioeconomic development (Pintak & Nazir, 2013; Wong, 2004). Journalists in South Korea and the United States are more prone to act as critical observers of authorities who actively scrutinize government claims and critique political decisions (Meyen & Riesmeyer, 2012), especially as journalists have a greater distance from authorities. Notably, Korean journalists take a higher collaborative role than their American peers. Rhee and Kim (2012) explained that the Korean press had been closely intertwined with political parties or the government along ideologically different lines. This might have led some Korean journalists to show support for the government or specific political forces.

Table 1. Means of Four Journalistic Roles in China, South Korea, and the United States.

Country	Monitorial	Collaborative	Interventionist	Accommodative
China	3.18 (0.85)	**3.47** (1.01)	3.40 (0.73)	3.55 (0.76)
South Korea	**3.98** (0.67)	2.07 (0.76)	**3.46** (0.66)	2.73 (0.73)
United States	**3.97** (0.71)	1.51 (0.84)	2.38 (0.89)	**3.07** (0.84)
China vs. South Korea	[−.94, −.70] ***	[1.26, 1.54] ***	[−.19, .04]	[.70, .94] ***
China vs. United States	[−.92, −.69] ***	[1.85, 2.11] ***	[.89, 1.12] ***	[.35, .58] ***
South Korea vs. United States	[−.12, .14]	[.43, .73] ***	[.94, 1.21] ***	[−.49, −.22] ***

Note. Data retrieved from World of Journalism (n.d.). Mean values are reported with standard deviation in parentheses. Each index is measured by averaging a group of items using a 5-point Likert scale (a higher value indicates higher agreement with the journalistic role). We conducted one-way ANOVA tests to examine if the means between countries are significantly different. Brackets with asterisks show 95% confidence intervals of differences in means using Tukey post hoc tests. *** $p < .001$. All observed differences were significantly different between countries, except for the monitorial role between Korea and the United States and the interventionist role between China and Korea.

Both South Korean and American journalists highly identified their role as monitorial. As Table 1 shows, Korean journalists reported a significantly higher degree of agreement on the *interventionist* role, while American journalists were more likely to embrace the *accommodative* role. As interventionists, South Korean journalists take a "participant" role in reporting with a strong disposition toward involvement and commitment (Hanitzsch et al., 2019). With a higher agreement on the accommodative role, American journalists see their audience as consumers and aim to help audiences manage daily life by providing information, advice, and guidance (Underwood, 2001).

Framing the COVID-19 Pandemic

There have been some efforts to identify news frames of public health crises/epidemics. Shih and colleagues (2008) analyzed news articles related to the epidemic published in *The New York Times* over 10 years and suggested six main frames widely used in reporting public health epidemics: *consequence, conflict, uncertainty, action, reassurance,* and *new evidence*. The *consequence* frame generally speaks to the outcomes of the diseases (e.g., number of infections and deaths, the social or economic impact of the disease). The *action* frame stresses governments' actions against the disease (Shih et al., 2008). The *conflict* frame focuses on the disagreements and debates between political or social actors around the disease; the *reassurance* frame presents a more harmonious and positive image by emphasizing the preparedness and achievements of the political leaders or government in fighting the disease (Shih et al., 2008). The *uncertainty* frame focuses on the unpredictability of the disease (e.g., the unknown origin/spread/cure). In contrast, the *new evidence* frame emphasizes the new research findings or medical efforts that advance people's understanding of the diseases.

This study expects that these frames will intersect with journalists' role perceptions in two ways—frame prevalence and framing valence. *Frame prevalence* is how frequently each media used different frames, and *frame valence* is whether each news frame was presented positively, negatively, or neutrally (Ferguson & Gallagher, 2007). The type of valence matters, given that the effect of news framing can be different depending on whether stories oppose or support certain positions (Bizer, Larsen, & Petty, 2011). For instance, when news stories used negative valence, which highlighted the disadvantageous consequences of a European Union summit, readers were less likely to support the European Union than those who read stories that used positive valence to stress advantageous results (De Vreese & Boomgaarden, 2006). This study goes beyond examining frame prevalence and looks at valence to promote a multifaceted understanding of the news frames used in different countries. In the following sections, we provide ideas about which roles in each country would intersect with different epidemic frames and valence.

Framing Prevalence

As the WJS showed that journalists in China, South Korea, and the United States have different perceptions of journalistic roles, this study anticipates that journalists will use different news frames in tandem with their perceptions. First, this study argues that frames that highlight *conflict* and *uncertainty* will be more salient in countries where journalists emphasize the monitorial role. In contrast, the *reassurance* frame will be more salient in countries where journalists take the collaborative role. In the early stages of the pandemic, conflicts and economic instability were inevitable: divisions over government-imposed policies were apparent and economic activities were shrinking (e.g., Deane, Parker, & Gramlich, 2021). However, in China, where journalists experience substantial political and organizational pressure (i.e., take collaborative roles; Wang & Sparks, 2019), their news reports will be more likely to emphasize social stability than conflicts or negative economic consequences. Thus, they will be more likely to use news frames to reassure the public and report positively on the role of political leaders. On the other hand, American and Korean journalists—who tend to be more critical of their governments than Chinese journalists (Meyen & Riesmeyer, 2012)—would be less reluctant to use frames that may harm social harmony or cohesion. This may be because they are guaranteed freedom

to speak critically of authorities. Thus, American and Korean journalists will more likely to use conflict and uncertainty frames when reporting on COVID-19. We hypothesize:

H1:   In coverage of the COVID-19 pandemic, the conflict frame will be presented more often in South Korea and the United States than in China.

H2:   In coverage of the COVID-19 pandemic, the uncertainty frame will be presented more often in South Korea and the United States than in China.

H3:   In coverage of the COVID-19 pandemic, the reassurance frame will be presented more often in China than in South Korea and the United States.

Although Korean and American journalists take *monitorial* roles, there are meaningful differences. Korean journalists place greater importance on the *interventionist* role than American journalists, and American journalists are more likely to embrace the *accommodative* role than their Korean peers. These indicate that Korean journalists are more likely to challenge the status quo and be agents of change, while American journalists have a more substantial concern for their audiences' interests (Hanitzsch et al., 2019).

This study examines the difference between Korea and the United States using uncertainty and conflict frames (framing prevalence) based on such differences. For instance, Semetko and Valkenburg (2000) argued that the conflict frame could attract audience interest, and studies have shown that it is one of the most salient frames in U.S. news media (Neuman, Just, & Crigler, 1992). Thus, it is reasonable to expect that the U.S. media will be more likely to use the conflict frame than the Korean media. On the other hand, it is unclear how the uncertainty frame can be associated with journalistic roles. When news stories include any indicators of uncertainty, readers perceive the news reporter as more trustworthy (Jensen, 2008). Media trust is vital in market-driven journalism because it is directly related to the financial interest of the news industry (Schranz, Schneider, & Eisenegger, 2018). It is plausible that journalists in a market-driven environment may be more likely to emphasize uncertainty to highlight the trustworthiness of their news stories to their readers. Hence, American journalists may be more likely to use uncertainty frames than Korean journalists, who are relatively less interested in capturing audience interest.

H4:   In coverage of the COVID-19 pandemic, American journalists will be more likely to use (a) uncertainty and (b) conflict frames than Korean journalists.

Framing Valence

In addition to comparing framing prevalence, this study adds a second-level framing analysis by identifying the valence of a frame (e.g., positive, negative, or neutral) used in news stories. Framing valence is often associated with positive/negative elements in news stories (e.g., supporting or opposing, risks or benefits). Frame valence is studied frequently in frame effects research and has been proven powerful in influencing readers' attitudes or stances toward an issue or related policies (e.g., De Vreese & Boomgaarden, 2003; Jun, Kim, Thrasher, Cho, & Heo, 2021).

Although framing valence has been underdiscussed in framing studies, it is important because it shows the most fundamental characteristic of political discourse, the elite's attempts to associate specific issues with negative or positive aspects, by presenting whether issues are framed positively, negatively, or neutrally (De Vreese & Lecheler, 2012). Luther and Zhou (2005) compared how Chinese and American media framed the Severe Acute Respiratory Syndrome (SARS) epidemic. They found that the economic consequences frame was most prominent in both countries. Interestingly, Chinese newspapers presented the economic consequences frame positively, whereas American newspapers negatively framed the economic consequences frame (Luther & Zhou, 2005). This implies that even if the same frame is used, it can be used differently depending on each country's political, media, and social environments.

Unlike frames such as reassurance that has a positive connotation or conflict and uncertainty that have a negative connotation by default, the consequence, action, and new evidence frames can be used with both positive and negative valence. For instance, when news media use the consequence frame, it can be positively (e.g., emphasize financial gains such as increased export of masks) or negatively portrayed (e.g., criticize financial losses such as decreased tourism). Chinese journalists are significantly more collaborative and are more likely to reassure the public and support government actions. Thus, this study expects Chinese media to be more likely to present the positive valence of consequence, action, and new evidence frames than in South Korea and the United States.

H5:   In coverage of the COVID-19 pandemic, frame valence of (a) consequence, (b) action, and (c) new evidence will be different across the three countries.

Method

Samples

This study selected major wire news agencies that provide news in English: *Xinhua* (China), *Yonhap* (Korea), and the Associated Press (United States), and collected news articles from the online news database Factiva. These three news outlets provide online wire services and are one of the largest and most influential news agencies in each country (Lim, 2006; Xin, 2006).[2] Many researchers have chosen these news outlets in their comparative studies because they represent the cultural and political environment of each country (e.g., Dai & Hyun, 2010; Yu & Chen, 2021). The words "coronavirus" and "COVID-19" were identified as search terms. We applied a one-month time frame from an initial peak date in 2020 for each country. For China, we focused on one month following the Wuhan lockdown (January 22 to February 22). For Korea, we searched for articles following the sudden spike of COVID-19 resulting from "patient 31" (February 23 to March 23). For the United States, we applied a one-month time frame after all 50 states reported confirmed cases (March 17 to April 17). This study looked at the early stages of the COVID-19 pandemic because this was when countries faced the first sharp growth of cases, and each government took different actions to

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[2] Xinhua is the largest news outlet in China, owned by the government and the Communist party (Hong, 2011). Yonhap is one of the major South Korean news agencies, and AP is one of the largest news agencies in the United States. AP and Yonhap are neither state-owned nor privately owned (Dai & Hyun, 2010).

combat the disease. Depending on the role that journalists take within their society, they may highlight different aspects of their government's response to a pandemic.

Initially, we identified 721 articles from *Xinhua*, 330 from *Yonhap*, and 610 from the AP during the one-month timeframe. To make the sample size approximately equal across the three countries, we applied systematic sampling to choose every *n*th unit within a population. We selected every second article of *Xinhua* and AP and every article of *Yonhap*. We expect that the influence of journalistic roles is manifested in reporting domestic issues, so we removed news articles covering the pandemic in foreign countries, and irrelevant articles. The final sample included 232 articles from *Xinhua*, 257 from *Yonhap*, and 260 from the AP (N = 749).

Measurements

Table 2 presents operational definitions and intercoder reliability for each news frame. Each news story was examined in terms of (1) what frames were used and (2) what the valence was associated with the frame (i.e., positive, negative, neutral). Frame valence was coded if news stories used frames of consequence, action, or new evidence. A positive valence refers to emphasizing optimistic/positive consequences (e.g., the decline of infections/deaths), providing encouraging evidence, or supporting government actions. A negative valence refers to emphasizing negative/gloomy aspects of consequences (e.g., the spike of infections/deaths), evidence (e.g., side effects of vaccines), or criticizing government actions.

Table 2. Operationalizations of News Frames and Intercoder Reliability (ICR) Tests.

	Operationalization	ICR (Cohen's K)	Percentage Agreement (%)
Conflict	Emphasizing disagreements/debates/controversies around COVID-19	.91	96.7
Uncertainty	Emphasizing uncertainty/risks related to COVID-19 (e.g., origins, symptoms, treatments)	.85	97.8
Reassurance	Emphasizing preparedness/readiness for COVID-19; acknowledging achievements by the government	1	100
Consequence	Focusing on general epidemiological outcomes (infections, deaths) or social/economic impact caused by COVID-19	.75	93.3
Action	Focusing on governmental policies/measures against COVID-19	.93	96.7
New Evidence	Focusing on new findings from COVID-19 research	1	100
Fact-checking[*]	Fact-checking factual-false statements related to COVID-19	1	100

Frame Valence	Presenting positive/negative aspects of consequences, evidence, and actions	.95	98.9
Average		.92	97.9

Note. The test was based on coding results of 90 news stories by two coders. Cohen's *Kappa* (1960) score was calculated by using R package "irr" (Gamer, Lemon, Fellows, & Singh, 2012).

[*]We took an inductive approach to explore if there are any new framing patterns in addition to the predefined six frames. Several news articles attempted to check or correct the facts from COVID-19 mis- or disinformation. This study did not examine the fact-checking frame because of the limited sample size. Its significance and suggestions for follow-up studies can be found in the discussion section.

Coding and Validating

The two authors both reviewed 20% of articles randomly selected from the sample of each country to pilot a coding scheme and variables, clarified each variable's operational definitions, and resolved disagreements. We coded another 90 articles (9.04% of the sample). The average Cohen's *Kappa* was 0.92 with a range between 0.75 and 1, which indicates very good intercoder reliability (see Table 2). The two authors independently coded the remaining articles.

Results

Table 2 presents the proportions of each frame and overall frame valence used by the news media in *Xinhua*, *Yonhap,* and the AP. To test H1, H2, and H3, we used pairwise proportion comparisons to compare the proportions of news articles featured with a certain frame across *Xinhua*, *Yonhap*, and the AP. As Figure 1 shows, the proportion of *conflict* articles is significantly higher in AP (AP-*Xinhua*: $\chi^2=$ 34.16, $p < .001$) and *Yonhap* (*Yonhap-Xinhua*: $\chi^2= 10.04$, $p < .001$), compared with that in *Xinhua*. Thus, H1, which predicted that the *conflict* frame will be presented more often in South Korea and the United States than in China, is supported.

The proportion of *uncertainty* articles is significantly lower in *Xinhua* than the AP ($\chi^2= 15.48$, $p < .001$), while the differences between *Xinhua* and *Yonhap* are not significant. The results suggest that the proportion of articles using the reassurance frame is significantly higher in *Xinhua* than in *Yonhap* (*Xinhua-Yonhap*: $\chi^2= 17.15$, $p <.001$) and AP ($\chi^2= 50.34$, $p < .001$). Therefore, H2 (the *uncertainty* frame will be presented more often in the United States and South Korea than in China) is partially supported, and H3 (the *reassurance* frame will be presented more often in China than in South Korea or the United States) is supported.
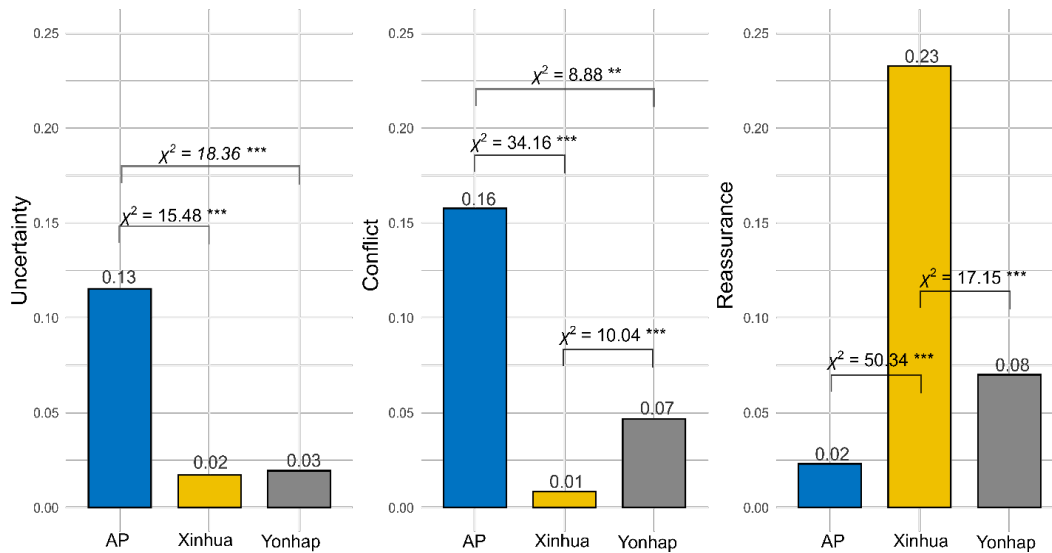
Figure 1. Comparing proportions of news frames across the AP, Xinhua, and Yonhap.

Note. Proportions of news frames used by each news agency are presented on top of each bar. Pairwise proportion comparisons were conducted to test H1 to H4.
** p <.01, *** p <.001.

To test H4, which asks whether there would be differences in framing the COVID-19 pandemic between the Korean and American media, we also compared the proportions of the frames used by *Yonhap* and the AP. As Figure 1 shows, the proportions of the conflict and the uncertainty frames are significantly more present in AP news stories than *Yonhap*. Therefore, H4a and H4b are supported. This could be understood by considering the differences in collaborative, interventionist, and accommodative roles between South Korea and the United States. Based on the WJS survey, Korean journalists are significantly more collaborative and interventionist, while less accommodative than American journalists. This suggests Korean journalists are more likely to support governmental actions and maintain social stability to effectively control the public health crisis, resulting in less usage of the conflict or uncertainty frame.

To test H5, which expects that the frame valence of *consequence, action,* and *new evidence* would be more positive in Chinese media than in South Korea and the United States, we used one-way ANOVA to compare the means of frame valence of the three frames across the three countries. The results are reported in Figure 2. The results indicate that when using the *consequence* frame in reporting the COVID-19 outbreak, China's *Xinhua* is more likely to adopt a positive tone ($M = 0.20$, $SD = 0.36$) while the frame valence is found more neutral or even negative in *Yonhap* ($M = 0.02$, $SD = 0.19$) and AP ($M = -0.11$, $SD = 0.36$). The differences across the three countries were significant ($F = 27.81$, $p < .001$), thus H5a is supported.

The results also suggest that there is significant difference in the frame valence of the *action* frame across three countries ($F = 47.5$, $p < .001$), thus H5b is also supported. The results show that the frame valence of action is significantly more positive in *Xinhua* ($M = 0.43$, $SD = 0.60$) than in *Yonhap* ($M = 0.02$,

$SD = 0.22$) and the AP ($M = -0.02$, $SD = 0.37$). However, no significant difference is found in the frame valence of the new evidence frame across the three news agencies. Therefore, H5c is not supported.
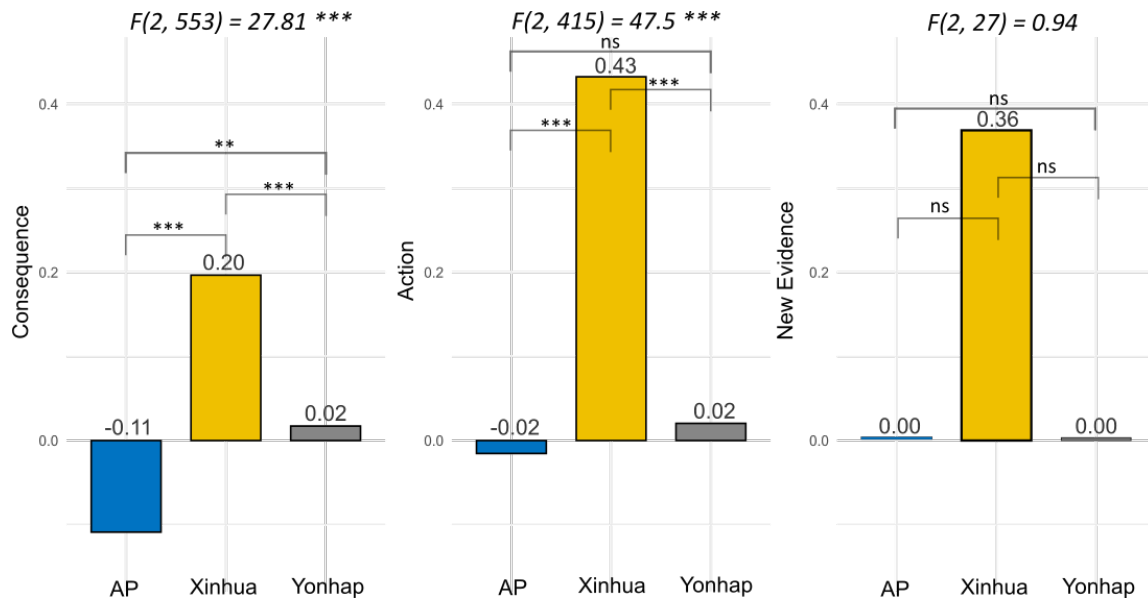

Figure 2. ANOVA tests for comparing means of frame valences across the AP, Xinhua, and Yonhap.

Note. Means of frame valence are presented on top of bars. Scheffe's method was used in post hoc comparisons.

***$p < .001$, **$p < .01$.

Discussion

Based on the WJS survey, this study investigated how different journalistic roles can contribute to different news framing. We compared news framing on the COVID-19 pandemic across China, South Korea, and the United States. While American and Korean journalists mostly identified themselves with the *monitorial* role, journalists in China report the highest score in the *collaborative* role (Hanitzsch et al., 2019). Also, the differences in journalistic roles between South Korea and the United States should be noticed— South Korean journalists are more likely to identify themselves in the *interventionist* role, while American journalists identify with the *accommodative* role.

First, we tested frame prevalence and frame valence of three countries in their COVID-19 reporting. We found that the Chinese news agency was more likely to use *reassurance* frames than the other two countries, while news agencies in South Korea and the United States were more likely to use *conflict* and *uncertainty* frames than the Chinese news agency. Korean and American journalists who take a strong *monitorial* role were more likely to use conflict and uncertainty frames, perhaps because they sought to address the severity of the problem while holding the government accountable. However, Chinese journalists, who embrace a *collaborative* role, tend to use the *reassurance* frame more frequently to uphold

the legitimacy of the authority. This aligns with previous research that argued Chinese journalists get directly censored by the government or are self-censored, making citizens less likely to hold the government responsible for social problems, such as epidemics (Beaudoin, 2007).

Furthermore, when looking at the difference between South Korea and the United States, American journalists were more likely to use the *uncertainty* frame than Korean journalists. Media that focuses more on capturing public attention dramatize issues by emphasizing crises or uncertainties (Nisbet & Huge, 2006). When considering the secondary journalistic roles between Korean and American journalists, it is plausible that American journalists who are more market-driven (as the accommodative role score indicates) and are less likely to see themselves as agents of change (as specified by the score for the interventionist role) are more likely to highlight uncertainty than Korean journalists. This finding suggests that even countries with similar journalistic cultures (as journalists in both countries take the monitorial role) have a secondary effect that makes a difference between the two.

Moreover, for the frames of *consequence* and *action*, the Chinese news agency was more likely to highlight positive aspects (i.e., positive comments on the government's actions) than the news agencies in South Korea and the United States. In China, where the government has a powerful influence on media (Zhou, 2000), journalists are pressured to take collaborative roles. Although not surprising, this result is notable in that it provides empirical evidence of how China's political and media systems and the role of journalists are reflected in one of their news outlets' actual news reports.

Importantly, this study does not claim that journalists' role perception is the only determinant of news frames. For instance, Oh and colleagues (2012) explained that death rates of the H1N1 pandemic were much higher in the United States than in Korea, and this might have affected U.S. newspapers to use frames focusing on the prevention, diagnosis, and treatment of H1N1 more often than the Korean newspapers. Similarly, we cannot rule out the possibility that other contextual or situational factors played out during the initial months of the pandemic, such as COVID-19 transmission patterns in each country or each government's response to COVID-19, might have affected how each country highlighted different attributes of the pandemic in news reports. It is plausible that the Chinese government suppressed the early stages of COVID-19 more strongly and effectively than other countries (Yu et al., 2020), and this might have garnered more frames of reassurance appearing in news articles. The opposite may be true in the United States and Korea, where conflict frames were more prevalent as partisan conflicts and political polarization are deeply rooted in its national/political culture (e.g., Lee, 2005; Lupu, 2015), and the pandemic quickly turned into a partisan issue (Hegland, Zhang, Zichettella, & Pasek, 2022; Rich, Eliassen, & Dahmer, 2020). Nevertheless, we highlight that journalists' role perceptions cannot be detached from such organizational, national, or sociopolitical culture, and such factors collectively (re)shape journalists' role perceptions (Donsbach, 2008). Therefore, our findings provide meaningful explanations of factors that shape framing practices across different countries.

Lastly, we uncovered the patterns of journalists investigating facts to verify claims and information around COVID-19, although creating and validating new epidemic frames is beyond the scope of this study. Given that incorrect information related to COVID-19 spread through various media, posing a serious threat to public health (Bridgman et al., 2020), it has become more important than ever for established news to

provide accurate information. For this reason, correcting misinformation would have become more salient in news coverage of epidemics. Based on our preliminary findings, future studies could consider and validate fact-checking as a new frame in news coverage of epidemics.

Conclusion

Journalists in different countries with unique political and media systems have different ideas on what roles they are expected to take (Donsbach, 2008). This study has shown that such differences can affect what is emphasized and how frames are used in news coverage.

This study contributes to the comparative news framing literature by integrating the concept of journalistic roles to explain differences in news framing across news agencies in China, South Korea, and the United States. Earlier comparative framing studies explored macrolevel predictors such as political system (Dimitrova & Strömbäck, 2012; Strömbäck & Dimitrova, 2006), political culture (Floss & Marcinkowski, 2008), and media system (Hallin & Mancini, 2004) to explain the differences in news framing. However, these system-level concepts can be too broad to explain differences in media content across countries. Most of these frameworks focus only on Western democratic countries and have limited explanatory power for non-Western or nondemocratic regions. As this study considers the journalistic role as a determinant of media coverage, it explains specific differences between journalists while accommodating non-Western countries in comparison, thus using a more comprehensive framework for comparing news frames in different countries.

Moreover, this study provides more nuanced explanations of news framings in different countries by introducing a second-level measurement of framing, namely frame valence. This study examined which frames were emphasized in each country and how those frames were used. Measuring frame *prevalence* by comparing the proportions of a news frame is a common analytic strategy for frame comparison (e.g., Beaudoin, 2007). However, for some frames that do not necessarily imply a particular *valence*, measuring the proportions of frame usage may overlook variations between subjects of interest. In this study, we found that when using the frame of *consequence* and *action*, Chinese media presented the pandemic news in a more positive, encouraging, and hopeful tone than media in South Korea and the United States.

This study acknowledges some limitations. This study focused only on three countries; we undertook exploratory research on the cases of one selected press per country, published in the pandemic's early stage. This limits the generalizability of the findings, suggesting future studies gather larger samples with a longer time frame and more diverse news outlets on the current topic. Researchers can also expand our framework to more diverse countries with different journalistic cultures and sociopolitical environments. Examining multiple news outlets for each country would pinpoint cross-national and intranational differences in news frames of the issue.

This study compared news frames at an issue-specific level (i.e., conflict, uncertainty, reassurance, consequence, action, and new evidence). However, there are various types of frames that could be analyzed, such as the generic frames (e.g., human interest, morality, responsibility) identified by Semetko and Valkenburg (2000). Future research could investigate news framing in the COVID-19 pandemic at a different

level or compare the associations between generic and issue-specific frames across different countries. Finally, this study suggests future researchers examine how differences in news frames in each country affect attitudes toward the coronavirus, vaccines, and related policies. This will provide a better understanding of the impact of journalists' roles and responsibilities in society.

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